Water, Land and Law

This book is dedicated to Joep Spiertz (1940-1999),
friend and colleague,
who collaborated with us
in the water rights training and research project.

Water, Land and Law

Changing Rights to Land and Water in Nepal

Proceedings of a workshop held in Kathmandu,
18-20 March 1998

Rajendra Pradhan, Franz von Benda-Beckmann
and Keebet von Benda-Beckmann, Editors

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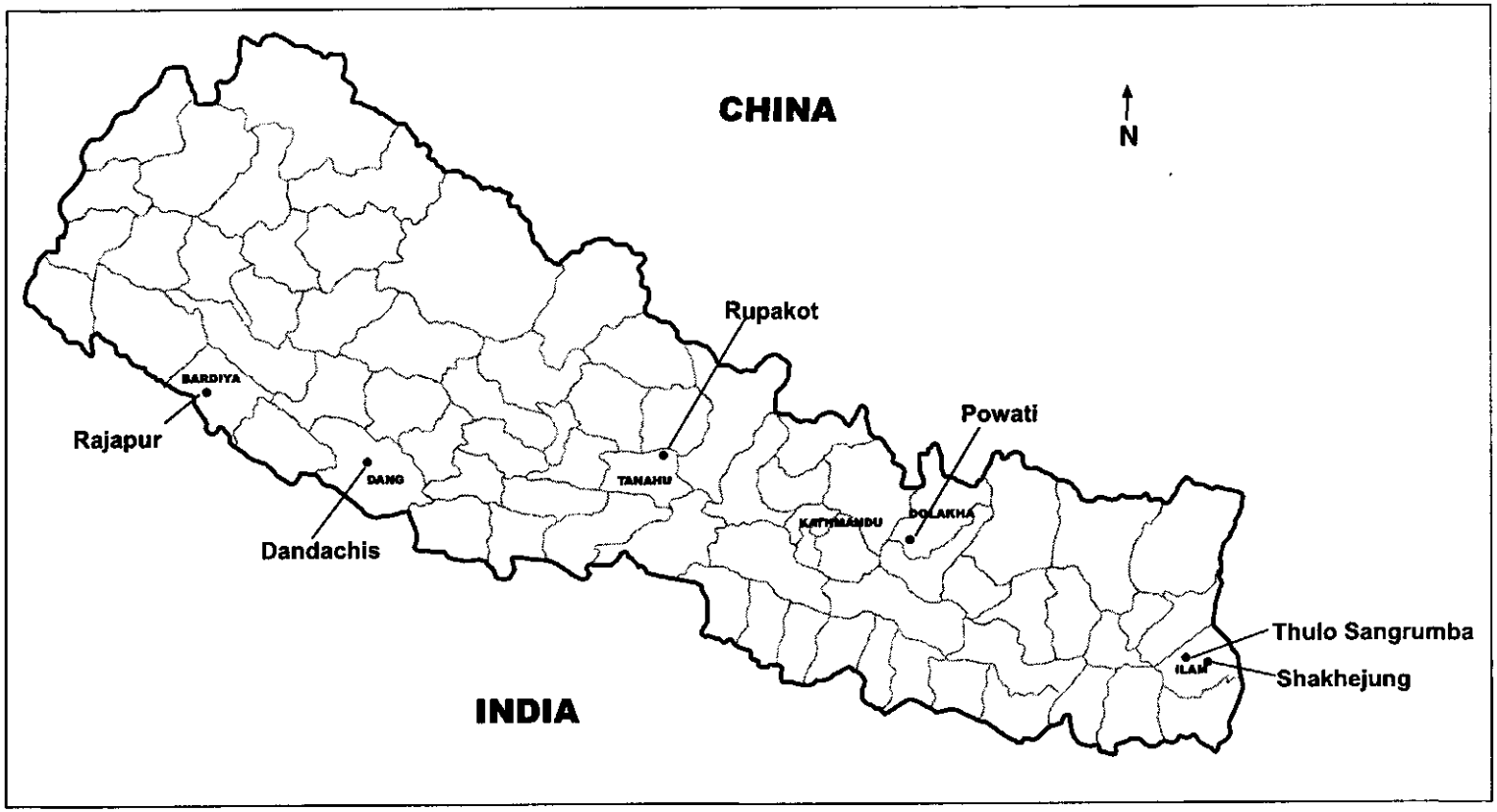
This book is dedicated to the late Joep Spiertz, friend and colleague, who collaborated with us in the water rights project. Although he is no longer with us, we feel that the dialogue with him continues.

Rajendra Pradhan, Franz von Benda-Beckmann and
Keebet von Benda-Beckmann, Editors

Map of Nepal with Case Study Sites



Introduction

Franz von Benda-Beckmann, Keebet von Benda-Beckmann and Rajendra Pradhan

This collection of papers is the second publication that has come out of a research project on water rights in farmer managed irrigation systems (FMIS).[1] Some of these systems have been constructed more than hundreds of years ago, while others are of more recent date. Government involvement was never completely absent. Local landlords and tax collectors, who had received land grants and the permission to build irrigation systems from the local rulers in order to extract taxes and to expand the frontier, in fact built most of the older systems. At various stages in history, regulations related to irrigation changed.[2] But it was not until recently that interventions started to have a more profound impact both technically and from an organisational point of view. Many of these "farmer managed" irrigation systems have recently been or are in the process of being improved with the help of the government or foreign donor agencies. Such interventions invariably pose problems of redesigning the canal infrastructure and accustoming existing regulations and organisation. They also create new problems resulting from changes in rights and obligations related to water. But while a lot of studies have looked into the technical changes and problems in irrigation systems, little still is known about the processes of adjustment, accommodation and conflict management that is involved; about the transition from the old to the new organisational setting; and about the co-existence of older and newer forms of organisation, rights and obligations. In particular the co-existence of state regulation, of local regulations and of regulations made by the intervening agencies, captured under the term "legal pluralism", has received little attention. Usually it is assumed that the introduction of new rules, whether made by state agencies or by donor organisations, leads to the disappearance of the old ones. In fact, this rarely is the case. More typically, (parts of) older and newer regulations co-exist side by side in an uneasy cohabitation, whether or not the old regulations are officially recognised.[3]

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[1] The first publication contains the results of the first workshop held in Kathmandu in January 22-24, 1996. See R. Pradhan et al. 1997. Most of the research projects had been sponsored by the Ford Foundation.

[2] See Pradhan in this volume.

[3] See Spiertz 1991 for the co-existence of older and newer regulations regarding *subak*, water management organisations in Bali.

The researchers contributing to this volume come from various disciplines, including law, agronomy and social sciences. Most of them work for various Nepali research organisations such as the Legal Research and Development Forum (FREEDEAL), the Mountain Research Management Group (MRMG), and the Institute of Agrarian and Animal Science in Rampur (IAAS). They share an interest in conflicts and the role of law in regulating irrigation water. Some of the older participants had done fieldwork before; for others it had been their first exposure to field research and legal anthropological research approaches. Research on these plural legal structures and their relations with the actual management and use of water in irrigation issues, in addition to the more usual techniques, requires the specific methodology that has been developed in legal anthropology. Most researchers had been trained in the anthropology of law with the assistance of Wageningen Agricultural University and Erasmus University, Rotterdam in the context of a legal anthropological research and training programme sponsored by the Ford Foundation. As part of their training the researchers reported the results of their fieldwork during a workshop held Kathmandu in March 1998, where draft papers were discussed with more experienced national and international researchers working in the field of water studies.[4] Since then the draft papers have been extensively rewritten and the results are presented in this volume.[5] For some authors it is the first publication on this topic, while others have published elsewhere on their research projects. However, all papers reflect "work in progress". This introduction will discuss some of the major topics that came out of the papers presented at the workshop and the ensuing discussions.

Historical dimensions of water rights

Problems of irrigation management and water rights need to be seen within the context of, and as part of the development of the political economy of Nepal. From the early history of Nepal, in the feudal state as well as in the institutional developments after "democratisation", there have always been direct political and economic linkages between small-scale localities and political and economic elites in the centre of the Kingdom. Starting with *birta* grants and tax collection, both political and economic linkages have become more complex, diversified, fragmented and contested. In particular, the earlier strong interwovenness of political and economic aspects within one relationship, between feudal lord and his dependants (i.e., the land tenure holders and tax collectors) have been dissolved, and now involve political and economic agents of different kinds. Further, there is an increasing influence of foreign and international actors, governmental and non-governmental agencies on Nepal's policies and programmes, and an increasing presence of such donor-run projects in small localities. As a result, the international political and economic context directly impinges

[4] It was also the occasion for FREEDEAL, the main organiser of the workshop, to present its work-in-progress report to the Ford Foundation and to communicate its findings to Nepalese irrigation experts.

[5] For various reasons, four papers presented at the workshop could not be included in this volume.

on the ways in which irrigation systems are changed, new institutions are set up or old ones are transformed, and on the ways in which rights and obligations concerning water become redefined.

Several papers in this collection deal with the historical and political dimension of water rights. Pradhan's study of the history of legislation on water and land comes to the fascinating conclusion that the developments in these two fields show almost a mirror image of each other. While land rights legislation developed from feudal notions of rights to individual rights to cultivated land, water rights have gone the reverse way. In the past it was possible for local lords to obtain individual rights to irrigation water from the kings, whereas rights to water have become more and more "communal", a development which culminated in the Water Resources Act of 1992 which declared all water to be owned by the state.

It is not only important to look at the historical dimension at the level of state legislation. Individual irrigation systems cannot be understood without understanding their history, if only because the first builders of an infrastructure have prior rights to its water. Bajracharya and Sodemba and Pradhan show this in the case studies on Ilam, Poudel and van der Schaaf on Rupakot. But as Adhikari and Pradhan discuss for Dang, and Khadka for Rajapur, the development of irrigation systems in the wider context of local and regional history are as important.[6] People, whether farmers or functionaries, do not isolate irrigation from other social processes and relationships. Changes in the political structure or in the administration of villages may be as important for irrigation as changes in the irrigation infrastructure or organisation itself.

Studying the micro-history of individual systems shows in the first place the great variation in the connection between land, water and labour. Moreover, it shows that the political constellation within local communities as well as the national political situation may have important consequences for the distribution of rights to land and water (Sodemba and Pradhan, Adhikari and Pradhan). Water is so important in most regions that politicians tend to look at water disputes in times of elections as a way to enhance their voting constituency (Khadka and Upreti). During election campaigns, they are more likely to take an active interest in such disputes and try to come to an agreeable settlement, in the hope of securing the votes of the disputants. Political connections are remarkably short when it comes to water disputes, and this enhances people's opportunities of "forum shopping" for the most successful attempt to win their claims. And it equally makes "the forums", local and regional officials and politicians, shop for disputes in order to enhance their reputation (Poudel) or to gain votes (Khadka).[7] As Khadka and Upreti demonstrate, it may depend on a visit of the King, or on the presence of a respected and influential religious leader, whether a water dispute is dealt with to the advantage of the weaker party in the dispute. The actual constellation of water rights, in the sense in which F. and K. von Benda-Beckmann speak of "concretised" rights, in any area thus depends to a large extent on the local as well as the national political situation. But it also depends on more incidental

[6] See Yoder 1986, U. Pradhan 1987, 1990, Shukla et al. 1997.

[7] See K. von Benda-Beckmann 1981.

occurrences and situations, which, together with the more structural characteristics and processes, constitute the specific local history of a system or area. Shifts in power at the national level therefore may well influence the power relationships within irrigation systems, especially when such changes affect and alter the relationships between the hydrological boundaries of irrigation systems or sub-systems and the political and administrative jurisdiction (Adhikari and Pradhan). Since rights to water usually have to be re-negotiated over time, political shifts have a great impact on actual water rights.[8]

Irrigators in their political contexts

Water rights establish legitimate economic interests in water and thus form an important economic resource. In the general literature, but also in many papers presented at the workshop and during the discussions, most attention is given to what in legal categories would fall under "private law water rights". Public rights over water management and especially rights to make and implement decisions on irrigation structure and the use of water have received much less consideration. This may well be influenced by certain traditions of writing about water rights as property rights, in which property rights are largely seen as rights (ownership, use rights, etc.) that in Europeanised legal systems fall under the broad category of "private" law. Pradhan, F. and K. von Benda-Beckmann, Adhikari and Pradhan show why the public and political aspects need more attention than they have received so far. Because water is such a crucial economic resource, public water rights, and decision making authority over the use and allocation of water, are usually important political resources in different arenas and at different levels of political and administrative organisation.

This is especially important with respect to the multiple uses and inter-sectoral allocation of water. The same source of water may be used for different purposes, for irrigation, hydroelectricity, navigation, domestic uses and so on. And there are often conflicts over which use is to receive priority. It is probably to reduce such conflicts that the Water Resources Act of 1992 has laid down the priority order of use of water from the same water source. Inter-sectoral use and conflicts over multiple uses of water need more study especially given the increasing competition for water.[9] There is some evidence that when there is conflict over water use from a common water source, irrigation may receive priority over domestic use. This may be because, as Bajracharya shows, men control public decision-making and consider irrigation more important than domestic water use. Fetching water for domestic use is considered women's task. Sometimes, however, as Upreti shows, both men and women may give priority to domestic water use, especially for drinking purposes, over irrigation and use numerous strategies to gain access to the water source used for irrigation. Small hill irrigation systems are used only for irrigation but large ones, especially in the

[8] See K. von Benda-Beckmann, Spiertz and F. von Benda-Beckmann 1997.
[9] See Dixit 1997.

plains, are often also used as sources of drinking water for humans and domestic animals, for bathing and washing clothes, and in some places for fishing. Non-irrigation uses of water from irrigation canals and the rights involved, have hardly been studied and are not given official recognition by irrigation officials and functionaries. At local, regional, national and international levels, decisions over the use of water set the framework for the ways in which water is and has to be used and such decisions are usually dominated by the more powerful economic and political interest groups.

Also within the irrigation context proper, the public aspects of water rights are at least as important as the more private elements of water rights. Water rights are a source of power; they establish positions of authority, of heads of households over other members, of members of water users associations over non-members, of landlords over sharecroppers and tenants, etc. Functionaries of the Department of Irrigation exercise the water rights of the state; a village water distributor (*panipale*) exercises the right to control water distribution; VDC chairmen exercise the right of jurisdiction over water related conflicts, if formulated as law and order problems, etc. (Khadka). Donor agencies involved in the rehabilitation of irrigation systems also have positions of power which they use to influence the existing structure of water rights.[10] They are not neutral engineers. While exercising authority derived from the state, they change the structure of authority and water rights in the system under rehabilitation by means of their financial and technical resources. Moreover, the changes they impose on the irrigation infrastructure through the construction of new intakes and canals affect the existing structure of water rights and frequently lead to conflicts over their readjustments.[11] Often these water rights carry with them public obligations, e.g., for the members of a water users association to participate in maintenance and repair activities, for a *panipale* to make sure people do not steal water out of turn, for a VDC chairman and other quasi-judicial bodies to settle water disputes, for a DOI officer to take provide materials for repair that are beyond the means of farmers in case of floods. All these institutions, at the different levels of economic and political organisation, are part of the landscape that makes up the private and public aspects of water rights.[12] They form the legal and institutional contexts in which rights, obligations and decision making authority are situated that constrain and enable management and use of water. In irrigation studies, there often is a tendency to look at those institutions that have been explicitly set up for irrigation in isolation. However, several studies indicate that we should take a broader perspective and include other institutions in the analysis of water management and water conflicts. As Khadka shows, water disputes often do not stand in isolation but are in complex ways connected to other disputes, related to water or to other issues, in which a wide range of institutions may be involved.[13] How individuals position themselves in a water dispute depends on how they stand in other disputes as well. This calls all the more for an integrated approach

[10] See Pradhan, Haq and Pradhan 1997.
[11] See Shukla et al. 1997, K. von Benda-Beckmann, J. Spiertz and F. von Benda-Beckmann 1997.
[12] See F. von Benda-Beckmann, K. von Benda-Beckmann and J. Spiertz 1997.
[13] See also Pradhan and Pradhan 1996, 2000.

to the study of water conflicts and disputes. While all empirical studies presented in this book focus explicitly on individual actors, they do so by looking at this context and at the structures in which these actors operate, and at their relationships and networks.

The land-water-labour nexus and social differentiation

One of the most important relationships is that between land, water and labour. While there is no direct and fixed relationship between rights to land, labour and water, it has become clear that there always are important connections and that water rights cannot be fully understood without looking at rights to land and labour. Because both water rights and labour are closely associated with land rights, rights to land inevitably affect any change in labour arrangements and water rights, or in infrastructure. And since land is very unevenly distributed among ethnic groups, class, caste and gender, water rights and the fruits of labour are also unevenly distributed. The land-water-labour nexus therefore is crucial for understanding processes of unequal access to water and exploitation of labour.

Generally speaking, only those who have land in the command area of an irrigation system can obtain rights to water.[14] These are in the first place landowners, but they are not the only ones. Sharecroppers and tenants exercise water rights, though their rights are derived from the landowner. Tenants and sharecroppers have access to land, i.e., rights to cultivate land for a specific period and under specified conditions. Tenants and sharecroppers who acquire rights to cultivate land also acquire rights to irrigation water tied to the land; they cannot be denied rights to the water either by their landlords or by other irrigators. They are expected to contribute their labour for repair and maintenance of the irrigation system as representatives of their landlords, though the ultimate responsibility towards the other users lies with the landlords. The labour they put into maintenance and repair is ascribed to their landlords, i.e., the landlord maintains his water right by means of the labour provided by his tenant or sharecropper, who in turn also maintain their – derived – rights vis-à-vis their landlords as well as the other irrigators by the same labour.[15]

The most basic social unit in which land and water rights of individuals are embedded is the household. In fact, most studies on irrigation take the household as a point of departure but talk basically about the head of the household. Households are important groups that cooperate in irrigation activities, but the individual members

[14] There have been attempts to provide for the possibility to acquire water rights independent from having land rights in the command area in Andhi Khola. The idea was that a water market would develop in which landless peasants could sell their water shares and thus get the opportunity to buy cheap upland for which they could use the remaining water shares. In practice, however, no water market has emerged and the water rights earned with construction work have remained unproductive. Personal communication Shuku Pun and Jacobijn van Etten.

[15] The labour part of the land-water-labour nexus has been touched upon in many papers but it needs further elaboration.

do so from different positions within the household and in other social relationships with people outside the household. The various papers in this volume show that there is considerable internal differentiation both within households and among households. Besides the adult male family heads, there are other household members who have different capabilities, different needs, and a different outlook and priorities from the male head. The studies by Bajracharya, van der Schaaf and Pun which focus on women also show that women do not have the same rights to water as men have (Zwarteveen 1997, F. and K. von Benda-Beckmann in this volume). This has to do with the fact that water rights are usually closely associated with rights to land and with the fact that rights are established and maintained by investing in irrigation infrastructure either with money or with labour. Thus, given the fact that labour is an important factor in establishing and maintaining water rights, the gendered nature of labour and more public water-related tasks becomes part of the stratifying land-water-labour nexus. As Bajracharya explains, women in general lack those elements of water rights that have to do with the public arena, such as the right to participate in decisions concerning operation, management and repair of the system, and in decisions on multiple uses of water.[16]

This not only pertains to the ways in which different members of a household acquire rights to land and water but also to the activities required to maintain these rights, i.e., participation in the operation, maintenance and repair of the irrigation system. The labour provided by members of a household is attributed to the household and helps maintain water rights of the household which has rights to the land, whether as owner and/or sharecropper or tenant. All household members profit from a well-kept and well-functioning irrigation system, because it allows for higher yields. However, it is not self-evident that all household members profit equally from the higher yields, because distribution of the benefits is usually unequal. In general, heads of households, owners, and men benefit more from higher yields than other household members, in particular women. The labour done for the operation and maintenance of irrigation systems is usually attributed to the head of that household: It is he who maintains his water rights. For young male household members of landowners, who expect to start their own households at a later stage after partition of the family land, their maintenance labour guarantees that they will have the necessary water rights in the future when they own their own land. In other words, they build up their own rights for the future. But the other members of a household will only profit temporarily, as long they are members of the household. Women forfeit these rights upon marriage. In principle they inherit neither land nor water rights.[17]

The situation for bonded labourers, *kamaiya*, in cases of rehabilitation or enlargement of irrigation systems is ambivalent. As Durga K.C. suggests for Rajapur,[18]

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[16] See also K. von Benda-Beckmann et al. 1997.

[17] A woman who reaches the age of 35 unmarried, or who has no brothers, has a right to inherit family land from her father. This happens only in extremely rare cases. Upon marriage, she has to return the property to her brothers or other male relatives.

[18] Personal communication.

improvement of an irrigation system means that maintenance and repair work decreases, while there are more opportunities for agricultural work and yields in general increase. All in all, more bonded labourers may be hired, or at least less may be dismissed and they get more from the fields they are allowed to cultivate for their own consumption. But more agricultural work does not necessarily mean that more people are hired. Improvement of irrigation may in fact mean that they have to work harder, because there are more periods of active agricultural work, without a rise in income. More research is needed to look into the changes in contracts of bonded labourers.

The studies from this book do not provide an unambiguous picture of the role of caste. Examples from van der Schaaf, Poudel and Adhikari and Pradhan suggest that caste does have a stratifying impact on land and irrigation water rights though its impact if less clear than it is for drinking water. In general, caste has played an important factor in the political structure of Nepal, to which land and irrigation water rights are intimately related. People from higher castes tend to have better access to higher political authorities. They find it generally easier to obtain rights as newcomers, and find it easier to protect their own rights and more often infringe on the rights of others without being sanctioned. However, as caste is so much related to both ethnicity and to religion, further research is needed to understand its role in social and economic stratification and in land and water rights in particular.

All this points to the conclusion that water rights cannot be studied without studying land rights. And it is crucial to understand how labour is organised and who has command over the labour of individuals, whether male heads of households, junior men, female heads of households, wives of household heads, daughters-in-law, sons or daughters, sharecroppers, tenants, or bonded labourers. The differences in rights to water are a reflection of social stratification. This forces one to take social differentiation into consideration. The different water rights are not evenly distributed among all potential "beneficiaries" within a command area, nor do the various members of a household have the same rights to irrigation water. Gender, caste and class are powerful social differentials that underlie and legitimate unequal access to water.

Gender and rights to water

When gender issues in irrigation are discussed,[19] the topic that stands out is the position of female headed households. Given the increasing frequency of households that are permanently or temporarily headed by women due to male (labour) migration, this is very important, and it also fully fits in the general perspective of studying households as the basic unit. However, it is only part of the overall gender problem. Women as wives, as daughters, as daughters-in-law, as mothers and mothers-in-law, as widows, all have different positions within a household, within the family and within the

[19] One of the outcomes of the earlier research projects discussed in Pradhan et al. 1997 was that we needed to look more closely at some of the major factors in social stratification. As a result, this volume contains a number of studies on gender differentiation.

wider set of social relationships they stand in. Gender appears to be particularly difficult to come to grips with in irrigation, because the potential problems are not immediately evident.

In Nepal most people, including irrigating farmers, say that irrigation is a male activity. However, "irrigation" then is conceived as a limited set of activities within the wider context of irrigated agriculture. The discussions usually centre on the maintenance of the head works and primary canals. One of the reasons is probably that irrigation and water management in public discourse are considered communal activities that involve communal rights from which individual rights are being derived.[20] Besides, public discussions usually focus on larger irrigation systems, where the head works, intake and main canals are relatively far away from the fields and settlements. Repair and maintenance require absence from home for a considerable period of time, which would conflict with the caring and household tasks of women (Pun). However, irrigation activities include much more than maintenance and repair of the main infrastructure. That women usually do not participate in repairing and maintaining the head works and primary canals obscures the fact that women do take part in irrigation. In many parts of Nepal, women take an active part in irrigation. They irrigate their family plots, especially upland, but sometimes, though not always, also rice-land, and they also clean and maintain tertiary and field canals. Several papers report that women have more difficulties implementing the water rights of their household in the absence of an adult male, than men have.[21]

We have mentioned that, because water rights are closely associated with rights to land and maintained by investing in irrigation management either with money or with labour, and because land rights are mostly acquired through inheritance, women have less, and lesser rights to use water than men. But perhaps equally important is their inferior role in decision making processes regarding irrigation. Though in many parts of Nepal women at least have indirect influence on decisions regarding the choice of crops and the time of planting and harvesting, decisions about the allocation of water and the organisation of irrigation are very much a man's domain. All papers in this volume report that women do not participate in these decision making processes. The main reason seems to be that decisions are not made at the household level, but in public arenas such as the meetings of the water users association, or the more informal meetings of water users. This means that the public part of water rights, i.e., the right to participate in decisions concerning operation, maintenance and repair, belongs virtually exclusively to men.

At the level of legal regulation, there have been certain changes that give women more authority in such institutions. If a water users association wishes to be registered, regulations require that at least two women be registered as members. However, in practice this does not mean that female heads of household can now exercise the

[20] For a more theoretical discussion of gender and water rights, see F. and K. von Benda-Beckmann in this volume.

[21] See Bajracharya, van der Schaaf, F. and K. von Benda-Beckmann. See also Zwarteveen and Neupane 1996, Meinzen-Dick and Zwarteveen 1998: 179.

public part of their water rights. Instead, high status, literate women are usually appointed in order to fulfil the legal requirement (van der Schaaf). Moreover, even if women become members of a water users association that does not yet mean that they become members of its committee where the major decisions are likely to be taken. In short, women have lesser land and water rights in their own name; they share in the land and water rights of the men in their households. They exercise their rights in a more indirect way. Their rights are strongest where they pertain and can be exercised at the household level. The more public aspects of water rights are by far the weakest and are often altogether absent. Moreover, women's opportunities to exercise their rights are seriously constrained by cultural and ideological perceptions. As Bajracharya and Pun suggest, the fact that women do not participate in maintenance and repair of the head works has more to do with ideological notions of what women are capable of doing than with their actual physical strength. It is not considered appropriate that women attend public meetings and even less to speak up there. Women are not supposed to irrigate at night, because "a good" woman would not do so (van der Schaaf). Hindu religion with its strong normative guidelines concerning gender differences is a reservoir of ideas that influence actions and/or that can be invoked to justify actions quite contrary to laws of the state and probably also to some of the more profound interpretations of religious learning itself.

The significance of legal pluralism

The papers presented here all demonstrate the importance of studying water rights and water conflicts from a perspective of legal pluralism. Not in order to choose between the various legal orders, and not because one legal system is inherently better, more effective, or more equitable than the other. On the contrary, the papers all point more at the weaknesses of the various sets of legal norms, be they customary or state law. The papers also point at the diversity among the various customary legal systems related to water. This suggests that much more systematic comparison of customary legal systems is needed, rather than focusing exclusively on the usual opposition between state law and customary law. For instance, customary legal systems differ in the extent to which women may have rights to land and may inherit land. This must have consequences for their ability to acquire rights to water. Also, ethnic groups were incorporated into the kingdoms and in the Kingdom of Nepal in different ways and at different times. This means that customary legal systems were in various ways and to various extents affected by the law of the centralising states. Given the importance of land and water as a means to bind local rulers to the kings, rights to land and water have been differently defined in different regions, as the examples from Dang, Ilam and Rajapur suggest.

The use of the word "customary law" in the context of Nepal is not without problems. For "custom" and "customary law" are usually associated with local tradition, sets of rules having their own basis of legitimacy in generally accepted social practice, distinct and different from the rules of the state with their own legitimacy. Irrigation

systems, however, often have been constructed on the basis of a grant from the king or another feudal lord, and in the historical development of many irrigation systems the local "farmer managed" irrigation systems were based on rules that regulated the relationship between feudal lords and their fiefs. They had more to do with the feudal state or state formation, than with local relationships *per se*.

In what sense, then, can the rules of the feudal system be called customary law? In trying to answer this question, two points shall be made. One is that the feudal system was part of the customary legal situation, though this situation was undergoing much change. Customs were being renegotiated not only among local people in local communities, but also within the larger political framework of the evolving feudal state. Indeed, up till the mid 19th century there was no clear distinction between state law and customs. The first codified law which was valid throughout the Kingdom of Nepal was promulgated only in 1854 AD (Pradhan), and it largely recorded and officially validated rules in use, often referred to as "customary practices". Customary in the first place thus denoted rules and practices of older historical origin rather than indicating a particular non-state legitimation of such rules and rights. This only gradually changed when the state organisation and state legal regulation increasingly were differentiated from the older political organisation, new rule making and administrative institutions emerged which created new national and local spheres, new forms of self-regulation in these spheres and new linkages between these spheres.

This brings us to the second and more intriguing point. The research shows clearly that everywhere local communities at different stages in history appropriated state regulations and rights, such as rights to irrigation systems. What were considered external rules from distant rulers, over time became internal rules of the community and were incorporated into the existing body of regulations. When new state regulations were made, people started to consider the older organisation structure and the rules and regulations as belonging to and based in the local community, rather than something forced upon them from outside. This means that the opposition between customary law and state law becomes even more blurred. Increasingly it is not so much the historical origin that counts, but rather the fact that people perceive regulations as belonging to them and based on local authority structures, rather than on external legitimate authority. Their "local laws" often are hybrid legal forms that combine elements of state law and customary legal rules and principles (F. and K. von Benda-Beckmann and Spiertz 1997). Nepal is by no means unique. Studies on the history of land developments in Mexico (Nuyten 1997), the Philippines (Wiber 1991) and Indonesia (F. and K. von Benda-Beckmann and Brouwer 1995, Spiertz 1991) show that this often is the case in long processes of state formation. What at one time was strongly resisted as undue external influence by a state authority may at a later stage evolve into an internal institution that deserves scrupulous defence against external intervention.

The question that remains is what are precisely the mechanisms and the conditions under which this appropriation takes place? This is not just of historical importance but an important issue in contemporary Nepal where many locally managed systems

are rehabilitated. While the extent and duration of the control of the system by the external agencies may be limited, and the systems themselves still be referred to as "farmer managed", the projects introduce new rules about water allocation and operation and maintenance of the systems. What happens in these transitional phases? Do we have to do with similar processes of intervention and appropriation? Can we draw lessons from the historical examples? Projects, policy makers and legislators usually devote little attention to the problems of transition and assume that from the moment of introduction the new situation starts and is taken for granted. The time frame of transition is an important field for further study.

Religious law is another intriguing element of legal pluralism in Nepal. During the workshop it was felt that religious norms related to water in general and more specifically irrigation needed more attention. In the past, the Hindu theory of the king as the "lord" of the land and other natural resources provided a strong legitimation for the kings to claim authority over land and water and to exploit both land and water by levying taxes and for endowing trusted followers with land grants (Pradhan). Moreover, Hindu regulations still put limitations on the freedom for women or 'untouchable' castes in many ways and in general legitimate caste differences. The question of purity of water and the exclusion of "untouchable" castes from water sources of the pure castes is a well-known problem. But as the case discussed by Upreti show, religious norms concerning free access to drinking water may also be invoked to overcome the exclusionary character of ownership of land and drinking water sources. Religion thus creates its own equalities and inequalities in access and rights to drinking and irrigation water. Moreover, in ideology and practice, religion based caste differences are used to legitimate economic inequality and exploitation and non-conformity to legal regulation that on paper at least aims to declare caste and ethnic differences irrelevant in law and public life. Another area where religion and religious rules may be important is the *guthis*, religious, charitable trusts. Most *guthis* were established with land grants. As such they are important actors in the field of land management and probably also in irrigation. It is not so easy for ordinary farmers to go against the interests of the leaders of such charitable trusts, whose authority is religiously strengthened. The question is whether these regulations are regarded as belonging to a distinct legal sub-system, Hindu law, or whether they have become part of local law or local customs, as they are usually referred to, or both? It requires further research to understand the precise modes of inclusion and exclusion legitimated by religious laws. The issue is all the more interesting, since religious regulations have not been integrated into customary laws equally in the various ethnic groups in Nepal.

Harmony and conflict

The call for more insight into the socio-economic and legal complexities of existing organisations of farmer managed irrigation systems should not be taken to mean that older organisations are inherently good, equitable, or efficient. The studies presented

here provide no reason to idealise tradition. Tradition in many respects has been the foundation of exploitative arrangements, as the studies in particular of bonded labour and gender relations indicate. Tradition may be respected but at the same time questioned because it sanctions unfair water rights relationships. Sodemba and Pradhan quote a farmer in Ilam who complained, "We are greatly troubled by tradition." The Nepalese history of water and irrigation shows that irrigation has always been intimately related to elites and political authority. As Pradhan argues, the rulers considered it their prerogative to extend the right to construct an irrigation system to their followers. Irrigation was a means to reward local elites for collecting taxes. Many of the so-called "farmer managed systems" have been built by local leaders who received the right from their feudal ruler. It was not meant to accrue to ordinary people from the beginning. And it is only a relatively recent development that water is considered to belong to the nation as a whole and that water should be equitably – or evenly – accessible for all citizens. This new policy has changed the discourse on irrigation considerably.

Farmer managed systems are not necessarily more equitable or efficient than state managed systems. There is at least ground for scepticism to such claims. While the efficiency of irrigation systems has been studied quite extensively, the question to what extent they contribute to equity is still under-researched (but see Boelens and Dávila 1998). If it is true that most old systems were constructed by elites - who exploited the labour of ordinary farmers and slaves - and with the explicit understanding that this was a reward for paid feudal services, to what extent is it possible to call these systems equitable? And do the same elites still have prerogatives, and if not, how have they changed? Many studies show that there are fundamental conflicts in irrigation systems, between the old builders and newcomers, between landowners and landless peasants and (bonded) labourers, between people from different castes and ethnic groups, and between the rich and the poor. Such unequal relationships do not necessarily mean that the operation of the system may not be relatively harmonious and efficient. Indeed it may well be that they are relatively efficient because of class, caste and gender differentiation. In other words, we have to look at conflict and harmony at different levels. A well functioning irrigation system may be highly inequitable. The fundamental conflicts may remain largely implicit and dormant, while there are relatively few overt disputes (see Poudel).

On the other hand, we should regard state legislation and policies with the same amount of scepticism and ask to what extent they really bring more equitable relationships in irrigation and water rights. In order to make a realistic evaluation we need to learn far more about the role of the state in legislation and implementation. Reviewing the law-making process, it turned out to be quite difficult to lay hands on draft legislation. This suggests that for ordinary people it is virtually impossible to participate effectively in public debates about legal reform and to have an effective influence on legislation on a subject that is of crucial importance to them. Regarding the implementation of legislation and public policies it is also crucial to understand the ways in which the lowest level of state administration operates.

Outlook

One implication that can be drawn from the workshop papers and discussion is that we need a better understanding of the various positions people hold within households, within an irrigation system and within the wider social and political contexts in which irrigation takes place. Distinctions between head of household (male and female) and other household members, between men and women, and the ways these categories crosscut distinctions of class and caste. Van der Schaaf's account of the lives and experiences of women in Rupakot are an indication of the miserable lives women, and especially those whose husbands have migrated or died, live within the households of their in-laws or their own house. It is also a reminder of how much, or better how little, importance rights may have compared with familial relations of authority and dependence based on age and gender, and how legal standards (whatever their source and legitimation) can be neglected and abused by those – mainly men - in more powerful social positions. However, especially the tradition in policy literature of mainly focusing on "households" as "the beneficiaries" of intervention prevents us from getting deeper insights into the household internal dynamics. The same also holds true for the relationship between different socio-economic categories of rural people, as the analysis of the differences between landowners and landless peasants and of the role of bonded labourers in irrigation shows (Pun and Khadka in this volume). Also these relations should be seen in connection with ethnic and caste differences. Most bonded labourers in the Terai are Tharus, while the large landowners are predominantly higher caste hill people.

This not only has important methodological implications for further research; it also has practical implications for rehabilitation projects. If rights to water and the fruits of irrigation infrastructure are unevenly distributed not only among households but also within households, the usual way of looking at water rights implicitly or explicitly from the perspective of households becomes problematic. Further research needs to be done on social stratification within and between households and irrigation. In a more practical sense, this suggests that any intervention related to irrigation that does not explicitly deal with social differentiation, will have a bias towards land owners and towards those in command of labour, and will in all likelihood exacerbate social differences based on class, caste and gender rather than improving the situation of the poor (van Koppen 1998a, b 1999). This would be quite contrary to the stated objectives of intervention projects. For with the increasing influence of European and Anglo-American donor agencies, a counter-ideology has been brought into the country that stresses the equality of persons independent from their racial, ethnic, gender or caste status. It also stresses communality and the common goods character of water which contrasts sharply with the often aggressive particularistic economic motivations of rural people (but see Sodemba and Pradhan). While these ideas have been promoted, and often were imposed, by foreigners without receiving enthusiasm on the side of the majority of the Nepalese – richer as well as poorer – they have now been incorporated into the constitution of Nepal and are shared by a small yet growing

number of Nepali citizens. These ideals and ideological ideas are also imported into small-scale local settings in which donors plan, finance and execute development projects - and where they regularly become involved in ideological battles with the establishment. However, without addressing and changing the underlying unequal relations to land, water and decision making authority these battles will not be won.

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Gender and the Multiple Contingencies of Water Rights in Nepal[1]

Franz von Benda-Beckmann and Keebet von Benda-Beckmann

Introduction

In the past years, gender relations in water management in Nepal have increasingly captured the attention of academic and policy oriented circles. Though only few empirical studies have been made so far,[2] the interest is growing and Nepali NGOs and IWMI have initiated new research (Merrey 1997). The concerns are the same as those that have led to attention to gender and rights issues in agriculture in other countries.[3] First, and in the most general way, it is a reaction against research and policy making that leaves about half of the population unaccounted for. In Nepal, which depends for 90 percent of its GNP on agriculture, women play a major role in agricultural production. Acharya and Bennett estimate that 57 percent of adult input time into subsistence agriculture and related activities come from women, who contribute half the household income (Seddon 1987: 193). Participation of women in irrigation varies, but sometimes reaches as much as 50 percent of irrigation activities. Yet, until recently, their involvement remained largely unnoticed. Secondly, there is the socio-political and moral concern with the fundamental imbalance which characterizes gender relationships in Nepal ideologically, legally and in social practices. In the dominant Hindu religion, women are assigned social and economic positions

[1] This contribution is largely based on the paper "Gender, law and rights to land and water" which we presented at the Kathmandu Workshop in March 1998 and on a paper which we presented at the IUAES Conference in Williamsburg (F. and K. von Benda-Beckmann 1998). It comes out of our involvement in legal anthropological research training and supervision on water management and water rights. The project started in 1993 and is sponsored by the FORD Foundation in India. For earlier publications resulting from this cooperation, see R. Pradhan et al. eds. 1997, K. von Benda-Beckmann, H. J. L. Spiertz and F. von Benda-Beckmann 1996, and F. von Benda-Beckmann, K. von Benda-Beckmann and O.K. Spiertz 1997. We are grateful to researchers from FREEDEAL and the Mountain Research Management Group, IIMI-Nepal, the IWMI gender, poverty and water program, and IAAS who shared their research experiences with us. We also thank Ruth Meinzen-Dick and Rajendra Pradhan for their valuable comments on an earlier draft.

[2] See the work of Zwarteveen and Neupane 1996, Bruijns and Heijmans 1993, B. Pradhan 1983. See also the contributions of Bajracharya, van der Schaaf and Pun in this volume.

[3] See Meinzen-Dick et al. 1997, Zwarteveen 1997, Agarwal 1994, Van Koppen 1998a, 1998b, Merrey and Baviskar 1998, Boelens and Davila 1998.

that are principally subordinate to those of men.[4] Decision making processes, within and outside the household, are usually dominated by men. Women have less right to productive resources than men; the rights women have are mostly weaker than those held by men; and these weaker rights are largely derived from the stronger rights held by men or social units dominated by men. And generally, even the rights women have often cannot be asserted in social and economic life. Thirdly, studies of gender relations in irrigated agriculture and of intervention practices are critical not just on account of the inequitable consequences for gender relationships. They also emphasize in a more instrumentalist way the importance of more equal gender relations for the improvement of the general welfare of the rural population, as well as for a more efficient use of water (Agarwal 1994). Interventions in irrigated agriculture tended to be, and still are heavily informed by technological and economic considerations. In as far as local social and economic organisation is taken into account at all, irrigation is predominantly seen as a 'male domain' and men are seen as the main addressees by external agencies. The considerable role women play in irrigating as well as their lesser, derived rights to water remained largely unrecognised. As a consequence, gender specific needs for water tended to remain unexamined. The awareness of existing inequalities and their social and economic consequences has intensified with the increase of state or donor initiated actions to improve agricultural production through the construction of new irrigation schemes or the expansion and rehabilitation of existing systems. The concern for differential impact on gender relations has now joined the earlier, but gender-insensitive attention given to differential impacts of intervention in terms of people's social and economic power.[5]

In the discussions about the position of women in irrigated agriculture in Nepal and in the remedies suggested for change, the issue of property rights in general, and water rights in particular, plays a very central role. The non-existing or weak water rights of women have been held to contribute significantly to their weak social and economic position, and it has been advocated that their position should be changed by giving them independent rights to water.[6] Although the recent literature on gender, property and water rights has generated important new empirical material and theoretical insights, we think that there is a need for further refinement.

First of all, most authors writing about 'rights' do not distinguish between 'categorical' and 'concretised' rights. Categorical rights define in general terms the legal status of categories of persons and property objects as well as the type of rights and obligations between persons with respect to property objects. An example would be that "heirs of land within the command area of an irrigation system are entitled to inherit the right to water in the irrigation system". We speak of concretised rights

[4] Hindu religion is the official religion of the Nepali kingdom. For its significance in social and political life, see Burghart 1984, Gray 1995, Gellner et al. 1997.

[5] See U. Pradhan 1990, Chambers 1994, Zwarteveen 1997, Meinzen-Dick et al. 1997, van Koppen 1998, Merrey and Baviskar 1998.

[6] Agarwal 1994, Zwarteveen 1997, van Koppen 1998a.

when the legal criteria of a categorical right are inscribed and become embodied in a social relationship between actual persons with respect to actual property objects. An example would be the statement that "landowner A has a right to a turn in the rotation scheme in irrigation system X". The social processes through which categorical rights and concretised rights are established, the ways in which categorical rights are transformed into concretised rights, and through which both categorical and concretised rights are effectuated are quite different.[7] Second, there is often too little attention to the range of rights and obligations that are considered 'water rights', both categorical and concretised. The term water rights is sometimes used for the distribution and allocation only, while others regard all rights and obligations related to water as water rights.[8] Analytical umbrella concepts such as access and control and the bundle of rights metaphor need further differentiation of the aspects or types of legitimate action that are bundled in (empirical) categorical and concretised rights.[9] We suggest that it is useful to consider the full scope of aspects of rights and obligations that cover socio-political control and uses of water, both in the private and public sphere, and at individual and communal levels. Thus full member of a water user association or the state appointed controller of water distribution in the branch canal have a water right just as a land owner or a share-cropper, the difference lying in the scope and kind of legitimate action each of these rights conveys, and the scope and kind of obligations attached to them. Third, there is a tendency to treat rights to water as a distinct set of property rights. While the connection between land rights and water rights is increasingly noted (Meinzen-Dick et al. 1997), we think that the complexities of these interrelationships deserve further exploration. Fourth, too little attention is given to conditions of legal pluralism where rules and principles of different origin and legitimation co-exist in the same locality.[10] The content of categorical rights, the ways in which they are bundled, the holders of such rights and the connection of land and

[7] For an elaboration of this distinction, see F. and K. von Benda-Beckmann 1994, F. von Benda-Beckmann 1995. Compare Schlager and Ostrom (1992) who fail to make this distinction. In their words, the term "rights" refers to particular actions that are authorized, while the term "rules" refer to the prescriptions that create authorizations (1992: 250). While this conceptual clarification is useful, it should be noted that they talk about categorical rights only. They do not address the crucial significance of the social processes through which categorical rights have to be transformed into concretised rights. However, much of the gender inequality is precisely a result of this process of transformation.

[8] In the political debate about whether women should have rights to water, the term water right often seems to be preserved for the allocation or distribution, or a share of water only. For example, van Koppen (1998a: 141) states "[i]nclusion in forums or water users' associations is a 'proxy' for being vested with resource rights." She regards membership of a water users association as "recognition of water rights", not as an element of the water right itself.

[9] See for further differentiation of the bundle of rights Wiber 1991, Schlager and Ostrom 1992, K. von Benda-Beckmann et al. 1997; F. and K. von Benda-Beckmann 1996, F. von Benda-Beckmann, K. von Benda-Beckmann, Spiertz 1997.

[10] For a discussion of legal pluralism with respect to water rights, see F. von Benda-Beckmann et al. 1997. The distinction made between *de facto* and *de jure* rights which is made in resource management studies (Schlager and Ostrom 1992) also expresses awareness of plural legal conditions.

water rights are often defined differently in different legal systems. At the local level, the dominant constructions of categorical rights often are hybrid legal forms consisting of elements taken from state legislation and older or more recent local traditions ('local law'). The elements of these hybrid forms are inscribed in the concretised rights, for relations of legitimate authority and socio-political decision making as well as for legitimate forms of appropriation and use. This is particularly relevant for the final point we want to make. Studies of gender in irrigated agriculture have a tendency to focus too exclusively on gender as the most important social differential, not relating it to other social differentials such as caste and class. Constructions of gender categories and relations certainly are all-pervasive.[11] They are expressed in general cultural and religious ideas about the appropriate nature, status, rights and obligations of the genders. They are also defined into the categorical normative frameworks of institutions and organizations. Such definitions of rights and obligations may differ from the more general cultural-religious or ideological gender constructions. They are usually also different in state and local laws, and there are considerable differences between local laws as well. Moreover, gender constructions of rights are often different for categorical and concretised rights. While categorical rights can be defined as gender-neutral, all actual social relationships and concretised rights and obligations are gendered. But while gender relations are one of the most "enduring inequalities" (Tilly 1998), they are not the only one. The political-economy of Nepal is characterized by a profoundly unequal distribution of economic and political power, and a fundamentally in egalitarian socio-religious ideology and social practice (Seddon 1987: x, xi). Land ownership is highly skewed. Social, economic and political life, especially in the Hinduized areas, is largely organized along caste (*jat*)[12] differences that shape any individual's legal status and permeate all social relationships, and local categorical and concretised rights in particular.[13] Moreover, social differentials based on common kinship, class or caste, or occupation form the basis for the formation of social and economic groups in which gender, as a category is only secondary. This means that the relation between the factors gender, class and caste needs to be explored.

In this contribution we want to draw attention to what we call the 'multiple contingencies of water rights'.[14] With this we refer to the condition that water rights are contingent upon a variety of legal and non-legal elements, on land rights, family

[11] Gender refers to "socially learned behaviours and expectations that are associated with members of a biological sex category" (Andersen 1988: 48).

[12] The term *jat* refers to both caste and ethnic group. The Hinduized ethnic groups have been incorporated into the caste system. In this paper we use the translation caste, but it should be kept in mind that this may include references to ethnic groups.

[13] Gray (1995: 7). On the historical development and contemporary caste differences, see Burghart 1984, Seddon 1987, Gray 1995, Sharma 1997. See also the contributions of Pradhan and Poudel in this volume.

[14] We confine our discussion to irrigation systems that derive their water from rivers and which are farmers' managed. This is by far the majority of irrigation systems in Nepal. Privately owned springs, very small, privately owned systems that derive their water directly from a small stream as well as groundwater systems will not be dealt with here. Neither will we discuss government managed systems.

relationships, political organization and ecological conditions. We want to show that apart from discrimination at the level of categorical rights, these contingencies make it particularly difficult for women to actually acquire rights which they *could* hold under the current legal regime, or to maintain those rights after acquisition. Furthermore, we shall also show how these factors affect women differently depending on their caste and their social, economic status.

Before turning to gender differences in the structure of categorical and concrete rights to water and to the processes in which categorical rights and concretised rights can be effectuated, we shall discuss the general contingencies that condition water rights in Nepal: the connection between water rights and land rights, the specific combination of land-based water rights and socio-political specification, and the additional conditions for maintaining rights. We shall then show how characteristic features of Nepal's political, economic and geomorphic conditions lead to a highly dynamic and flexible relation between rights to appropriate and use water, land rights and socio-political decision making. Thereafter we shall go into the gendered nature of land and water rights and show how the multiple contingencies of water rights place women in a particularly difficult position in acquiring and effectuating water rights. By way of conclusion we shall argue why we do not fully share the idea that "the *biggest impediment* [our italics] to establishing legitimacy for women's need for individual water rights is the astounding lack of recognition of women as irrigators and water users" (Zwarteveen 1997: 1346). While we agree that there is a formidable problem there, we suggest that greater difficulties for changing gender relations in irrigated agriculture in Nepal lie in the connections between land and water rights, and in the way in which these form part of a wider set of socio-legal relationships.

The contingencies and dynamics of water rights in irrigation systems

The relations between land and water rights

Rights to water are rarely rights that isolate water as an object of rights completely from rights to the land on, under, or adjacent to which water is located (F. von Benda-Beckmann et al. 1997: 224). Often, in the case of groundwater and water in wells, rights to water are directly tied to rights in land. In irrigation, rights to water are often derived from rights to land. Under the present legal regime,[15] unless the state government has taken over an irrigation system, the major general rules and principles embodied in the Muluki Ain and local laws are: Landowners participating by their own labour or expenses in building a canal obtain inheritable priority rights over the water in the canal. The labour input of tenants is usually ascribed to the landowners. One may not control more water than one can use for one's own purposes. Surplus water must be shared with minor rights holders or even outsiders. First users have priority over newcomers. Migrants need the consent of original settlers to build a

[15] See Khadka 1977, Pradhan in this volume.

canal, and fields irrigated of old (*sabik*) have prior rights to water over all others. Finally, full rights in an irrigation system involve certain obligations: To retain one's right to water, one must contribute to the maintenance of the system. Full rights imply a right to a share of water both in monsoon and in dry season irrigation.

In Nepal, local rights to share in the water of an irrigation system thus are attached to the rights to fields in the command area. These fields are owned by individual or joint owners who live together with non-owners in households. Water rights may be further specified with respect to types of fields and crops. Title-holders to irrigated fields (*khet*) or dry upland fields (*bari, bhit*) may be entitled to different water shares. It is as a holder of rights to land that person, male or female, households or larger communities are in the position to claim and appropriate water for irrigating their fields. Rights to water are almost always transferred with the right to land, whether by purchase, gift or inheritance.[16]

But while there usually is a close connection between water and the land on or adjacent to which it flows, water rights have a different character than those to land due to the physical-natural characteristics of water. Water is a fugitive resource and exists in a transitory state. Because of its fluidity, the same source of water is generally used by more than one user. Because of its fluidity water rights cannot be 'fixed' in time and space as easily as rights to land. In contrast to rights to land which can be defined with respect to a clearly demarcated part of the environment, water rights are nearly always defined as relational with respect to other users (Hammoudi 1984). The distribution is structured by various technical devices such as canals, diversion heads, weirs, etc. and by a variety of distribution principles, e.g., first come-first serve, rotation schemes or volumetric calculation. The actual amount of water to which a concretised right pertains is 'fixed' through the natural flow of water and social processes of allocation, distribution and appropriation. These processes occur at different levels of an irrigation system; from the division of water between systems drawing water from the same river, the distribution between main and branch canals down to the distribution over field inlets. While the flow of water is a more or less permanent process, this specification or 'fixing' of the substantive quantity of water rights has to be done or maintained every day, and may vary with and during day and night time and over the seasons.

The actual connection between land and water rights thus is highly variable. It varies in particular with the kind of distribution adopted. A distinction must be made between water abundance and water scarcity. In water abundant areas during the monsoon, water flows continuously and right holders may tap freely. Abundance and scarcity, however, to a large extent depend on the crops that are under cultivation. This means that, though there is more water during monsoon than during the winter season, during monsoon water may be scarcer, so that only rice fields (*khet* land) may be irrigated, whereas during the winter season owners of unlevelled land (*khet/pakho*

[16] Sodemba and Pradhan in this volume report one dispute in the Ilam region in which a landowner claimed to have sold a plot of land without water rights, a claim vehemently contested by the buyer.

or *bhit*) are often entitled to irrigation water as well. If there is not enough water, a distribution system has to be developed at the different levels of the irrigation system. This usually is based on rotational use, often a combination of several rotational principles, each adjusted to a particular phase in the cropping cycle. There is considerable variation in the basis upon which rotation takes place in terms of duration, volume and order. At the level of individual fields, the share of water is generally related to the size of the fields, but there are cases in which the quality of the soil, as well as the kind of crops is also taken into account.[17] The order of water application may start with the head-reachers or with the tail-enders. Which option is chosen is not unimportant, for generally speaking it is of advantage to be among the first to receive water in a rotational system. The volume that goes into branch canals may depend on the total area that is to be served by the branches, or on the labour and financial input in the maintenance of the main canal. But it also may be shared in equal shares, independent from the size of the land in the respective command area. Or it may be determined by the relative socio-political strength of individuals or groups within the system (Shukla et al. 1997).

Socio-political control

Due to the characteristics of irrigation systems and the water flowing in them, water, more readily than land, is perceived and legally treated as a common good over which socio-political organizations such as the state or villages claim the right to regulate and distribute it.[18] In farmer managed irrigation systems, socio-political control over water is bound into a wider network of supra-household organization, consisting of influential local leaders, former *jimidars* or Water User Associations. The distribution of water may also be controlled by specially appointed functionaries (*pani pale*), who receive compensation for their work, organizing water distribution and monitoring rotation schemes.[19] Individual rights remain contingent on socio-political decision making and therefore rarely reach the level of economic power in ownership type of rights (see Zwarteveen 1997: 1339).

Maintenance of water rights

Maintaining water rights over time is further conditional on the landowners' or land users' contribution to repair and maintenance of the irrigation system. Every year the canals have to be cleaned and repaired before the irrigation season starts. If there are

[17] Over time an irrigation system may change its rotation principles several times. Durga K.C. and R. Pradhan (1997) report that a system in Tanahu district started out with a water distribution system for monsoon rice in which a period of continuous irrigation was followed by two different rotation systems. With the introduction of a new rice variety they turned to a three stage rotational system for monsoon rice. See also Van der Schaaf in this volume.

[18] For the legal history of state legal regulation on land and water, see R. Pradhan in this volume. See also Regmi 1971, Benjamin 1994, Khadka 1997, Shivakoti et al. 1997.

[19] Over time, systems may employ different operators and controlling officers (e.g., Durga K.C. and R. Pradhan 1997). It may be done by a professional operator who is appointed and paid by the users. In many cases officials from among the users are appointed to do the work.

no permanent diversion works, these have to be rebuilt every year. But semi-permanent or permanent head works are also frequently destroyed due to heavy monsoon floods and landslides. These labour obligations to contribute to the maintenance of the system are divided over households as constituent units of the local socio-political organization. The calculation of their obligations can be based on the size of the land they posses but it may also be based on the number of persons or households in the respective areas (see Shukla et al. 1997). However, only (members of) households holding land in the command area may take part in maintenance and operation activities. The same goes for tenants or sharecroppers: their rights to water are derived from the landowner's rights to the land.

These factors make the interrelation between land and water rights in irrigation systems quite complex. The rights to appropriate water are tied to land rights, but the actual specification or 'fixing' of water rights in terms of volume or time share is also dissociated from the land through processes of socio-political decision making over water as an object of communal rights and processes of appropriation. The right to the water which has been appropriated, on the other hand, is very similar to a normal private property right. Ostrom's distinction between "resource systems" or "stocks" and "resource units", what individuals appropriate and use from resource systems (1990: 31), is helpful but needs further elaboration. For what is "common" or shared property in the resource system, i.e., the water in the irrigation system, and what is a resource unit, i.e., the water appropriated (Ostrom 1990: 30), is relative to the structure of the irrigation system and the socio-political organization of decision making (see also Wiber 1991). Water in the fields is the resource unit in relation to the resource stock, the water in the irrigation branch canal. But in relation to the resource stock in the main canal, the water in the branch canal can also be seen as a resource unit appropriated by the right holders in the branch canal service area. And in relation to the river feeding several irrigation systems, the water in the main canal may be seen as a resource unit, appropriated by the community of the canal command area.

The dynamics of water rights in Nepal

We have sketched the conditions that require repeated specification of what water rights mean in a specific social and ecological context. The criteria for this specification largely have the character of principles rather than of rules. Negotiations and fights over rearrangements of water allocation and in the agreements and settlements that are reached reflect which of the principles are followed and in which hierarchy. Apart from the seasonal variation in water rights, there are additional factors that necessitate repeated readjustments and renegotiations in which water rights are concretised, both with respect to the allocation, i.e., the official, valid assignment of rights to water shares, as well as to the actual distribution of water over social units and irrigation systems (see Shukla et al. 1997, K. von Benda-Beckmann et al. 1997). A number of factors give the water rights system in Nepal a particular dynamism.

One is *socio-economic*. Irrigation development in Nepal in many areas, particularly in the Terai, has all the characteristics of a frontier. This process which started with the land reclamation schemes centuries ago has not stopped yet.[20] Migration and normal population growth demand the expansion of irrigable land. This sets one of the preconditions for the continuous flux in irrigation arrangements and the constant renegotiations of water rights.[21] In the more recent years characterized by increased intervention from the Department of Irrigation and donor projects, government sponsored rehabilitation of irrigation projects has combined with or even taken the place of purely local activities. In existing farmers' managed systems that are rehabilitated, clarification of water rights is also necessary because rehabilitation always entails principles based on local law and on the law of the state or donor agencies which come to interact in the rehabilitation process. These rights may be mutually exclusive, although this is not necessarily the case. Though agencies designing and implementing the rehabilitation may wish differently, it is not certain from the outset which set of rules and principles takes priority over the other. This is a frequent problem because intervention agencies are rarely aware of existing local regulations, let alone willing to build upon them for the renewed and enlarged irrigation system. Instead, new rules are usually designed as if there were no prior rules in place before rehabilitation. The new rules enable those 'setting the stakes' to play out the state water right authority and ideas about 'beneficiaries' against their opponents' claims based upon the existing structure of water rights. In these struggles over the concretisation of water rights, each set of rules provides a repertoire of accepted justifications and options for possible arrangements, but none of them leads unequivocally to one particular solution.[22]

Second, *changing political and administrative relationships* between villages, irrigation farmers, and especially local leaders contribute further to the frequent attempts to rearrange water rights. Such conflicts tend to be embedded in political rivalry among dominant families who have all allied themselves with various political parties. This political dynamism has a long tradition in Nepal. Under the Rana regime, when relations of political and economic patronage were still relatively simple and undifferentiated, positions of governmental and economic authority were highly unstable. Officials, district governors, tax collectors, especially at intermediate levels, were appointed and dismissed quite frequently (see Caplan 1975). The regularity with which regional and local power relations changed has continued under the new administrative regime. This process has provided a set of differentiated positions of administrative and economic power over resources in different governmental departments and district and village councils, which overlap with the more traditional powers of former *jimidar* and other traditional leaders, many of whom managed to combine, or exchange, their traditional authority with the authority of the state

[20] See the cases described by R. Pradhan, Haq and U. Pradhan (1997) and Durga K.C and R. Pradhan (1997) which illustrate the gradual expansion of irrigation systems and the constant renegotiations between old water users and new claimants.

[21] See also the case from Ilam District described by Bajracharya in this volume.

[22] This provides many opportunities for forum shopping and shopping forums (K. von Benda-Beckmann 1981). See the case studies in R. Pradhan et al. 1997 and Khadka in this volume.

administration or political parties. Moreover, Nepali party politics are highly volatile, new coalitions coming into power nearly each half year. Any change in local power relations thus is seen as a good reason to question previous water rights arrangements, as an attempt to finally implement earlier agreements, or to force new agreements that are more favourable to one's own irrigation system. This is further complicated by the fact that often the traditional political-economic jurisdictions were largely based on land grants and the irrigation system was an integral part of such area. In the newly developed system of territorial-administrative relations, however, administrative boundaries and property or irrigation boundaries are rarely congruent. Rivers and streams are the axis of irrigation systems, but often form the natural boundary between villages, areas under one socio-political control. Problems about the location of intakes for irrigation systems, questions of whether and where new intakes could be constructed, thus regularly lead to conflicts between socio-political communities.[23]

Finally, there are *geomorphic* reasons that necessitate regular rearrangements of the irrigation infrastructure and water rights, such as the frequent occurrence of floods, changes in the flow regime of the streams, and changes in the diversion infrastructure.[24] This requires new negotiations over intakes, the relocation of main canals and often even secondary channels, and water distribution within canals.

Given this need for frequent renegotiation of specific water rights, it becomes crucial for individual water users to be able to participate in such negotiations. As we shall see, women usually are excluded from the forums in which these negotiations take place and decisions are made.

Gendered rights to land and water in irrigation systems

Against the background of the specific Nepalese general structure of water rights we shall now retrace our earlier steps and look at the ways in which gender enters the structure of land and water rights, socio-political control and the concretisation and effectuation of water rights.

Gender and the land-water right connection

In terms of categorical rights, both men and women can be holders of the fullest rights to agricultural land. Ownership titles can in principle be registered in a woman's name. While women can purchase land and be a recipient of a gift which transfers land rights,[25] they are, however, limited in their rights to *inherit* land, according to

[23] An extremely interesting example of these historically shifting boundaries of irrigation units and socio-political jurisdictions over water allocation is provided by Adhikari and R. Pradhan in this volume. See also Khadka in this volume.

[24] See Shukla et al. 1997, K. von Benda-Beckmann et al. 1997: 1-57.

[25] This is mainly the case for *raikar* land which is not subject to the limitations of inherited property. In Terai communities women sometime buy land from their dowry. They become full owners, but upon their death it is inherited by sons, not by a daughter. Prabina Bajracharya and Amita Tuladhar, who have come across examples in West Gandak during their IWMI research on gender, poverty and water in Nepal (personal communication).

both state and local law. But apart from the discriminatory regulation of inheritance, women's abilities to acquire independent concretised rights to land, and consequently to irrigation water, are limited for other reasons. This has to do with the way in which social organization, kinship and marriage, and property relationships are interwoven.

The core units holding agricultural property, at least in the Hinduized regions are patrilineal segments (*santan*) comprising two or three generations, around which households (*pariwar*) are formed.[26] Women belong to their father's patrilineage until they marry. Upon marriage they become a member of their husband's patrilineage. By marrying his wife, the husband fulfils his *dharma* (Gray 1995: 49). Accordingly, wives are subordinated to their husbands. Land is the source of origin, reproduction and unity of the patrilineage. The patrilineage relates to land as a collective - within it respect (*mannu parne*) provides the discursive idiom in which gradations of control of the land (and power) are practised (Gray 1995: 147). It is the patrilineage of men who have superior rights of control over land (Gray 1995: 50). The formation and division of households is intimately linked with the property relationships and inheritance to land. Inheritance is patrilineal. Most land is acquired through one's father by inheritance. Through their birth, sons become right holders in their father's property, or rather, the property of their father's *santan*. Even if the land should be registered only in the name of the father, father and sons become co-parcerners in the joint estate.[27] After marriage, and especially after sons get children, the joint property can be partitioned. With the partitioning of the land, the joint family is partitioned as well, and the sons start to build and run their own household. Often a more informal separation of a son's family from his father's house precedes the official partitioning of the household and the joint property. Tensions between brothers, and after marriage, between their families, over the use and distribution of benefits of the land are frequent. Partitioning is seen as reflecting the tensions and struggles between the emergent new families, as a denial of the collective spirit and the authority of the father. It is therefore often deferred until after the father's death.

Women, as daughters, only have inheritance rights in land if they remain unmarried until the age of 35. This is an extremely rare occurrence.[28] Their rights to household property are seen as being compensated by the dowry they get upon marriage. Should they return to their natal household - most marriages are virilocal - they only have a right to maintenance from their patrilineage's land. When they marry, they acquire a

[26] See Gray 1995. Especially in the Hinduized population, households are of central importance in everyday life as the cultural, social and economic unit. It is through being a member in a household that Nepali men and women perceive and experience social life within and outside the domestic sphere. As Gray says, for Hindus, everyday life is domestic life (Gray 1995: 26).

[27] Inheritance refers to the whole process of inter-generational transfer of property. While in some legal systems this transfer occurs typically upon the death of an inheritor, in Nepal transfer starts at the birth of a son, when they become co-parcener. They are entitled to request partitioning of family property during the lifetime of their father. Becoming co-parcener upon birth and partitioning are part of a long process of inter-generational transfer of family property and are therefore regarded as part of the wider concept inheritance.

[28] See Gray 1995: 145. And even then, should a woman marry at later stage, she will loose her right to the inherited property.

right to be maintained, but do not get independent rights to land of their husband's family. They work on the land of their husband, or of their husband's family in case partition has not taken place yet. If a man dies without leaving sons, the widow officially inherits his property, or his share in the joint property if partition has not yet taken place. Legally, such land can be registered in her name. If widows remarry, they have to return such property to their husband's lineage. However, widows of high castes are not allowed to remarry.

Registration of land in a wife's name is a rare occurrence, especially in the case of family land, and is usually strongly opposed by her husband's family, who are afraid that the land could eventually be inherited by her daughters or be transferred by her as a gift to someone outside the husband's lineage.[29]

Given the close connection between land and water rights at the field-level, water rights are almost always vested in men, because land, especially in the villages where married women live, is generally the land owned by their husband's patrilineage in joint or partitioned ownership.[30] The land rights-household-inheritance nexus therefore also defines her rights to irrigation water. This is the case for women as a member of a household in which her father-in-law or her husband is the landowner and the person to whom the woman stands in a subordinate position. It also holds for women in the position as a temporary or near-permanent head of a household. Whatever rights women can claim is claimed on the basis of their derived rights, as a trustee for their sons or absent husband.

The position of married women, however, also varies with the position her husband, herself and children - in particular sons - have in the household, i.e., whether the household is (still) joint or partitioned. Although the familial relations of authority over persons and property are not fully severed, partition removes her somewhat from the relations of dominance with her husband's parents and the potential antagonistic relationship with her husband's brother(s) and their families.

Structurally, a married woman is in the most vulnerable position when her husband migrates, when he is seriously ill for a longer time, or when he dies. The high rate of migration has put the burden of most agricultural work on the shoulders of the women staying behind, who have to run their household during their husband's absence. The absence of the husband will shift the burden of agriculture entirely to his wife and children when they are old enough to work on the land. Ploughing has to be done by wage labourers because that is considered men's work (Bruijns and Hijmans 1993: 43). Due to the high rate of migration in some areas, this affects up to 30% of all households (Bruijn and Hijmans 1993). The probability that such a woman will be disadvantaged in discussions about the partition of the joint estate is great. She has no male support in the negotiations and struggles over the possible partition of the property, because her brothers-in-law are her immediate rivals. Her relative strength depends

[29] Van der Schaaf (this volume) found that in some cases in Rupakot land was indeed registered in a wife's name. But the women had no full control over the land. Alienation would not be tolerated by her husband's families.

[30] Gray (1995: 144) calls the right of married women a status-based "right of maintenance from the land".

also on the sex, number and age of her children. Should she only have daughters, the inclination to treat her fairly even by her father-in-law will be minimal, because she and her family will not be in the position to continue the patrilineal, and her husband's family faces the prospect that the land might be withdrawn from them through alienation by the wife or widow, or through the marriage of her daughters to a man of a different family. A mother with almost grown-up sons will have a better chance to be treated equally, with due respect and will have her land protected by her male in-laws. Much also depends on the quality of the relations between the spouses, and the other members and in-laws of the family (see van der Schaaf, this volume).

The extent to which women are dominated and oppressed within the family and individual household, however, varies considerably. The most important factors seem to be the social class of the household and its caste or ethnic affiliation (Seddon 1987: 193). There is also variation in women's involvement in subsistence agriculture and market oriented economic activities. It is usually high caste women who are under greater cultural-religious constraints to engage in other economic activities than subsistence agriculture, while women from tribal groups and even more from the untouchable *jats* have more leeway for doing so. On the other hand, given the fact that whatever rights in land women hold are derived from their husband or father's families, the kind of wealth they control or manage depends on the wealth of these families. There is thus a strange contradiction between the cultural-religious-legal and actual socio-economic possibilities women have. Wealthier and higher caste women are more likely to have the means to purchase land but are heavier constrained in engaging in economic activities outside the domestic sphere than low caste poor women.

Irrigation: appropriation and distribution of water

Apart from such structural legal constraints of acquiring concretised independent rights to land and water, women face great difficulties in asserting and effectuating their rights, whether independent or derived from their husband's rights. In most irrigation systems, women play an active role in the distribution of water and irrigating fields.[31] Irrigating involves a number of activities such as opening one's own intakes, closing others, checking the amount of water in the field, and guarding one's own intake. Women's problems in actually getting water on their (husband's) fields vary with the seasonal relative scarcity of water, the organization of water distribution, and the location of the land. In principle during periods of water abundance, when no farmer has to wait until another has taken his or her turn, women and men alike have no problems getting sufficient irrigation water. The problems come with scarcity.

Water distribution is particularly problematic for women who have no husband around, if distribution systems are less clear or where there is no strong, well functioning distribution officer. This is the case, for example, when there is only just sufficient water, but not for all interested farmers at the same time. For reasons of water efficiency

[31] See Seddon 1987: 193, B. Pradhan 1983, N.C. Pradhan 1989. In some regions, women do not irrigate *khet* land, see Prabina Bajracharya in this volume.

it may make sense to introduce an on-demand rotational system in which farmers demand water whenever and how much they want. Under this type of distribution farmers repeatedly have to negotiate turns and quantities; they also have to check closely whether the other farmers respect their turn. Often when they have opened their intake and return later to check, they find that somebody has closed it again. Such a distribution system therefore is rather unpredictable and susceptible to manipulation and power differentials. Under these conditions lower status, people from lower caste and especially women without a husband have a difficult time to get sufficient quantities of water at the right time. High class elite farmers may bluff their way in demanding more water at the most convenient time. Such a system potentially draws participants into bothersome quarrels over the distribution with others, an activity considered inappropriate especially for high caste women. The scarcer the available water is, the more problematic on-demand rotation becomes. For women these negotiations and quarrels with male and sometimes higher caste farmers are particularly bothersome. Women therefore prefer scheduled rotation schemes that guarantee some predictability (Bruijns and Hijmans 1993: 31).

When water is scarce, conflicts over water are common. During the peak-demand for water, when ploughing and transplanting rice in the monsoon there is severe competition among farmers to get a turn. Women have difficulties obtaining water under these conditions, and often only get water after male farmers have finished their irrigation (N. Pradhan 1989: 53). Moreover, it is considered to be inappropriate for women to go to the fields at night. This means in effect that they are unable to use their legitimate night turn, let alone engage in 'water stealing' and other ways of manipulating water distribution at night.

If water distribution is performed and monitored by specially appointed functionaries (*panipale*), the conditions for women improve. A strong and incorruptible functionary is especially beneficial for women. Problems and infringements of rotation rights may be reported to him and he also takes care of sanctioning. N. Pradhan reports that where there is a good organization of water distribution in place, women can take part in the distribution schedule as well as men. In some districts, women are even involved in irrigation during night hours, if the land is close to their residence. If their land is more distant, being out in the fields is risky and dangerous and nightly rotation turns cannot be used; going out at night is also disapproved on cultural grounds.[32] In that case women have to rely on their male in-laws for protection and this is not always a reliable source for protection.[33]

[32] See N. Pradhan 1989: 53. Van der Schaaf (this volume) reports that in Rupakot, Tanahun district, the situation for women became much easier when the distribution official took over distribution.

[33] There is also some evidence that contradicts this. Meinzen-Dick and Zwarteveen (1998: 183) report that women who are not a member of a water user association profit from their liberty by taking water whenever they need it, without bothering about the distribution schemes that have been made by an institution in which they do take part. The association has great difficulties to bring them under control, because they have no way of sanctioning the women. On the other hand, the authors also point out that such access, that is not based on formal legal rules and sanctions, is not secure and more subject to unequal power relations than control over water based on democratically devised rules and principles (1998: 185). It is clear that this issue deserves further investigation.

Distribution control and decision making

While decisions concerning land, crop choice and the distribution of profit may be taken jointly by men and women, husbands and wives, female household heads and their husband's in-laws, women are largely excluded from decisions over the control and distribution of irrigation water. The reason is that these decision making processes are not made at the household level, but in communal forums and organizations. And these are very much the world of men. Depending on the organization of water control, the right to decide lies in the hand of powerful individuals or families, in informal meetings, or in meetings of a water users committee or association, where elite members often informally are in control.

Distribution schedules and the division of water between major and minor irrigation canals are often contested, especially when the organization is weak and control poor. The version that 'sticks' is largely dominated by the more powerful men, high caste farmers, and often headend farmers. Distribution of rotation shares and day and night turns therefore often constitute unequal systems in which some persons, notably of low caste, low status persons and widows, have to take their turn at inconvenient times, e.g., during the night or at the end of the planting cycle. Influential people often have the most convenient position within the rotation cycle. In conflicts about the division of water over and about distribution schedules, caste and wealth differences as well as political connections play a major role. They take place in communal and public arenas in which women do not usually want, or are expected to act.

Not all irrigation systems have official institutions in which decisions about the distribution, management and operation are made. Some small farmer managed systems have virtually no formal institutions. But where water management institutions have been established, they are invariably highly gendered. Outside agencies who build or rehabilitate irrigation systems require that users committees or associations be set up, with one or two female members. But the women who are appointed or selected are often taken from the wealthier high caste households; literacy or even Nepali citizenship[34] may be required. The life experience of these women is so different from that of female heads of households or low caste and low class women, that they cannot adequately represent these women in their irrigation system. Many women express the feeling that they would not be taken seriously by men; also, that it would be inappropriate for them to speak in public.[35] Whatever influence women exert on public decision making is predominantly done within the domestic sphere.

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[34] Nepali citizenship is a politically highly sensitive issue in the southern and eastern regions of Nepal with open borders to India. Poor people, especially women, lack the financial and social resources necessary to obtain formal citizenship. Therefore, they often cannot be members of registered associations. See van der Schaaf in this volume.

[35] See Bruijns and Hijmans 1993. See also the contributions of Bajracharya and van der Schaaf in this volume. However, examples from the IWMI gender, poverty and water research in West Gandak and Andhi Khola suggest that some Water User Associations do have active female members who do speak up in public (personal communication Prabina Bajracharya, Amita Tuladhar and Shuku Pun).

Since rights to water are so strongly contingent on negotiating, decision making or struggle, women are in a weaker position than men to effectuate whatever water rights for irrigation. Women in particular have specific interests in the availability of water for domestic uses, for laundry, kitchen gardens, livestock and fodder production (see Jackson 1998: 35). Water for these purposes is often drawn from main or branch canals, but women are more or less fully excluded from decision making processes about the intake and the allocation of water between main or secondary canals. Discussions and decisions in such committees tend to focus on the distribution of water for irrigation. Other uses of water are by and large ignored. In practice this means that there is no water in the canals during the period in which irrigation water is not needed. Women have to use other water sources for domestic purposes during this time, which are often further away from their homes. Thus, exclusion of women from the decision making bodies has further reaching consequences than for irrigation only.[36]

Maintenance

In order to maintain one's (household's) rights one must fulfil one's obligation to contribute to repair and maintenance of the irrigation system. The yearly maintenance work is done by labour and financial inputs of the water users themselves.[37] Participation in maintenance establishes and confirms rights to water.[38] Maintenance work is in principle considered a male domain, but there is considerable variation. The willingness and possibilities of women to contribute to the maintenance strongly depends on their economic status and their household composition and social network. Also the extent to which women, especially those who are temporarily or permanently head of their households, have to and actually do participate in order to maintain their household's rights, varies.

Most women are reluctant to work on the main and branch canals, especially in the larger systems, because they lack the time. However, women usually contribute to the maintenance of field channels. They also contribute to the total labour input by providing snacks and food - an activity which often goes unnoticed because it is seen as belonging to the domestic sphere rather than to canal maintenance (N. Pradhan 1989: 53).

In most systems, whenever a contribution is required in cash or labour, households headed by women contribute equally to households headed by men (N. Pradhan 1989:

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[36] See van Koppen 1998b on inclusion and exclusion.

[37] The amount of work may be equally divided among the households of the users. Other ways to divide the work is on the basis of size of land or on the basis of water shares, or on the basis of one share for each hamlet. Financial inputs are usually raised by the users. If the government has made permanent structures, financial demands for maintenance are relatively low and labour is recruited from among the users. However, the costs of repair after floods or landslides may be far too high for the users. Nowadays, the government often pays at least a substantial part of the repairs.

[38] Because of that, persons who are not granted full rights usually may not participate in regular maintenance work, but they can be called upon for emergency repairs. Emergency repair does not establish rights to water.

52). When they are unable to participate in the repair and maintenance work, they often have to send male family members or hired and paid labourers. Women with a large family and good social relations can use more family labour. Better-off women who are able to produce a surplus can use this for hiring labourers. It seems that in some areas and under certain conditions, female heads of households do not participate in the maintenance at all, without loosing their water rights.[39] Poor women both lack the necessary time and labour (Cleaver 1998: 60). As a result, they may loose their potential rights to irrigation water and as a consequence be unable to work their land.[40]

As in the case of working and irrigating fields, there are differences in maintenance work according to the caste status of women and the location of the land. High caste women seem to do less maintenance work. N. Pradhan (1989) reports that in the hills women are prohibited from working in repair and maintenance activities of the larger canals. Such work is seen as 'men's' work. Often, women are described by men, but also by women, as being physically incapable of doing hard physical work.[41] Women from tribal groups and even more from the untouchable *jats* have a larger recognized room for engaging in maintenance work, and therefore have better opportunities to maintain their rights to water, however small the amount of water may be.

Thus, in two main parts of the total complex of water rights, women are either totally excluded or severely limited. This goes for participation in negotiating and deciding on rules of distribution and in maintenance work. Moreover, because of the marriage and inheritance rules they usually have only derived rights to water at best. And these rights cannot be easily effectuated without strong close male relatives or a well-functioning *panipale* in place.[42]

Conclusions

In this contribution we have outlined the major contingencies of gendered water rights in farmer managed irrigation systems in Nepal: The problem of converting categorical rights into concretised rights; the dependence of women's concretised water rights on land rights held by men; the problems women face in the actual appropriation of water, and their virtual exclusion from decision making processes over the distribution of irrigation water and over the use of water in irrigation canals and the organization of maintenance work. The latter aspect is particularly important given the highly dynamic and frequent changes in the water rights system due to changes in local political organization and the hydrological and technological structures of the irrigation

[39] Prabina Bajracharya (this volume) reports this from a hamlet in Ilam district that female headed households get exemption from labour contribution. See also van der Schaaf in this volume.

[40] See Pun in this volume.

[41] See Bajracharya in this volume. She reports that, in contrast to what men say about their physical capabilities, women complain that they are not given the opportunity because they are not called to do maintenance work.

[42] But see Meinzen-Dick and Zwarteveen 1998: 193.

systems. Women thus generally have little opportunities to acquire concretised rights and have little influence on the specification of the amounts of water, while they find it very difficult to maintain their rights and defend whatever rights they have.

Our account also shows that women never function as holders of land and water rights just as 'women'. Their legal and social position on which they claim rights or enter into negotiations is always a compound of status elements. Some of these elements derive from their individual relationship to their father's and their husband's family. Some are general, derived from their caste and class status. In any negotiation or struggle over water, they enter as a Chhetri or low caste women; as a married women or as a widow; as a member or a head of a household; claiming water for a *khet* or *bari* field in the tail- or headend of the irrigation system; in the old or newly expanded command area of an irrigation system. Women thus are simultaneously constrained by all these positional characteristics.

This means that gender cannot easily be isolated from these other social differentials. Changes directed at gender relationships, for instance claims to gender equality, affect all other categories. Political calls for gender equality are often directed at the socially 'naked' individual, abstract from his or her other social and economic characteristics such as caste and class. But since gender does not exist in isolation, questioning the legitimacy of gender inequality is likely to affect also the legitimation of other inequalities. This may be even more the case because of all categorical inequalities, gender is perceived as the most 'natural' biological inequality, although caste inequality is also based upon physio-moral categorical differences.[43] In political and academic debates, there is a tendency to focus too strongly on gender and on individualized property rights in isolation, paying too little attention to the multiple status and relational elements in which female - and male - persons are enmeshed and to the multiple contingencies of water rights.[44] Providing women with the same rights as men would mean something different according to status, caste and wealth.

How does this relate to the statement of Zwarteveen (1997: 1346) that "the biggest impediment to establishing legitimacy for women's need for individual water rights is the astounding lack of recognition of women as irrigators and water users"? We doubt whether a greater visibility and recognition of women's important role in irrigated agriculture, and as irrigators, as such would lead to much change. It depends more on the legal and social organization and rules that structure the ways in which labour is controlled and attributed through status and contractual obligations. Male wage

[43] But unlike caste, gender, in Tilly's words (1998: 75), is an exterior category to the household or village organization that is 'matched' within the organisation of households and villages and becomes an interior category as well. As Tilly (1998: 77) points out, this reinforces inequality considerably.

[44] Even Zwarteveen (1997) in her excellent paper on gender and water rights in the context of irrigation, too generally speaks of 'women', and the attribution of water rights to 'men', and does not discuss the relation of water rights to land rights. While she convincingly points out that in relation to men, women are disadvantaged in that they a) have less water rights, and hardly ever on an individual basis, and b) even where women have such rights or act as trustees for their adolescent sons or absent husbands, she fails to come back to the land right-water right nexus and women's position in the household relationship complex.

labourers, share-croppers or bonded labourers perform most of the agricultural work and canal construction and maintenance, yet it is usually attributed to those persons or institutions who control this labour. Their activities and labour inputs in irrigation remain legally irrelevant in the sense that such labour does not lead to new property rights to land and water. Likewise, the work of women in irrigation is attributed to their husband or the household, but not to them personally. But we have to keep in mind that within the household, many men do not have individual rights to land or water either. Most agricultural land is inherited property which is not at free disposal to a man. Partitioning often takes place long after a man has established his own family. But even after partitioning has taken place, the land is not fully at his disposal. However, their labour is put on their own account and at least men have the expectation that after partition they become full title holders.

This also shows that providing women with individual rights to land and water would require far more than simply passing a law to allow women to have individual rights to water. Scepticism towards the presumed security that new formal rights allegedly bring is certainly warranted, given the experiences governments all over the world have had in using legal engineering as an instrument to change social and economic conditions.[45] The introduction of categorical rights for 'women' will not automatically lead to women acquiring concretised rights. Individual concretised rights to land and water, even if they could not easily be effectuated, may give women a better bargaining position in relation with their husbands and family-in-law. But to bring women into a more equal position with men would require changing the whole structure of categorical rights as well as a fundamental change of the conditions under which women can acquire and maintain over time concretised independent rights to land and water. In other words, it would require a rearrangement of the many-stranded household relations and their marital and matrimonial property relations. Given the gender inequalities in culture and religion, it would also require a fundamental change in the worldview of men and women.[46] Unless the whole land and water rights system would be changed, women would need land rights from which their water rights can be derived. Dissociating rights to irrigation water completely from rights to land would be very difficult in the existing systems. And if it would be possible it would bring only temporary relief at best. In order to maintain such rights to water through time and over the death of an individual woman, the inheritance system would have to be changed as well.

But given the particular ways in which rights to water are simultaneously but flexibly connected to land rights and socio-political decision making over water, even if changes in the private law sphere would occur, this would not provide a solution to another set of severe problems that have come out of the Nepalese material: it would not necessarily mean that they would get more influence in decision making processes

[45] See Cleaver (1998: 47, 55) for a critique on the assumption that formal rights, i.e., rights based on the national legal system, are "more robust and enduring than informal ones." For a more general discussion of legal engineering policies, see F. von Benda-Beckmann 1989, Rose 1998.

[46] See the conditions in Rupakot described by van der Schaaf in this volume.

in Water Users Associations. For this, other, cultural-religious and economic factors that shape women's actual positions and relationships would have to change too.

Finally, individual rights would not necessarily give women a better position in defending their water rights in case there is no husband around, due to death, sickness, or migration. We have seen that because of the specific characteristics of water, defending one's right needs to be done at a particular moment. If one is too late, the water will have gone. Women have more difficulties than men to do so, although there are also examples of women who freely steal water because they cannot be controlled by the very organization that excludes them from participation.[47] In their relations and interactions with men in other households and in community institutions other cultural-religious and economic (time and labour) constraints inhibit women from actively and if necessary aggressively defending their water turns when fields are irrigated, no matter what kind of right to water they hold.

Does this all mean that one should refrain from attempts to improve the situation of women regarding water rights? Certainly not, but the analysis calls for modesty in one's aspirations. Water rights relate to many widely diverse issues, in part of high economic and political sensitivity. The path to improvement is therefore complex, difficult and long.

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[47] See Meinzen-Dick and Zwarteveen 1998: 183. It is not clear whether all women are able to steal without being punished or whether it is in particular high caste elite women who profit from this lack of control. The question is also why their husbands as head of their households are not punished as the person responsible for the household.

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Land and Water Rights in Nepal (1854-1992)[1]

Rajendra Pradhan

Introduction

This paper discusses changes in the conglomeration of rights over land and water in Nepal between 1854 and 1992. It makes three related points. First, developments in land and water rights are at counterpoint to each other. The state has been relinquishing rights over land, especially arable land, while at the same time asserting stronger claims over water. In the past, the king was the 'owner' of all land in his kingdom and his subjects had different rights to the land depending on the tenure he bestowed on them. Over time the landholding system has developed into a combined system in which private ownership by citizens is a central element, though state ownership has not been abandoned. On the other hand, water was hardly regulated at all; the legal regime concerning water has developed through increasing regulation and control into full state ownership of all water in the kingdom. Currently all individual water rights are secondary to the rights of the state.

Second, along with, or perhaps as a result of these developments, rights over land and water have been dissociated. In the past land and water rights were intimately linked; rights to water were subsumed under and acquired through land rights. Currently, though rights to use irrigation water are still linked to land rights, ownership rights over water sources have been delinked from ownership of land. The state owns all water sources, even water sources such as springs on private land.

Third, these developments in land and water rights are both part and consequences of broader changes in the political economy, especially after the so-called 'revolution' in 1950-51, which ended 104 years of despotic Rana regime. The personalised political system in which the king or ruler and the state were not differentiated was replaced by parliamentary democracy and a constitutional monarchy with a strict distinction between the king and the state; as a consequence it is no longer the king but the state

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[1] This paper is a revised version of the paper presented at the workshop titled "Water, Land and Law: Legal Anthropological Perspectives", Kathmandu, March 18-20, 1998. I would like to thank Franz and Keebet von Benda-Beckmann, Ruth Meinzen-Dick and Ajaya Dixit for their very helpful comments on earlier drafts of this paper. This paper is part of the research project on water rights in Nepal, carried out by FREEDEAL and funded by the Ford Foundation.

which is the ultimate 'owner' of all natural resources within the country.[2] The nature and functioning of the Nepalese state changed from being mainly an instrument to maintain law and order and to collect revenue to one which also plans, regulates and implements developmental and welfare activities. New laws were enacted empowering the state to increase its control and regulation of natural resources for the benefit of all the citizens.[3] Foreign aid in the form of capital, planning and training, technology and policies began to play an increasingly important role in influencing how natural resources were to be regulated and exploited.

As a consequence of all these and other developments (domestic politics, economic growth in Nepal and India, foreign trade, etc.), there have been significant changes in the relative importance, real or perceived, of land and water for the state and the national economy. Land is no longer the main source of revenue and patronage for the state. In the financial years 1952/53, 1974/75, 1983/84 and 1990/91 land revenue contributed 29.17, 9.01, 1.87 and 0.76 percent of the total revenue respectively.[4] Taxes, royalties from forests, and foreign aid contribute more revenue than land. Since the late seventies, water has been increasingly considered the most important natural resource for Nepal's development[5] because of the heavy population pressure on land, dismal agricultural growth, infant industry and service sectors, international alarm about deforestation and ecological 'crises', and international interest in Nepal's immense water resources.[6] Water is seen as 'blue gold', a potential source of enormous revenue for the state and wealth for the elites if hydroelectricity were generated and exported to India.[7] Changes in the conglomeration of rights over land and water, especially after 1951, to some extent reflect changes in the relative importance of these natural resources for the political economy of Nepal.

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[2] King Mahendra abolished multiparty democracy and instituted the so-called 'partyless' Panchayat regime in 1960 wherein the King was the absolute monarch and the source of all law. Multiparty democracy was restored after a short period of 'people's movement' in the spring of 1990. Even during the Panchayat period, there was, legally speaking, a strict distinction between the king and the state as far as ownership of land and other natural resources were concerned.

[3] The directive principle of the Interim Constitution promulgated in 1951 after the Rana regime was deposed, stated: "The government shall make all possible efforts to promote the welfare of the people by creating and fostering a social system which effectively insures social, economic, and political justice in institutions relating to national life. In particular, the government shall insure the equal rights of all citizens to adequate means of livelihood and distribute the material resources of the community in a manner best suited to the public welfare. It shall also introduce an economic system which prevents the concentration of wealth and means of production in a manner detrimental to the public interest" (Regmi 1976: 39).

[4] HMG\ Ministry of Finance 1979, 1985, 1992.

[5] The enormous potentiality of water for Nepal's development was highlighted by King Birendra in his 1977 address to the 1977 Colombo Plan Consultative Meeting: "One of our chief resources in Nepal is water, which if harnessed and managed properly holds a magic key to all-round development of our country. Used properly, not only can rivers generate electricity but also provide water for irrigation abundantly. More than that, it can also act as a catalyst for multiple forms of development including energy as alternative to our forest wealth" (Pandey 1998: 165-66).

[6] Nepal has a theoretical potential of producing 83,000 MW of hydropower (Pandey 1998).

[7] Several authors have begun to question the popular view that water resources will lead to Nepal's development (cf. Gyawali 1989, Thapa 1997).

In this paper we examine rights over land and water as defined and legitimised by state laws[8] enacted between 1854 and 1992.[9] Until the middle of the last century Kathmandu, the capital of the newly enlarged kingdom, had not yet imposed administrative and juridical control of the whole kingdom. Different parts of the kingdom, politically united after long military campaigns by the Shah kings of Gorkha, had their own laws. In 1854, eight years after Jang Bahadur Kunwar (Rana) seized power and had himself appointed Prime Minister for life, King Surendra promulgated the first collection of codified and written law, uniformly applicable throughout the kingdom. The promulgation of this corpus of law, then known simply as *'Ain'* (law) but better known now as Muluki Ain ('Law of the Land' or National Code), was part of the wider process of imposing greater and more direct control over the whole kingdom. The Ain was based primarily on Hindu religious texts, mainly *Naradsmriti* and to some extent *Manusmriti*, but it did retain some customary laws, for example those relating to marriage and inheritance and to some extent, irrigation.[10]

The major sources of state law between 1854 and 1951 were the Muluki Ain and the numerous decrees and orders issued by the kings and the Rana prime ministers on specific issues, applicable to specific areas and communities, in the hills or the plains, which were not covered by or which amended provisions in the Muluki Ain. Numerous amendments were made to the Muluki Ain over the years and finally a new Muluki Ain was promulgated in 1963. The Muluki Ains had numerous provisions concerning land rights but only a few on water rights, mainly for irrigation. These provisions were supplemented or replaced by decrees and regulations concerning land revenue

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[8] It must be kept in mind that the state's legal construction of rights is only one among other legal constructions. Other legal constructions are religious law, customary and local law. On legal pluralism, see among others, Merry 1988, Griffiths 1986, Spiertz 1992, F. and K. von Benda-Beckmann and J. Spiertz 1997). Further, the paper discusses only the construction of rights and not the practice of actualising such rights.

[9] A paper covering the earlier period of Nepali history (especially of the Kathmandu Valley) is under preparation.

[10] Several authors have commented on the Muluki Ain of 1854 and other versions, see Adhikari 1984, Hofer 1979, Kolver 1993, Fezas 1990, 1993 and Michaels 1993. According to Adhikari and others (e.g., Shrestha 1992, Khanal 1980) the Muluki Ain is based on Hindu *shastras* (religious texts), mainly *Naradsmriti* but also *Manusmriti*.
Regarding the Muluki Ain of 1854, Adhikari writes, "The *Ain* dealt not only with civil and criminal matters but also with administrative procedures and the rules governing the conduct of Government servants. It contained provisions for land management, revenue administration, land survey and the distribution of land to the landless. It also defined the relations between landlords and peasants. It included detailed provisions regarding social conduct, such as inter-caste relations, marriage, relations between husband and wife, division of family property, *Sati*, slavery and gambling, to mention only a few topics. The *Ain* is also a literary work which presents a faithful picture of Nepalese life in the nineteenth century.
"The *Ain* possessed three important features. First, it facilitated the quick disposal of disputed cases according to its provisions, because its many provisions covered all the different aspects of Nepalese society. It was no longer necessary, as had been in the pre-codification period, to consult the *Shastras* for clarification on legal points. In the second place, the Ain provided Nepal with a more or less uniform system of administration. Finally, the *Ain* become [*sic*] the foundation for all future legislation. New enactments were made to meet the changing needs, but they remained within the framework laid down in 1854" ([italics in the original] Adhikari 1984: 274 -5).

and irrigation (e.g., the Revenue Regulations for the districts of Terai (*Madhesh Mahalko Sawal*) of 1935). As discussed below, there have been many changes in the provisions in the Muluki Ain concerning land rights but not much concerning irrigation. Many of these provisions and decrees benefited the landholding elites but there were a few which, as we shall see later, attempted to benefit the tenants.

After the end of the Rana regime in 1951 and the rapid changes in the political economy of Nepal, including the activities of the state, massive influx of foreign aid, and changes in the relative importance of land and water, a whole array of new laws were enacted and continue to be enacted many of which have supplemented or replaced the provisions in the Muluki Ain. Domestic politics as well as international pressure led to a series of land reform legislation, such as the Land Related Acts of 1957 and 1964, which altered the conglomeration of land rights of the king, the state and citizens. The growing importance of water for the Nepalese economy was reflected in the promulgation of laws which specifically concerned irrigation and water resources such as the Canal Act of 1961, the Canal, Hydroelectricity and Related Water Sources Act of 1967 and the Water Resources Act of 1992.[11] These water related Acts legitimised the state's increasing control and regulation of water and finally vested ownership of water in the state.

I shall start by discussing the broader historical context of developments in rights to natural resources, particularly land and water, and pay some attention to the relations between rights to land and other natural resources. The next section examines changes in land rights based on the studies of the economic historian M. C. Regmi and the anthropologist R. Burghart as well as analysis of three versions of the Muluki Ain (1854, 1952 and 1963) and a few land related Acts. Attention will be paid to different categories of land tenure and the changes in rights and obligations of the king and the state, the holders of land tenures, and cultivators. I will then discuss changes in water rights based on the analysis of the provisions on irrigation in the three versions of the Muluki Ain and three Acts relating to water resources. These laws reveal increasing control and regulation of water by the state culminating in the 'nationalisation' of all water within the kingdom as well as the dissociation of land and water rights. The last section concludes the paper.

The king's possessions, state domain and the question of 'ownership'

The king's possessions and rights

In the classical Hindu theory of kingship, the king was perceived as the Husband (*svami*) of Earth and Lord of the Land (*bhupati*) (Derrett 1995 vol. II: 87). As the Lord of the Land and Husband of Earth, the king was the ultimate 'owner' of land as

[11] For a brief history of these legislations, see Pradhan 1990, 1994, Khadka 1997.

well as of the natural resources (wealth) on or below the surface of the soil.[12] As 'owner' of the land, the king had various kinds of rights (*adhikaras*) of 'enjoyments' (*bhogas*), including the right to tax his subjects for use of the land and other resources such as minerals (Derrett 1995 vol. II: 41) and water (Kangle 1992 vol. 2: 151).[13] The king's ultimate proprietary rights (*svata*), however, did not preclude "concurrent, though distinct, rights of ownership in land between the ruler and the ruled" (Derrett 1995 vol. 1: 40). Several persons simultaneously could have different types of rights (*adhikaras*), even inconsistent and mutually exclusive ones, over a piece of land, "...those of the king, the ultimate proprietor and receiver of land revenue and other profits from each tenure; of the *mula-svami* or *bhaumika*, the land holder, payer of land-revenue; of the mortgagee to whom he has mortgaged it; of the sub-mortgagee to whom the mortgagee had sub-mortgaged it; and finally of the cultivator to whom the sub-mortgagee has leased it" (Derrett 1995 vol. II: 86-7).

The king's rights included rights to transfer and even alienate his proprietary rights to his subjects. When the king granted tenure of land to his subjects, he transferred some his rights of *bhogas* (enjoyments) to the land; the more *bhogas* he transferred to them, the more valuable was the tenure. The most valuable of the *bhogas* were known as the *astabhogas* (eight enjoyments) which were "treasure, unclaimed property, rocks, present sources of profit, accruing sources of profit, water, existing privileges, privileges that might be conferred" (Derrett 1995 vol. II: 86, footnote 317). The transfer of the *astabhogas* amounted to the fullest alienation of land. The *bhogas* could be severed and granted or sold separately to different persons: "[L]and could be sold without the right to use a well in it, and trees could be sold, leased, or mortgaged, without affecting ownership of the soil" (Derrett 1995 vol. I: 39).

Three points emerge from the above discussion, which is of relevance to this paper. First, from the perspective of the king, the king 'owned' all land and the natural resources on or below the surface of the soil. Second, rights to land and other natural

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[12] "Brahma arranged that the king was (to be) the owner of all wealth and specially (wealth) that is inside the earth" (Derrett 1995 vol. I: 39).

[13] Kangle (1992 vol. 2: 151, footnote 18), commenting on a section in the *Arthashastra* which discusses different taxes for the use of water (from rivers and ponds) for irrigation, remarks, "[T]he king is entitled to a water-rate even when the works are made by the farmers themselves, because he is the owner of all water as well as land." It is worth quoting this section in full, mainly because it has hardly been discussed. "The (farmers) shall pay a water-rate of one-fifth in the case of water set in motion by hand from their own water-works, one-fourth when set in motion by shoulders and one-third when set flowing in channels by a mechanism, one-fourth when lifted from rivers, lakes, tanks and wells" (*Arthashastra* 2. 24. 18, Kangle 1992). Farmers who constructed water works (irrigation channels, tanks, etc.) with their own labour or investment were granted tax exemption from water-rate (water taxes?) for a number of years (3.9.33). Further, though the king owned (natural) sources of water such as rivers, water stored in man-made structures and the structures themselves could be owned (and sold, leased, mortgaged, etc.) by the subjects. However, the king retained rights to some control over such structures: the ownership of tanks, for example, lapsed, if it had not been in use for five years and persons who leased, rented or received water works had to maintain them (cf. Rangarajan 1992: 232 [3.9.32, 3.9.36, 3.10.3]). Some of these provisions are very similar to the old Nepalese laws concerning irrigation structures and water, see below.

resources were not intimately linked: rights to these resources could be separated when they were transferred to the king's subjects and when they in turn transferred them to others. Thus land could be sold or granted without transferring rights to water or forest on the land. Third, there were different kinds, levels or hierarchies of property rights over land and other natural resources which could be held simultaneously by different persons. In other words, property relationship was perceived in terms of "bundle of property rights" (cf. F. von Benda-Beckmann 1979, F. von Benda-Beckmann et al. 1997, Wiber 1992, Schlager and Ostrom 1992).

In the traditional Nepalese polity, the king, as in the classical Hindu polity, was the 'lord' or 'owner' of land (Kolver 1993, Burghart 1996). After the 'unification' of the kingdom by King Prithvi Narayan Shah in late eighteenth century, the rulers referred to their territorial domain as *muluk*, a Persian loanword that means possessions. The king's rule was based on his proprietary relationship to the land; the territory within which the king could demand tax delimited the extent of his kingdom. The king saw himself, at least in the administration of his possessions, as a *malik* (a Persian loanword meaning lord or master) similar to the notion of *bhupati* (Burghart 1996: 229). As Lord of the Land, the king had proprietary rights not only over land (surface) but also over all productive resources within his territory: timber, firewood, herbs and wild animals, pasture for grazing, fish in the waterways, minerals, and also trade and crafts carried out in his domain (Burghart 1996: 48). As owner of the land and resources, the king had rights to impose taxes for use of these resources and to transfer rights over these resources to his subjects.

The king did not retain sole and complete rights over land but transferred parts of his rights, and in some cases substantial rights, to his subjects by assigning or bestowing on them various categories of land tenure, such as *raikar* (tenancy rights on crown land for which the tenants paid rent to the king), *birta* (tax-free grants of land, which were usually alienable), and *jagir* (temporary assignment of tax-free land to government employees in lieu of cash salary). Tenurial rights to land also included, or encompassed, rights to some or all of the resources within the domain of the land. For example, tenants on *raikar* land had rights to use land and water for which they paid rent and fees whereas holders of *birta* tenure had ownership rights not only to the land but also to forests and water on their tenurial holdings. The latter also had rights to charge levies for the use of these resources and to sell, lease, or bequeath some or all of these rights to others.

The king or ruler assigned different categories of tenurial rights to his subjects for different reasons. In general, as Burghart notes, "The assignment of tenurial status and productive resources enabled the subjects (*raiyats*) to earn their livelihood and the king to run his government and 'enjoy his land' (Burghart 1996: 71-2). More specifically subjects were assigned *raikar* tenure mainly for revenue purposes (income of the king and later the Rana prime ministers) and they were assigned *rakam* tenure to be assured of goods and services for the royal household (and the households of the Rana prime ministers). Other categories of land tenure were assigned, as Regmi has often pointed out, mainly for political reasons. The rulers were able to sustain and

legitimise their power by assigning *birta* and *jagir* tenures to the elites.[14] Similarly, it was mainly to ensure loyalty that the Shah kings, during and after the long military campaigns to expand their territory,[15] assigned *rajya* tenure to some of the former chiefs or kings of the petty kingdoms and confirmed *kipat* tenure of the Limbu and other communities in Far Eastern Nepal (Regmi 1984: 18).[16]

Unlike land, there is very little historical evidence about rights to water sources. The rights of the king in the past included the right to tax his subjects for use of water sources and to transfer this right along with land rights to his subjects to whom he granted or assigned land tenures such as *birta, jagir* and *guthi* (Burghart 1996: 214). There is no evidence of tax being levied for use of water sources in the Kathmandu Valley but water tax was levied in other parts of Nepal by the Shah kings in the eighteenth century and perhaps earlier. Regmi mentions royal orders which reconfirmed rights of the local authorities and revenue collectors as well as holders of *jagir* tenures in the eastern Terai to levy a variety of taxes on the tenants, including taxes "for the use of communal facilities such as forests and sources of water" (Regmi 1971: 65-6, 1979: 30, 1995: 52). These rights to impose taxes were reconfirmed in 1809 but abolished from 1849 to 1857 soon after the Ranas came to power (Regmi 1978: 63). Another historian, Pandey, mentions a tax known as *vaulo*, which was one of the 36 taxes owed to the kings of the petty kingdoms in Western Nepal between the 14th to the 18th centuries. *Vaulo* was a tax levied on the subjects for the use of ponds or reservoirs, known as *vapi,* which supplied drinking water and, in some areas, winter irrigation (Pandey 1997: 462). Unlike in the examples cited by Regmi, the *vaulo* tax was not for use of natural water sources such as rivers but of a 'constructed' water source and thus perhaps similar to water fees currently paid by the irrigators in state managed irrigation systems.

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[14] As Regmi (1984: 19-20) argues, "In order to sustain their monopoly of political power through which they exploited the nation's resources for their own benefit, the rulers of Nepal, whether Shah, Thapa or Rana, had perforce to share such benefits with the aristocracy and the bureaucracy... Divestiture of ownership rights in these resources through *birta* grants in favour of priests, religious teachers, soldiers, and members of the nobility and the royal family was, in fact, the pivot on which the social and political framework of the state rested. Similarly, the growing administrative and military establishments of the government during the period and after political unification were mostly sustained through assignments of lands under the *jagir* system of tenure, rather than through cash salaries." Burghart (1996) similarly argues that the elites forced the king to assign them large tracts of land either as *birta* or *jagir* tenure, and sometimes as revenue contractors. The king bestowed *birta* grants to Brahmins, temples and monasteries to legitimise his rule.

[15] Acquisition of or control over land was the major reason for the numerous wars waged by Prithvi Narayan Shah, his supporters and descendants to conquer the numerous small kingdoms (1779 to 1815) which now constitute Nepal, for the wars with the British (1814-1815), for the power struggle between different factions of the ruling elite (1777 to 1846), and the usurpation of power by Jang Bahadur Kunwar (Rana) and his family who ruled Nepal for 104 years as Prime Ministers, the real power behind the throne (1846 -1950) (cf. Regmi 1978, 1979, 1984, 1988, 1995, K. Pradhan 1991, Stiller 1976, Whelpton 1991).

[16] On *kipat* tenure see Regmi 1976, 1978, Caplan 1970, K. Pradhan 1991, Sagant 1996; see also Sodemba and Pradhan, this volume.

State domain

We need to differentiate between king's possession (and rights) and state ownership of natural resources before and after 1951. Regmi has consistently used the term state landlordism, state ownership and state property even for the period before 1951 when, as Burghart has argued, "(t)here was no distinction between the person of the king and the state (of which he was the embodiment)" (Burghart 1997: 81).[17] Thus where Burghart would say king, Regmi uses the term state as for example in the statement, "In Nepal, agricultural lands, mines, and forests have traditionally been regarded as the property of the state" (Regmi 1984: 17). Regmi further claims that state treasury was differentiated from royal treasury even before 1951 but he also states that in practice the rulers, first the king and later the Rana prime ministers, freely used state revenues to meet their personal and household expenses (Regmi 1988: 38-42, 1995: 24-29).[18] According to Burghart, royal and state treasury were not separated before 1951. All revenues from *raikar* land and other taxes accrued to the king (and between 1846 and 1950 to the powerful Rana prime ministers who usurped the royal revenue). The royal household, as distinct from the king, was maintained from a separate category of crown land, known as *sera*, and by goods and services from artisans and servants who received *jagir* or *rakam* tenures (Burghart 1997: 71). The civil and military establishments were remunerated by *jagir* tenure. The ruler, earlier the king and later the Rana Prime Minister, appropriated all surplus revenue not spent on administrating the state.

Burghart argues that after 1951 and one may add, until the restoration of democracy in 1990, sovereignty was still vested in the king but an implicit differentiation was made between the king and the state at least concerning proprietary relations. It is only for the period from 1951 that we can speak of state 'ownership' of land and of state revenue as distinct from the king's private land and income. Since 1951 all revenues from land, tax, fines, etc. are deposited in the state treasury and the annual expenditure of the government, including the fixed stipends of the king and members of the royal family, are met from the annual budget. The surplus revenue accrues not to the king but to the state (Burghart 1996: 256-7). The land and resources within the kingdom are no longer the king's possessions but state domain. This transfer of

[17] Regmi assumes an early differentiation of the king and the state, beginning from the time of the unification of the kingdom by King Prithvi Narayan Shah. King Prithvi had conceived of the notion of an "entity to be protected and preserved independently of allegiance to an individual" (Whelpton 1991: 25). This entity was metaphorically expressed as '*dhunga*', literally meaning 'stone'. Regmi (1979: 21) argues, "(T)his concept implied that the state was an entity that transcended the person of the ruler, and that allegiance to the state superseded personal loyalty to the state." This concept is in sharp contrast to the pre-Gorkha Empire theory that the king personified the state (Regmi 1979: 21). Though the metaphor may be new, the idea that the king is only one element of the state is not new - for example, in the *Arthasastra* (6.1.1.) the king is only one of the seven elements which constitute a state.

[18] "[I]n the Gorkha Empire there was at no time any distinction between the revenue of the state and the income of the king. In other words, the King appropriated for himself the revenues of the state for his personal and household expenses, subject, of course, to the urgency of the royal needs and the availability of state funds" (Regmi 1995: 25).

ownership of land and other natural resources from the king to the state is well reflected in King Mahendra's address to the Parliament in 1960 where he stated that the ultimate ownership of land was vested in the government.[19]

The state is the ultimate owner of all land and natural resources (minerals, forests and from 1992 water) within the kingdom and, as the king did in the past, it now bestows different types of rights over natural resources to the citizens, including the king. From a proprietary perspective land is now categorised as government land (*sarkari*), public land (*sarbajanic*) and private land. All private land, that is land owned by individuals or groups for which tax is paid and which can be sold, leased, bequeathed, etc. is *raikar* land. The state has rights to acquire private land by paying compensation for the benefit of the public.

Details concerning the percentages of private and government and public lands are not available. However, it is possible to get some idea from information on land use. Most of the private lands are cultivated land; residential lands constitute a small fraction of *raikar* land. Forests, mountains, grasslands, waste lands and water bodies, roads, etc. are all either government or public land. According to one source, in 1978, forest, cultivated area, grasslands, land under permanent snow, and others (wasteland, residential areas, water bodies, etc.) covered 35.5, 16.3, 12.0, 14.9 and 21.3 percent of the total land surface of Nepal respectively (World Bank 1978). In other words, private land constitutes less than 20 percent of the total landmass.[20]

Land tenure: changing rights and obligations

This section examines changes in the constellation of rights and obligations of the king and later the state, the holders of different tenurial rights and their tenants and cultivators. For reasons of space discussion will be focused mainly on *raikar*, *birta* and *jagir* tenures.

Until 1951, the king (or his representative), as the lord or owner of all land and productive resources within his kingdom, assigned tracts of land to his subjects under different tenurial conditions. Regmi has discussed the different categories of land tenure (*raikar, birta, jagir, rakam, guthi, rajya* and *kipat*) and productive resources in various publications.[21] He argues that there were basically two categories of land tenure in Nepal, a) *raikar* or land owned by the state, based on the principle of "state landlordism", and b) *kipat* or communal ownership of land by some ethnic groups and based on the principle of customary rights to land. The other categories of land tenure were derived from *raikar* tenure (Regmi 1976: 16). The rights and obligations of the tenure holders attached to these different categories changed over time.

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[19] King Mahendra made this statement in Parliament to announce the abolition of *birta* tenure. The complete sentence runs as follows: "On the basis of the principle that the ultimate ownership of the land is vested in the Government, my Government has abolished a feudal land system like Birta" [no italics in the original] (Regmi 1978 (a): 335-6).

[20] According to the Land Resource Mapping Project, in 1986, forest covered 28.1 percent, agricultural land 26.8 percent and other 45.1 percent of the total landmass of Nepal.

[21] Regmi 1978a, 1978 b, 1976, 1979, 1984, 1988.

Rights of birta and jagir holders and revenue collectors on raikar land

Until 1951 the king retained ownership rights over *raikar* land, which he assigned to his tenants, known variously as *raitis* or *mohis*. The king received from his tenants a share of the produce as well as labour services. Revenue collectors, collectively known as *talukdars* and as *mukhiyas* and *jimmawals* in the hills and *chaudharies* and *jimidars* in the plains, were appointed to collect land taxes from his tenants. They were also responsible for ensuring that the tenants provided labour services, for example, for constructing irrigation systems and public paths, for maintaining law and order and for dispensing justice in the territory or village under their jurisdiction. The revenue collectors could evict tenants for non-payment of revenue, but they had to make up for any deficit in the revenue stipulated for their area. As payment for their services, they received a commission of between 3 to 5 percent of the land revenue collected. Further, they were allowed to extract forced labour from the king's tenants (*raitis*) for their personal work.

Birta tenures were grants of *raikar* land, usually tax-free, by the king, usually to Brahmins, members of royal family and other elites. There were many kinds of *birta* tenures, most of which were 'private property' which could be sold, mortgaged, leased or bequeathed. *Guthi* tenures were grants of tax-free land made by the king or holders of *birta* tenure for the establishment and maintenance of socio-religious institutions such as temples, monasteries, and poorhouses. Such land usually could not be alienated. *Jagir* and *rajya* tenures were temporary assignments of rights to revenue from the land subject to annual review by the ruler; these tenures could not be transferred. Except for these differences, the holders of *birta*, *guthi*, *rajya*, and *jagir* tenures had similar rights and privileges vis-à-vis their tenants.

When the ruler gifted or assigned *birta*, *guthi*, *jagir* and *rajya* tenures, he temporarily or permanently transferred most of his proprietary rights and to some extent his sovereignty[22] to the holders of these tenures. They thus acquired enormous power and privileges, especially over their tenants. Like the ruler, they had rights not only to a share of the agriculture produce (as rent) but also rights to impose levies and taxes for use of forests, pasture and water and for carrying out trade and crafts, to extract forced unpaid labour, and to dispense justice to the inhabitants of their 'tenurial domains'. They were thus 'lords' of their domains.

The ruler, however, still retained some rights and sovereignty over these tenures. First, these tenures were held at the 'discretion' of the ruler. *Jagir* and *rajya* grants were subject to annual review. Though in theory most of the *birta* and *guthi* grants were permanent alienation of 'ownership' rights of the king, these rights had to be reconfirmed whenever a new king or ruler ruled the country. *Birta* grants were often confiscated, especially when there was a change in power relations between the ruling elites. It was only towards the end of the last century that compensation was paid for confiscation of *birta* tenures. However compensation was not paid for acquisition of

[22] As Regmi (1971: 44) noted, "*Birta* and *Jagir* grants in fact meant a virtual abdication by the State of its internal sovereign authority."

jagir or *raikar* tenures, which continued to be 'owned' by the king. Second, the ruler retained ownership rights over minerals found in *birta* and other tenures.[23] Third, the ruler had rights to impose taxes of various kinds and to extract corvee labour for 'public works' from their tenants. Fourth, the king (via his officials) dispensed justice in serious cases involving five serious crimes (*panchakhat*). Finally, the king could regulate the tenants' rights and obligations vis-à-vis the holders of these tenures.

Tenants and cultivators

The tenants had some rights to the land and other resources that they acquired from the landholders. In general, tenants on *raikar* land had more rights and better security of tenancy and paid less rent than tenants on other categories of land tenures but by the beginning of this century the differences had narrowed considerably. Before 1854, while tenants on *raikar* lands in the central and eastern midlands were termed *mohi* (tenant-farmer) and had only usufruct rights to land, so long as they paid the stipulated land revenue and actually cultivated the fields, tenants in the far-western midlands and the Himalayan regions had rights to sell, mortgage and sublet their tenancy (Regmi 1976: 171-4). Tenants in these regions were called *chuni*, that is, "*ryots* who paid taxes to the government and were listed as taxpayers in the official records" (Regmi 1976:173). The rights of the *raikar* tenants in all areas of Nepal were further improved during the Rana regime: first, all registered tenants were allowed to sublet their holdings to cultivators (1854-68); then, alienation of *raikar* land by the registered landholder was permitted so long as he resided in the same district (1868); and finally all transactions in *raikar* land (sale, mortgage, lease and bequest) were legally recognised and registered (1921). The *raikar* landholders thus, as Regmi argues, became, 'de facto owners' of *raikar* land even though, unlike the *birtawalas*, they were still tenants of the king and were called *mohis* (Regmi 1976: 174-7) and were obliged to contribute labour services when called upon to do so. *Raikar* land could be confiscated or alienated without payment of compensation to the *mohis*. Further, agricultural *raikar* lands that were not cultivated were allotted to other tenants (Regmi 1976: 178). As detailed below rights of the tenants on *raikar* land were further increased after 1951, which transformed them from tenants and landholders to landowners.

Relations between the holders of *jagir* and *birta* tenures and their tenants were not well regulated before 1854. Tenants were evicted at will and rents were arbitrary and higher than in *raikar* lands. The 1854 Muluki Ain and subsequent laws regulated relations between tenants and landholders. *Jagirdars* were prohibited from evicting their tenants except for non-payments of dues; and the tenants were registered in the tax assessment records to ensure security of tenancy. Further, the *jagirdars* could not collect more rent in cash or kind than specified in the document (known as *tirja*)

[23] Minerals found in any land, irrespective of the form of land tenure, belonged to the state (Regmi 1984: 20). But he had earlier stated that minerals on *kipat* land were owned by the *kipat* holders: "In Pallo-kirat, a Limbu, until recently, exercised ownership rights within his Kipat holding not only over lands of all physical categories, such as homesites, dry lands, paddy fields, and pastures, but also over all forests, water and mineral resources" (Regmi 1978a: 546-7).

which detailed their rights (Regmi 1978(a): 483-491). The 1854 Muluki Ain granted rights to *birtawalas* to evict tenants and raise rents but the 1906 redaction of the Ain bestowed more rights to the tenants: they had rent and tenurial security more or less on similar terms as on *raikar* lands; and tenancy rights to *birta* land, just like *raikar* land, could be transferred as long as the rights of the *birtawalas* were not affected (Regmi 1976: 183-185).

The tenants not only had rights, they also had obligations to their landlords - the king, *birtawalas*, *jagirdars*, etc. Their primary obligation was to pay the stipulated tax or rent failing which they could be evicted. They also had to provide free labour services to their landlords and the revenue collectors for private as well as public works. The landlords and revenue collectors drafted the tenants, for example, to construct, maintain and repair irrigation systems (Benjamin et al. 1994: 22, Regmi 1978: 504).[24] It has been argued that the majority of the irrigation systems may have been constructed by tenants of *birta* and *raikar* lands, and possibly slaves too (Benjamin et al. 1994: 22).[25]

There was a close relationship between rights to land and irrigation water and the obligation to provide labour services for repair and maintenance of irrigation systems, especially on *raikar* land. Tenants were responsible for repair and maintenance, and often, management of irrigation systems. If they failed to do so, not only did they lose rights to irrigation water, they could also be evicted (Muluki Ain 1854 and 1952). Tenants of *raikar* lands had to inform their revenue collectors if they were unable to repair the irrigation system with their own resources. The revenue collectors in turn had to inform the local government office and request funds for repairs. Revenue collectors who invested their own money to repair damaged irrigation canals could evict the tenants on *raikar* lands if they or the state did not repair the canals for three consecutive years. On the other hand, tenants acquired secure tenancy if they contributed labour of repairs and maintenance; revenue collectors were instructed not to evict such tenants (Muluki Ain 1854, 1952; see Table 2).

In most parts of Nepal, the tenants on *raikar* and other categories of land tenure had to cultivate the land themselves (i.e., including family labour) in order to retain their tenancy rights. But over time, as mentioned above, the tenants were allowed to sublet their tenancy to actual cultivators. These registered or 'official' tenants thus became rentiers who paid tax or rent to their landlords and collected rent (*pot* or *tiro*) from the cultivators, their tenants, who were later to be known as '*kisans*' or peasant. The labour obligations to the landholders and the king were probably fulfilled not so much by the official tenants as by the actual cultivators. The rights of these cultivators were addressed only after 1951.

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[24] Revenue officials and local officials were instructed to repair and sometimes even construct irrigation systems if the tenants or landholders did not or were unable to do so (see, for example, Revenue Regulations for the Districts of Terai, April 25, 1935, cited in U. Pradhan 1990: 238).

[25] The well known farmer-managed irrigation systems in Nepal, usually described as constructed and managed by farmers, were in fact usually constructed, maintained, repaired, and often managed by the tenants (and cultivators); slaves were also used. In other words, the term 'farmer' has to be further specified.

Land tenure after 1951

After the Rana regime was overthrown in 1951, laws were enacted over a period of time, partly due to domestic politics and partly to international pressure, which abolished all categories of land tenure except *raikar* and *guthi* and which improved the rights of tenants and cultivators. *Jagir* land tenure was abolished in 1951, *birta* in 1959, *rakam* in 1963 and *kipat* in 1968 (Regmi 1976: 86, 42, 169, 103). A series of laws were enacted which transformed registered tenants (*mohis* or *raitis*) into landholders (*jaggawalas*) and finally to landowners (*jaggadhani*) and also transformed registered cultivators (*kisans*) into tenants (*mohis*) of the new landowners (see Table 1). Until 1957, the term landholders usually included landowners (such as *birtawalas*) as well as *jagirdars* and *jimidars*, but not tenants or cultivators. The 1957 Land Related Act (Sec. 2) defines a landholder (*jaggawala*) as a person who has rights to receive rent (*kut* or *tiro*). It includes under this category a) on tax-exempt lands, including *birta* lands, tenants (*mohi*) and those exempted from tax (*mafiwalas*); b) in *raikar* lands, registered tenants; and c) the *jimidar* (village level revenue collector in the Terai), so long as he enjoys *jirayat* land attached to his post [see Table 1]. Tenants of *birta* holders, like tenants on *raikar* land, were classified as landholders (Regmi 1976: 182-85). With the promulgation of the Land Acquisition Act of 1961, land rights of the former tenants on *raikar* land were further improved: registered *raikar* tenants (*jaggawalas*) were eligible for compensation if their lands were acquired by the government for public purposes (Regmi 1976: 179-180). They thus became 'landowners'.

The meaning of the term '*raikar*' has changed to mean land owned by individuals as opposed to its earlier meaning of crown land; the state, however, still retains 'ultimate' ownership of land. *Raikar* land is distinguished from state land and public land. The Land Survey and Measurement Act, 1963 defines state lands as "lands in the possession of the government for such purposes as roads, railways, and governmental offices, including waste land, forests, and rivers. Public lands, on the other hand, have been defined as land used by the community for paths, sources of water, pastures, and the like, which are not owned by any individual or family and cannot be used for agricultural purposes" (Regmi 1976: 16, footnote 1).

A further development in the land tenure system was that the status of the actual cultivators of *raikar* and *guthi* land, formerly called '*kisan*' (peasants), was upgraded to the status of *mohi* (tenants) (Regmi 1976: 203). The Land Related Act 1964 (Sec. 2 b) defines a *mohi* as "a peasant (*kisan*) who obtains land from a landholder to use the land on any condition and cultivates it with his own or his family members' labour". This Act conferred secure tenancy rights on the cultivator tenants, very similar to the rights that the tenants on *raikar* land (now termed landholder) enjoyed earlier. In other words, with this Act, 'tenants' became landholders or landowners, if one follows Regmi, and actual the cultivators of *raikar* land became 'tenants'. In addition, the new 'tenant cultivators' (*mohi*) acquired 'ownership' rights first of 25%, then with the recent amendment to the Act, of 50% of the land of which they are registered tenant cultivators.

Table 1: Definitions of different categories of landholders and tenants in selected acts

Term	Land Related Act 1957 AD	Canal Act 1961	Land Tax Act 1961	On Agricultural Matters Act, 1962	Land Related Act (Amendment) 1963	Land Related Act 1964 (and amendments)
Jaggawala and jaggadhani	A *jaggawala* is a person who has the right (*hak*) to receive rent in cash or kind from the land; it includes the following persons: 1) In "*mafi*" land (land which is fully or partially tax free, including *birta* land), if there is a *mohi* (tenant cultivator), then including the *mohi*, if not then only the '*mafiwala*'; 2) in *raikar* land, the person who has a *raitan* number (a number in the register of tenants) or is registered (*dartawala*); 3) a *jimidar* (revenue collector) so long as he enjoys *jirayat* (land attached to the *jimidari*).	A *jaggawala* is a person in whose name land is registered; the term includes a person who has been using or enjoying such a land (Sec. 2).		========== ***(jaggadhani)*** A *jaggadhani* is a person who has land registered in his name or who has acquired legal rights to enjoy and use land on the basis of being a registered landowner; also includes *jimidari* who has rights to *jimidari jirayat* land.	A *jaggawala* is a person who has a number in the *raitan* land register (*raitan numberwala*) or whose land or homestead is registered (*dartawala*); *jimidar* so long as he has rights to *jimidari jirayat* land; the term also includes persons who have rights to enjoy land on the basis of having a *raitan* number or being registered or a *jimidari* (1959 Amendment; also Land (Survey) Act, 1962).	A *jaggawala* is a person who has rights to land on the basis of the land being registered in his name for which he has to pay the current land tax to His Majesty's Government. The term includes the following persons: a) a person who has registered *birta* land in his name as per the Birta Abolition Act, 1959; b) a *jimidar* who has land associated with the *jimidari*; c) added in 1968: a person who pays tax to the government following the custom in *kipat* land tenure or a person who pays tax to such persons; d) a person who has rights to the land as an heir or a rightholder of a *jaggawal*; or a person to whom rights have been transferred or sold; e) a person who enjoys rights to use the land on the basis of possessory mortgage (*dristibandhaki*).

Table 1 continued on the next page

Table 1 continued

Term	Land Related Act 1957 AD	Canal Act 1961	Land Tax Act 1961	On Agricultural Matters Act, 1962	Land Related Act (Amendment) 1963	Land Related Act 1964 (and amendments)
raiti		A *raiti* is a person registered in the *raikar* (register) (Sec. 25).	A *raiti* is a person who has to pay land tax (*malpot*) and has a *raitan* number (i.e., is registered); the term includes a person who has legal rights to use the land (Sec. 2).			
kisan	A *kisan* is a person who earns from the land and pays rent or tax to the landholder; the term includes a sub-tenant (*magniwala*: a person who asks [for land] from the first tenant). A *magniwala kisan* is one who cultivates land which he rents from a secure *kisan* (1959 Amendment).			A *kisan* is someone who is engaged in producing agricultural goods from a land with his own or his family members' labour; includes his family members.	A *kisan* is a person who earns from a land on a contractual basis for which he pays rent in cash or kind to or shares the produce with the landholder (*jaggawala*).	A *kisan* is someone who is engaged in cultivation (*kheti ma lagegko*).
mohi			*Malpot* means land tax in kind or cash which a *mohi* has to pay His Majesty's Government; includes land tax (*bhumi kar*) to be paid by the *mohi* of land converted to *raikar* from *birta* as per the Birta Abolition Act, 1959 (Land Tax Remission Act, 1962, Sec. 2).	A *mohi* is a cultivator (*kisan*) who earns from the land and pays rent or tax in cash or kind to the owner of the land.		A *mohi* is a cultivator (*kisan*) who obtains land from a landholder to use the land on any condition and cultivates it with his own or his family members' labour (Sec. 2, b).

Private ownership of land by ordinary citizens, and not just elites or the king as before 1951, is now an integral part of the political economy of Nepal. But they do not have rights to other resources on or below the surface of land, as for example, the king and holders *birta* and *jagir* tenures had earlier. In the case of water, as discussed below, the citizens have gradually lost ownership rights to water, even on their private land.

Rights to water: irrigation and water sources

As in the case of land, there are many levels and types of water rights such as rights to own, use and sell and transfer; rights to control and regulate and perform water management activities; and senior and junior rights. All of these rights may be held equally by the same group of users or dispersed among different categories of users and even others who do not actually use water. Rights held by the state, landowners and landholders, tenants and actual cultivators, pre-existing users and newcomers in the same water source or irrigation system usually differ. The state may or may not use water from a water source but can and does, at least currently, claim ownership rights and rights to control and regulate use by means of licensing. People have use rights to water sources even if they do not own them. Prior appropriators usually have first rights to water from a water source but they usually do not have rights to sell such rights. In short, when talking about water rights it is important to distinguish between different types and levels of rights.[26]

In comparison with land, there were very few state regulations concerning water before 1951. However, there were customary or local laws. The pre-1854 regulations were concerned mainly with a) protection of water sources, especially springs which supplied water for domestic uses, by not cutting trees, b) the senior rights of prior appropriators in appropriating water from water sources for irrigation, and c) obligations to repair and maintain irrigation systems. Even after the promulgation of the Muluki Ain in 1854 and subsequent amendments, there were only a few regulations concerning water, most of which concerned irrigation. The different versions of the Muluki Ain contain many chapters relating to land rights but only a few sections dealing with irrigation. One of the reasons why the Muluki Ains did not regulate water in detail could be that water was not considered an important resource and a source of major revenue, as were land, minerals and forests. Though the users of water sources seemed to have been taxed in some parts of Nepal, the revenue from this source was probably very small. Another reason was that rights to water were subsumed under land rights. It was only after the state began to be involved heavily in construction and management of irrigation systems and hydroelectricity and when water was considered an important resource, that laws were enacted over a period of time, which addressed the question of ownership, control and regulation of water sources.

[26] See U. Pradhan 1995, K. von Benda-Beckmann et al. 1997, Wiber 1992, and Pradhan and Pradhan 1996.

We will now briefly review three versions of the Muluki Ain which have a few provisions concerning irrigation and then three Acts enacted after 1951 which concern irrigation but also water resources in general. I will focus on the changing relations between land and water rights and changes in ownership rights to water sources.

Rights to irrigation in the Muluki Ains

The Muluki Ains discuss provisions relating to irrigation very briefly in the Chapters dealing with land and tenant landholder relations (Muluki Ain of 1854), or land reclamation (Muluki Ain of 1952) or land cultivation (Muluki Ain of 1963). The provisions relating to irrigation have been put in a table format to facilitate comparison (see Table 2). These provisions deal with three aspects of irrigation: first, priority in rights to acquire water from water sources and in distribution of irrigation water; second, obligations to repair irrigation systems and security of tenancy; and third, right-of-way to construct canals across other peoples' land. Underlying these three aspects of irrigation are relations between land and water rights for irrigation.

Priority in acquiring water from water sources

The 1854 Ain is silent about how rights to water from water sources are established and how they are allocated, but presumably local and customary rules were to be followed. Most probably, the most common local and customary rules were that rights to water from irrigation sources were established by constructing diversion structures; the persons who constructed such diversion structures first to appropriate water for their canals had first priority in diverting water from the common water source. In most places customary law prohibited construction of newer canals upstream of existing canals if water supply to the latter would be affected. It was probably due to frequent conflicts over appropriation of water from common water sources that laws were enacted to regulate diversion of water from water sources for irrigation. The later versions of the Muluki Ains granted first rights to appropriate water from common water sources to persons who had constructed irrigation canals earlier. The 1952 and 1963 Ains prohibited construction of new canals upstream of existing canals if water supply to the older canals were reduced.

Allocation and distribution of irrigation water

Water diverted to a canal has to be allocated and distributed to the irrigators. According to the 1854 Ain water is to be allocated and distributed according to customary rules where such rules exist or according to shares if a share system exists. If there are neither customary rules nor share systems, distribution of water should begin with the fields nearest the source of water and move sequentially towards the tail end of the canal. The Ain does not detail how much water is to be distributed, but presumably it would depend on the size of the field of be irrigated. The 1952 and 1963 versions of the Muluki Ain do not mention customary rules or share systems. Water is to be distributed in sequential order beginning from the field nearest the

Table 2: Comparison of irrigation related provisions in three Muluki Ains (1854, 1952 and 1963)

	1854 Ain	1952 and 1963 Muluki Ains
Issue	**Chapters On Land (*Jagga jaminko*) and Tenant and Landholder (*Mohi talsing*)**	**Chapter On land reclamation (*Jagga birauneko*) (1952) Chapter On land cultivation (*Jagga abad garne ko*) (1963)**
Priority order for acquiring water from water sources		1. a. Water shall not be available for others until the requirements of the person who constructed the irrigation channel at his own expense or with his own physical labour are first met.
Sharing irrigation water (water allocation)	***Jagga jaminko* no. 52 a.** In disputes (*jhagada*) relating to canals, in places where water has been distributed according to age old custom (*parapurba dekhi chali ayeko bamojim*) and where it has been said to give water according to shares, the allocate water according to shares (*bhag*).	1. b. In places where water has been shared in the past, no one shall be allowed to withhold the usual share of the water, thus making a field uncultivable.
Sequence for distribution of irrigation water	***Jagga jaminko* no. 52 b.** In other places, once planting is completed in the upcanal (*mathi*) *khet* lands, the canal water should not be blocked, let the *khetwals* (landholder/ cultivator ?) from the lower fields take the water and plant. If the upcanal *khetwal* for some reason is unable to plant in his fields, do not say that I will not give you water until my field has been planted. The *khetwal* who has his field below (the above mentioned field) can take water and plant (*ropnu*). The *khetwal* from above should plant later. Once all the fields have been planted), then all should irrigate their fields according to their share.	1. c. After the field at the source of the water is irrigated, the next field shall use the water. If the owner of the field at the source is confronted with any difficulty, the owner of the next field shall use the water for cultivation.
First rights of prior appropriators of water sources		1. d. A new irrigation channel may be constructed at a point higher than the existing one only if the amount of water available to the field irrigated by the old channel is not reduced.

Table 2 continued on the next page

Table 2 continued

Issue	1854 Ain **Chapters On land (*Jagga jaminko*) and Tenant and Landholder (*Mohi talsing*)**	1952 and 1963 Muluki Ains **Chapter On land reclamation (*Jagga birauneko*) (1952)** **Chapter On land cultivation (*Jagga abad garne ko*) (1963)**
Obligations of irrigators		2. a. If an irrigation channel is destroyed or a field is damaged by streams or landslides, the landowners (*mohi*) themselves shall repair it as far as possible, or do so by jointly providing labourers. [Regmi adds for the 1952 version: 'They shall not share in the water supply unless they themselves make repairs;" but I have not been able to find this sentence in the original Nepali version.]
Obligations of revenue collectors		2. b. If the strength or resources of the landowners [*mohi*] prove inadequate, then the *jimidar* or the *talukdar* shall describe in a report all the particulars and write to the concerned His Majesty's Government office to request funds and if funds are released, repairs should be carried out according to the report. [*Jimidar* added in the 1963 *Ain*].
Security of tenancy and construction/repairs of irrigation systems	***Mohi talsing* no 19** If a person has with his own efforts constructed a dam and canal and reclaimed (cultivated) *khet* and *pakho* (upland), then do not give such land to other persons (who says he will give more).	2.c. If the channel is repaired with means provided by the Government, the existing landowner [*aghi kamaune: tenant?*]shall not be evicted [*pajni*]. If the irrigation channel is not repaired by either the Government or the tenant [*duniya: people*?] for three years, and the local Talukdar repairs the land or the channel at his own cost after reporting the matter to the central Government office [*dafdar*], he may [*should?*]take eviction measures. The existing landowner [*mohi*] shall not be allowed to complain that he has been evicted from the land. [This section was deleted in the 1963 *Ain*].
Security of tenancy and construction/repairs of irrigation systems		2. d. If any person offers to repair any land damaged by steams and washouts, and to pay the taxes due thereon, the existing landowner [*pahila dekhi kamaune*]shall be made to sign a document vacating the land [*rajinama garai*], which then shall be given to the person repairing it. In the Terai districts, action shall be taken after representation through the Government officer. [This section was deleted in the 1963 *Ain*].

Table 2 continued on the next page

Table 2 continued

	1854 Ain	1952 and 1963 Muluki Ains
Issue	**Chapters On land (*Jagga jaminko*) and Tenant and Landholder (*Mohi talsing*)** ***Jagga jaminko* no 10.**	**Chapter On land reclamation (*jagga birauneko*) (1952)** **Chapter On land cultivation (*Jagga abad garne ko*) (1963)**
Right-of-way to construct irrigation systems on other peoples' land to extend cultivation.	When a new canal is constructed to reclaim land (*khet biraunda*), if the canal cuts across fallow land and land is reclaimed, then no one in *raikar, birta* or similar land (tenure) should block (*thunna*) it (canal). It is permissible to construct a new canal to cultivate (*birhauna*) fallow (*banjho*) land. If a canal is built on one part of the land and three additional parts are reclaimed, then it is permissible to cut across cultivated *raikar* or *birta* (and similar) fields. If the canal cuts across three parts of cultivated (*avadi*) fields and only one section is reclaimed, then it is not permissible to build a canal across cultivated land. Do not let them do it.	3. a. Dams or irrigation channels may be constructed on any land, cultivated or uncultivated, Raikar or Birta, to bring into cultivation any land, Raikar or Birta [*and so on, gairaha*] . No obstruction shall be caused. The owner of the land [*jagga ko dhani*] shall be compensated with the value of the cultivated land taken up by the dam or irrigation channel, or given other land in exchange. But if the land that is thus taken up is uncultivated land not liable to taxation, no compensation shall be paid. [*Raikar* and *birta* are not mentioned in the 1963 *Ain*].
Tax remission for construction of irrigation systems		3. b. When landowners [*raititarfa bata*] incur expenditure on irrigation works to bring waste land into cultivation, if the tax [*tiro pot*] on the newly cultivated waste land is double that being paid on the cultivated land taken up by the dams or irrigation channels, the tax for the land taken up by the dams or irrigation channels shall be remitted.

Note: I have translated the Muluki Ain of 1854; the translation of the Muluki Ain of 1952 is from Regmi [1978: 224-5] with some changes in the translation.
The Muluki Ain of 1952 is the Ain of 1934, with amendments till 1948, published in 1952 by the Ministry of Law and Justice.

water source. These two versions also add that traditionally irrigated fields should not be deprived of water but they do not discuss the share of water to be distributed to each irrigator or field.

It is not clear from the provisions in the Muluki Ains whether riparian rights were to be given priority over rights based on prior appropriation in the sequential order of distribution of water for irrigation, especially in situations where the fields of the persons who first constructed a canal are located below the newcomers. The 1987 WECS report discussed later argues that riparian rights have priority over prior appropriators in the case of irrigation.[27]

Obligations to repair canals and security of tenancy

While the 1854 Ain was silent on the obligations of the tenants to repair irrigation systems, the other two versions instructed the tenants (*mohis*) to repair their irrigation systems themselves or provide labourers. The Ains do not state whether they should provide labour on a household basis or in proportion to the size of land irrigated. If they were unable to repair the canal, then they had to inform their local revenue collector who in turn requisitioned funds from the local government office to repair the canal.

In the 1952 version of the Ain and perhaps in the earlier versions, tenants (*mohis*) on *raikar* land who could not or did not contribute their labour for repairs of irrigation systems, were liable to lose their tenancy rights whereas those who contributed their labour or resources for construction or repairs acquired security of tenancy, as long as they paid the annual taxes. Revenue officials who invested their own resources for repair of damaged irrigation systems could evict old tenants who did not help in repairing the canals and claim tenancy rights to the vacated lands. These provisions were deleted in the 1963 Muluki Ain because of the changes in the tenurial rights of landholders (*jaggawalas*) as discussed in the earlier section. In other words, registered tenants could not be evicted for failure to contribute labour for repair and maintenance of irrigation systems. The Ain does not state whether tenants could be deprived of irrigation rights for failure to provide labour for repair and maintenance.

Right-of-way

To encourage land reclamation, landholders and tenants were bestowed rights to construct dams or irrigation canals on other landholders' lands, including on *guthi*, *birta* and *jagir* land, but only if this helped to expand land under cultivation. Rights of landholders were given some recognition. Though the 1854 Ain did not mention compensation the 1952 and the 1963 versions stipulated that the landholders whose lands were used for such purposes were to be compensated, either in cash or equivalent land in exchange. But no compensation was to be paid for uncultivated or tax-exempted land.

[27] The WECS report of 1987 argues that the law recognises both riparian rights and rights based on prior appropriation for irrigation and that riparian rights are 'given due consideration while trying to appropriate a water resource' (WECS 1987: 7).

In the Muluki Ains discussed above, irrigation rights were intimately linked with rights to land. Persons who did not have access or rights to land, either as a landholder, a revenue collector, an official tenant or a tenant cultivator did not have irrigation rights. Irrigation rights in turn were linked with contributions for construction and repair and maintenance of irrigation systems and security of tenancy was often tied to fulfilling this obligation. However, construction or repair of canals did not guarantee permanent rights to irrigation water; persons who contributed labour or resources for construction or repair of canals lost their rights to irrigation if they, for whatever reason, e.g., eviction, sale, or change in land tenure, forfeited rights to land irrigated by the canal. Rights to (irrigation) water were dependent on rights to land as well as contribution for construction or maintenance of irrigation systems. These rules or laws were and are part of local laws in many farmer managed irrigation systems.

The close and intimate relations between rights to irrigation water and land are well expressed in the views of the farmers. An informant once stated that these two rights are like nail and flesh. Another farmer stated that when one sells land, irrigation rights associated with the land automatically devolves to the buyer just as when one sells a cow the calf that is born later belongs to the new owner (see also Canal Act, 1961 discussed below). In other words, water rights are appurtenant to land rights (Martin 1986). Without rights to cultivated land, the question of rights to water (for irrigation) does not arise but the inverse situation, of having rights to irrigation water but not land, hardly ever arises in the Nepalese context. Rights to irrigation water are rarely sold or leased independently of land rights.[28]

Rights to water sources: 'ownership' and other rights

The Muluki Ains did not define who owned the water sources such as rivers, streams and lakes or the types of rights held by different categories of land tenure holders. The water sources were part of the king's possessions (and later state domain) rights to which he granted to his subjects along with land and other natural resources. After 1951, the state began to be actively involved in planning, developing and regulating water resources for public welfare and a need was felt to enact laws to empower the state to regulate and develop water sources. The three Acts discussed below were promulgated between 1961 and 1992 and reflect the growing importance of water resources in the Nepalese political economy. These Acts not only empowered the state to regulate water use, they also vested ownership of all water resources within the kingdom in the state.

The Canal Act of 1961

The 1961 Canal Act is perhaps the first legislation devoted specifically to irrigation, especially for state constructed canals.[29] In this Act, the state clearly asserted rights to

[28] See U. Pradhan (1990) and Sodemba and Pradhan, this volume, for examples of water shares sold independently from land rights.

[29] Some provisions in the Canal Act of 1961 are very similar to the bill proposed to the Advisory Council in 1954.

regulate and control water sources for irrigation purposes, especially for government constructed and managed irrigation systems (AMIS). And it indirectly claimed ownership rights to water sources.

Section 48 of the Act stated that all land at the bottom of naturally flowing or stored water was government land (*sarkari jagga*); the public was warned not use such land without government permission. This Act could be read with the Aquatic Animals Act of 1961 (Section 2, d), which defined private water (*niji pani*) as "lakes, ponds, and natural water storage to which a person has rights and is using and which is on land for which a person pays tax." The state thus claimed ownership of natural water sources in an oblique way because water above or below the surface of land owned by the government would be owned by the government just as water above or below the surface of private land is owned by private individuals. This was the first step towards claiming ownership rights of water sources. Two years later the Land Survey and Measurement Act, 1963 included rivers along with roads, forests, and wastelands as government property.

Though the Canal Act of 1961 did not define who owned water sources such as rivers, it did recognise limited water rights of the traditional users of water sources from which water was diverted to government irrigation canals. Such persons could claim compensation from the government if water supply to their fields or traditional water mills (*ghatta*) from the source they had been using was reduced or stopped due to diversion of water to a government canal (Section 7 [1]). At the same time they were prohibited from carrying out any activity which affected water supply to government canals; they would be prosecuted if they did so.

Other sections of the Act dealt with rights to irrigation water. Irrigators who used government canals had limited rights over water in the canals. They had to use the water for the purpose it was sanctioned and were not allowed to give it to persons who did not have rights to irrigation from the canal. They were liable to criminal prosecution if they violated this rule. Farmers using government irrigation canals were prohibited from selling or transferring rights to a share of irrigation water independently from land. Rights to irrigation water were tied to specific plots of land within the designated command areas. Irrigation rights were automatically transferred to the new owners when they bought land irrigated by the canals (Section 20).[30] Further, the irrigators could not establish rights to continue using water from a government canal on the basis of 'customary usage' (Section 20).[31] In other words, the state explicitly denied the citizens the rights granted by the courts to use water

[30] A person who has acquired the right (*hak*) to use the canal water or other things associated with the canal, cannot transfer the right to another person without the permission of the canal officer; however, a person who has rights to use water from a field channel (*pain*) can give such water to irrigate his fields to the tenant who cultivates his fields (*jagga kamauna*). If one wants to sell or buy immovable property which has been receiving water from the canal, then it is possible to transfer the right to water along with the land (immovable property). Unless proved to the contrary, it will be accepted that when such immovable property is sold or bought, such rights (to water) are also bought or sold (Section 20 [c]).

[31] No matter how long water from the canal is used, no right to the water will be established just by using water (Section 20 [e]).

from a source which they have been using for a certain period of time, even if it is 'owned' by others (cf. Khanal and K. C. 1997).

The Canal, Electricity and Related Water Resources Act of 1967

While the Canal Act of 1961 regulated water sources supplying water to government irrigation systems, the 1967 Canal, Electricity and Related Water Resources Act attempted to control and regulate use of all water sources, for whatever purpose. In this Act, we can see that water was considered a very significant resource for Nepal. The preamble to the Act stated that water sources such as rivers, lakes and underground water were important national wealth. This is very similar to the slogan popularised in the sixties and seventies: "green forests, Nepal's wealth (*hariyo ban Nepal ko dhan)*". This national wealth was to be regulated and controlled for the benefit of the general public by means of licensing and, if required, by the acquisition of existing private water related infrastructures.

A license was required for using water from water sources except for traditional or non-commercial use. Thus, while a license was mandatory to generate hydroelectricity it was not required for daily personal needs, for operating water mills, and for irrigation using local resources. However, a license was required even for such uses if existing or future government irrigation or hydroelectricity projects would be adversely affected (Section 3 [1]).

The Act empowered the state to acquire private irrigation or hydroelectric infrastructures to make large-scale and comprehensive arrangements. Compensation would be given, but only for acquisition of infrastructures and not, as in the earlier Canal Act of 1961, for loss caused due to decrease or non-availability of water to traditional users of the water source.

This Act weakened individual and private rights to water especially in relations to the rights of the state, "for the convenience and economic benefit of the general public". Individual and private water rights were secondary to the rights of the state and the public. The 1987 Water and Energy Commission Secretariat (WECS) report discussed below states this view more elaborately and also argued that the state 'owns' all water resources.

The 1987 WECS report

The Water and Energy Commission Secretariat, a high-level institution, under the Ministry of Water Resources, prepared a report in 1987 titled, "An Analytical Survey of the Laws on Water Resources in Nepal". The report, written by senior bureaucrats, reviewed all the 14 existing laws related to water either directly, as for example, the Canal, Electricity and Related Water Resources Act of 1967 and the Muluki Ain of 1963 or indirectly, for example, the Essential Services Operation Act of 1957 and the Village Panchayat Act of 1961. The report is an authoritative view of rights to water sources and irrigation. The 1987 WECS report and the 1985 study by APROSC, another semi-government research institution,

are clearly what we may call 'justificatory' studies for the Water Resources Act promulgated in 1992.

The 1987 WECS report begins with the premise that rights are derived from the state or rather state law. The report does not recognise rights based on customary or local law or prior usage. It is the state which confers rights on individuals and institutions.

The report argues that the state owns all water sources in the country because of the 1967 Act which refers to all water sources as 'national property' (WECS 1987: 4).[32] The state, as the 'owner' of water resources, has the right to control and regulate water use and users and to bestow rights on the public and the government to use water. The government may utilise water without any conditions, as it sees fit, whereas individuals and private companies may do so only under the conditions laid down in the law. The government and individuals, i.e., the general public, have use rights but not ownership rights over water.[33] The report argues that the concept of ownership of water by private individuals is not recognised by law "because it is not a property eligible to be traded by the people among themselves" (WECS 1987: 5). Private people can use water resources and levy some charges on others for use of facilities if they have rights to improve it but they cannot transfer ownership because they cannot own water resources. "The ownership as such is not transferable" (WECS 1987: 5).

There are two ways the citizens can acquire rights to utilise water, both as stipulated by law. First, by a license issued by the government for all uses of water except for purposes that do not require a license as prescribed by the 1967 Act. Second, for irrigation purposes, either by riparian rights or by prior appropriation, as provided by the Muluki Ain (WECS 1987: 5,7). The report argues that though the law recognises both riparian rights and rights based on prior appropriation, riparian right holders are to be given priority over prior appropriators. This argument, it seems to me, contradicts the provisions on irrigation in the Muluki Ain which accord superior rights to prior appropriators over riparian rights holders.

The report also asserts that according to the existing law, i.e., the Canal Act of 1967, rights of individuals are subservient to the rights of the state as can be seen from the fact that a) private users, individual or collective, may use water for irrigation through their own efforts only so far as existing or future government projects are not adversely affected; b) the government can take over water-use facilities of private persons by paying compensation; c) riparian rights and prior appropriation do not protect individuals from any possible 'encroachment' by the government (WECS 1987: 6, 11-12). In other words, it argues that in accordance with the principle of 'eminent domain', the rights of the state and of the 'public' are superior to the rights of individuals. The principle of eminent domain and of the subservience of individual rights to the rights of the state are worked out in the Water Resources Act of 1992.

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[32] The correct translation of the Nepali term '*rastriya dhan*' in my opinion is 'national wealth' and not 'national property' as translated in this report or 'national resources' as glossed in the earlier compilation of laws by WECS [HMG/WECS 1985].

[33] "... what is enjoyed by the government or the general public is not the ownership over the resource but the right to utilise it" (WECS 1987: 4).

Water Resources Act of 1992

The Water Resources Act (WRA) was promulgated in 1992 two years after democracy was restored. By then, water was considered the most important natural resource in Nepal, a resource which had the potential, as one leader is supposed to have said, to convert Nepal into another Hong Kong or Singapore if it were properly utilised, especially to produce hydroelectricity. The preamble to the Act does not make such bold claims but does state that the Act was promulgated so that water would be utilised rationally and beneficially, conserved, developed, managed, and made free from pollution. The WRA 1992 increased the state's power to control and regulate water use and greatly diminished water rights of the citizens.

The most important clause of the WRA 1992 from the perspective of water rights is Section 3 which states that "[T]he ownership of the water resources available throughout the Kingdom of Nepal shall be vested in the Kingdom of Nepal."[34] This section vests ownership of all types of water, above or below the ground, on private or public land, such as rivers, lakes, springs or wells, in the state. As the 'owner' of all water, the state has the right to regulate who may and may not use water resources, how, where and in which order of priority. It can also expropriate water resources used by the public without paying compensation.

Some of the provisions of the WRA are extensions or amendments of the 1967 Canal, Electricity and Related Water Resources Act. For example, as in the 1967 Act, a license is required to use water except for purposes specifically exempted by the Act. The WRA adds a further stipulation that water is to be used in a beneficial manner without causing damage to others (Sec. 4 [3]). Similarly, as in the 1967 Act, the state is empowered to acquire, for purposes of extensive public uses, existing water related infrastructures and land relating thereto for which compensation is to be paid. This Act adds that the state can expropriate water resources (Sec. 10 [2]) but, unlike in the earlier Acts, compensation would not be paid for the expropriated water sources or loss caused by reduced supply of water. As a safeguard against arbitrary expropriation of water resources and related infrastructures, the Act defines "extensive public use" as "use which does not cause substantial adverse effect to the existing use and serves benefits to a larger population than the existing population benefited from it" (Sec. 10). This clause thus affords some protection to the use rights of existing users.

The WRA 1992 empowers the state to regulate water use by laying down the order of priority for water utilisation (Sec 7 [1]). The first priority is given to drinking water and domestic use, followed by irrigation, agricultural uses, including animal

[34] The APROSC 1985 study also reported that 45% of the respondents believe that the government should own water sources, 2% district *panchayat* and 12% village *panchayat*, and only 20% of the respondents said that private parties should own water sources (Table 2, p. 69). It also recommended that to help solve conflicts over rights to water sources "all types of water resources (surface or ground water), public or private should be owned by the state" APROSC 1985: 104).

husbandry and fisheries, hydroelectricity, etc.[35] This section on the priority order of water utilisation is new. It was recommended by the APROSC report of 1985[36] but we do not know whether this recommendation was taken into account when the WRA was prepared.

Another new development of the WRA of 1992 is the recognition of the Water Users' Association (WUA). Water users who would like to utilise water resources on a collective basis could register as an association with the relevant authority. The association would then be recognised as a legal entity and could own movable or immovable property and sue and be sued [Sec. 6]. The government was authorised to turn over water related projects it had developed itself or acquired from others to the concerned WUA which then became the 'owners' of the infrastructures [Section 11]. However, the state retained ownership of water sources.

The WRA of 1992 confers on the state rights over water resources very similar to the rights the king had over land before 1951. Just as the king could levy taxes for use land and other resources, the state can levy taxes and license fees for use of water resources. Similarly, the state does not have to pay compensation for acquisition of water resources because it 'owns' all water just as earlier the king did not pay compensation for acquisition of '*raikar*' land which the king owned. It could be suggested that the WRA of 1992 has converted all the citizens of Nepal into '*raitis*' or '*mohis*' (tenants) of the state, at least with respect to water rights. The citizens have rights to use and manage but not to own water sources and their rights can be terminated at will by the state. What is interesting here is that the more the state relinquishes rights of ownership, control and use of land, that is '*raikar*' land, the more it bestows on itself rights to own, control and use water.

Conclusion

The rights of the king and the state, the elites and the commoners over land and water have changed considerably over the years, but especially after the change in the political system in 1951. It is no longer the king but the state which owns land and other natural resources in the country. The abolition of the *birta*, *jagir*, and *rajya* tenures officially ended the special privileges of the elites concerning land rights. The tenants and cultivators acquired increasingly more security of tenancy and land rights. The

[35] The priority order list does not mention religious uses of water, or perhaps religious uses are lumped under the category of domestic use or other uses. This significance absence indicates that water is seen in the law mainly as a resource to be used for economic and utilitarian purposes. The preoccupation with resource or commodity aspects of water has had one important consequence: The religious and symbolic aspects of water are totally ignored even though, Hindus, for example, use water for ritual bathing and purification, mortuary rituals, festivals, and so on. This is strange for a country which claims to be the only Hindu Kingdom in the world. FREEDEAL is currently engaged in researching on the religious and symbolic aspects of water.

[36] One of the recommendations of the report was "Priority should be fixed among different uses and according to the availability of water... In any case, the first priority should be given to drinking water purposes followed by irrigation, electricity and transportation, etc." (APROSC 1985: 106).

former registered tenants on *raikar* land have now become landholders (*jaggawala*) or more specifically landowners, as can be seen from the fact that they are issued landowner's certificate (*jagga dhani praman patra*). They have rights not only to use but also to sell, mortgage, lease, or bequeath *raikar* land and to demand compensation from the government if it acquires their land. Though the state continues to regulate tenurial relations in *raikar* land and to levy land tax from the holders of *raikar* tenancy, it has in effect renounced ownership claims to *raikar* land. In other words, as Regmi has argued, *raikar* land is now not so much crown land or state land as 'private land' in contrast to government land (*sarkari jagga*) and public land (*sarbajanic jagga*). The former cultivators on *raikar* land, i.e., cultivators who worked the land of the official tenant on contract and were registered as cultivators, have now become tenants (*mohi*) of the landowners, with secure tenancy and even ownership rights to one fourth of the land of which he or she is a registered tenant.

Developments in land and water rights are at counterpoint to each other. In the case of land, the state decreased its control and regulation of *raikar* land and even renounced its ownership rights but only of residential and cultivated land. The state is still the owner of forestland and wasteland. In the case of water, it increased its control and regulation of water and finally claimed ownership of all water resources, even springs, wells, ground water on private land which was earlier classified as private water.

With the promulgation of the 1992 WRA, land and water rights have been dissociated. In other words, unlike in the past, ownership of land does not now necessarily include ownership of water on or below the land surface and water rights may be transferred separately from land rights. It is possible to have water rights (ownership, control and use rights) without having rights to land over or below the water. However, in agency managed irrigation systems which are governed by state laws and in most farmer managed irrigation systems which have their own laws, rights to irrigation water are still intimately linked and appurtenant to rights to land in the command area.

State ownership of all water and the dissociation of land and water rights lead to further weakening of water rights of the citizens. When the citizens no longer have rights of ownership of water sources but only rights to use, like the tenants (*mohis*) of different land tenures in the past, the state may ignore the rights of the existing users (the public or individuals) based on prior appropriation or riparian rights and it may take over water resources used by the public without paying compensation. Thus, the rights of the citizens become 'subservient' to the rights of the state. This perspective is reflected in the WRA of 1992 and is in accordance with the principle of eminent domain. Water as an important national wealth - a potential source of huge revenue for the state - is to be developed by the state for the benefit of the wider public rather than to serve private, individual interests.

In the case of land, domestic political and economic compulsions as well as international pressure led to the citizens acquiring ownership rights to *raikar* land and the abolition of the privileges of the elites. In the case of water, by contrast, the

citizens have lost their rights to own water sources and increasingly national and multi-national companies and some members of the elite, especially those involved in hydro-electricity, have gained special privileges over water sources. The principle of eminent domain and the primary rights of the state over natural resources can be used to serve the interests not so much of the wider public but of the favoured few.

Ironically, the developments in land and water rights recall in many ways the classical Hindu theory of property, especially the idea that several persons simultaneously could have different types of rights (*adhikaras*) over an object of property and that the various rights could be severed and sold, leased, or bequeathed separately. As in classical Hindu theory of property, rights to land can be dissociated from rights to water. Further, just as the king was the 'ultimate' owner of all land and water resources and bestowed different types of rights to his subjects (including rights to ownership and other privileged tenures to the elites), so too the state claims 'ultimate' ownership of land and natural resources and bestows different types of rights to its citizens and will perhaps grant special rights to members of the elite.

Appendix

Preambles of selected Acts

The Canal Act of 1961 AD

Preamble: Keeping in mind the convenience and economic benefit of the general public (*sarbasardharan janta*), it is necessary to use and control naturally flowing as well as stored water from all rivers, streams, ponds and lakes to make good arrangements for irrigation.

The Canal, Electricity and Related Water Resources Act of 1967

Preamble: "Whereas it is expedient to regulate the use of important national wealth (*rastriya dhan*) such as rivers, streams, lakes, water falls and underground water for the convenience and economic benefit of the general public, and [...T]o develop irrigation in an appropriate way by providing necessary legal provisions relating to irrigation."

The Water Resources Act of 1992

Preamble: Whereas it is expedient to make arrangements for the rational utilisation, conservation, management and development of the water resources that are available in the Kingdom of Nepal in the form of surface water, underground water or in whatsoever form, and

Whereas, it is expedient to make timely legal arrangements for determining beneficial uses of water resources, preventing environmental and other hazardous effects thereof and also for keeping water resources free from pollution.

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Water Rights, Law and Authority: Changing Water Rights in the Bhamke Khola Basin[1]

Madhukar Adhikari and Rajendra Pradhan

"The person who holds the serving ladle naturally gets more."

Introduction

The term "water rights", like "property rights", is an umbrella concept which includes several kinds and levels of rights such as rights of ownership, control and management, use and alienation. These bundles of rights may be held by a single rightsholder or simultaneously by several individuals and collectivities such as water users associations, village communities or the state.[2] For example, the state may be vested with rights of ownership, control and use over public water sources such as a river or lake; a district water board or a government official may be delegated authority to regulate withdrawal of water from the water sources; and individuals and water users associations may have rights to use but not to regulate appropriation of water from the public water source. These various kinds of water rights may be grouped into two broad categories of rights, namely, rights to use and rights to regulate, control and make decisions (cf. F. Benda-Beckmann et al. 1996, 1997). In the irrigation literature, much more attention has been paid to use rights than decision making rights probably because the term 'water rights' is often understood to mean rights to use a share of water allocated by the state or water users association (Uphoff 1986; cf. Pradhan and Brewer 1998). But even authors such as Schlager and Ostrom (1992) and F. Benda-Beckmann et al. (1996, 1997) who have conceptually differentiated between these two categories of rights

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[1] This paper is a revised version of the paper presented at the workshop, "Land, Water and Law: Legal Anthropological Perspectives" Kathmandu, March 18-20, 1998. The authors would like to thank Franz and Keebet von Benda-Beckmann, Kailash Nath Pyakuryal, and the participants of the workshop for useful comments. Fieldwork on which this paper is based was done by Madhukar Adhikari, Janardhan Poudel and Mahesh Pradhan. The research is part of the FREEDEAL research project on Water Rights in Nepal, funded by the Ford Foundation.

[2] See F. Benda-Beckmann, K. Benda-Beckmann and Spiertz 1996, 1997, K. Benda-Beckmann et al. 1997, Schlager and Ostrom 1992, Pradhan 1990, 1994, Wiber 1992.

have paid much less attention to decision making rights in their actual description and analysis of data.[3]

In this contribution we describe and analyse the significance of the rights to make, implement and enforce decisions and rules concerning allocation and distribution of water and obligations to contribute labour, especially for repair and maintenance of irrigation systems. The right to make decisions are especially important in situations of legal pluralism and historical change. We describe the significance of two kinds of decision making authorities in the Bhamke Khola basin in Dang: first, authorities vested with rights by the state to allocate water turn shares to and regulate withdrawal of water by several irrigation systems from a river and second, traditional village level irrigation functionaries vested with the authority by the local community to regulate allocation and distribution of water and obligations to contribute labour for repair and maintenance.

The right to make and implement decisions and rules is important for several reasons. First, water rights are based on or legitimised by reference to law. But it is not always clear which law is relevant. Several legal orders such as state law, customary law and local law co-exist and interact in a social field such as a village (cf. Moore 1973; F. Benda-Beckmann et al. 1997). In such situations of legal pluralism, water rights, or some elements of water rights, are constructed differently by different legal orders.[4] In Dang for example, state law and local law construct the relationship between land and water rights and between water rights and ethnicity differently. Further state law accords priority to prior appropriators in withdrawing water from a river source whereas local law bestows precedence to upstream irrigation systems even if they were constructed later. And there often are several local rules which are applied in different times and for different cases. For example, labour contribution for repair and maintenance of different irrigation systems are based either on water shares, size of land irrigated or household. Second, law is often formulated as abstract principles which have to be concretised by decision making as rules applicable for specific cases (F. Benda-Beckmann et al. 1997). Therefore, the persons authorised to make decisions has the authority to shape the rules in concrete cases. Third, law and rights are subject to negotiation, contestation and change. The selection or concretisation of a particular law or combination of law from one or more legal orders or the creation of new rules affect existing water rights relationships: the share and basis of water allocation and the priority order of water distribution may be altered,

[3] Schlager and Ostrom (1992: 250-51) distinguish between 'operational rights' (rights of access and withdrawal) and 'collective-choice' rights (rights of management, exclusion and alienation). Benda-Beckmann, Benda-Beckmann and Spiertz (1996, 1997) similarly differentiate between rights to regulate, control, and represent in outside relations ('political and public rights') on the one hand and rights to use ('private rights') on the other hand. However, in actual analysis and description of data of water rights, they have paid much less attention to rights to make decisions. The literature on gender and water rights have stressed and analysed the importance of decision making rights. See Zwarteveen and Neupane 1996, Meinzen-Dick and Zwarteveen 1998. Similarly several authors who have written on land rights have also analysed both the private and public aspects of property rights, see F. von Benda-Beckmann 1979 and Agarwal 1996.

[4] For legal pluralism cf. F. Benda-Beckmann et al. 1997, Griffiths 1986, Merry 1988.

rights to use water may be granted to farmers who did not have such rights, and labour contributions for repair and maintenance may be made more equitable. The persons, who have rights to select, make, interpret and implement rules and decisions are able to protect or change existing water rights relationships to benefit themselves or people they favour. As it is said in Dang, "The person who holds the serving ladle naturally gets more."

Water rights are based on or legitimised by law but equally important, they are related to political, economic and social relationships and to other rights such as land rights (F. Benda-Beckmann et al. 1996, 1997). Power is an important dimension of law, both for the enactment as well as implementation and enforcement of law. The persons who are in positions of power generally secure better rights and more water for themselves and their allies because most often they are the decision-makers. However, it is important to emphasize that the powerful persons manipulate water rights not so much by the use of sheer power or force but by legitimate power or authority in the Weberian sense. In other words, decisions are made and implemented, at least formally, by persons who occupy positions of authority such as government officials, Chairmen of Village Development Committees (VDC), traditional villagers leaders and irrigation functionaries in forums or institutions such as annual meetings of heads of households of a village, which are accepted as legitimate by the larger community. The elite occupy or control and work through such positions of authority and legitimate forums. The decisions they make or implement are based on law, either state law, customary law, or local law, and either old law, different interpretation of old law or new law enacted in legitimate forums.

The decision-makers vary in the degree of autonomy they have to select or change water rights related laws; and they have jurisdictions over different bodies of water. Rights to make decisions concerning allocation of water from public water sources such as rivers are usually vested in government officials or village councils (currently known as Village Development Committees [VDC]). But they usually do not have rights to make decisions concerning water allocation and distribution in farmer managed irrigation systems (FMIS). Although all shareholders of FMIS have rights to participate in decision making concerning various aspects of water rights of their irrigation systems, the decisions are usually actually made by irrigation functionaries and members of the village elite.

Changes in political systems and power relationships lead to changes in laws as well as decision making authorities and institutions which in turn affect water rights relationships (cf. Shukla et al. 1997). Changes in political systems alter the power relationships between the users of an irrigation system or of different irrigation systems which often lead to changes in the functionary or office which makes and implements decisions. As discussed in the case study, with every change in the political system and decision making authority, some users and irrigation systems are allotted more favourable schedule and water turn shares and obligations for contributions than they had earlier. On the other hand, when the traditional elites retain their power and decision making authority, they are able to protect and even increase their share of water and obligations.

Rights to irrigation water are closely tied to land rights. Changes in land rights often result in changes in rights to irrigation water (see Pradhan in this volume). However, the exact nature of the relationship and change depends to a great extent on the social, economic, and political relationships between the rightsholders and between them and others with interest[5] but not necessarily rights in land and water. As we shall see ethnicity, for example, plays a great role in the concretisation of water rights and especially the relationship between land and water rights.

The distribution and implementation of rights and obligations among different users are increasingly subject to negotiation and contestation. As discussed in the case study, in a changed political context, dormant and hidden class conflicts may be openly expressed. Poor farmers, for example, question their share of water or labour obligations for repair and maintenance of the village irrigation system which they feel is unfair. Similarly, the Pahadis of Dandachis have begun to demand more equitable distribution of irrigation water. There is increasing ethnic conflict between the Tharus and Pahadis and class conflict between the big landlords and small farmers over various aspects of water rights.

We shall first describe the changing relationships between the indigenous population of the Dang Valley, the Tharus, and the immigrants from the hills, the Pahadis. In general, as McDonaugh (1997) and others have pointed, the Tharus have been losing ground in the Dang Valley (and other parts of Nepal) to the Pahadis, that is, they have access to less land and water and positions of power and influence than they had earlier. The Tharus of the Bhamke Khola basin, which was part of the Phalebang vassal state, have also been losing ground. The next section discusses the consequences of political and economic changes for water rights of the numerous irrigation systems which appropriate water from Bhamke Khola. With every change in the political system, a different functionary or office was vested with the authority to allocate water shares and regulate the schedule of water withdrawal from the river. The decision making authorities selected or changed rules to benefit their irrigation systems. As long as the Tharu *jimidar* (revenue collector) of Dandachis was vested with the authority by the king of Phalebang to regulate the water appropriation schedule from Bhamke Khola, Dandachis Kulo was assured of sufficient water but when the authority was shifted to another official or institution, Dandachis received less share of water than they traditionally had received.

The subsequent sections discuss water rights relationships in Dandachis village between Tharus and Pahadis and between the big landlords and small farmers. In the wider context of Dang and Bhamke Khola basin, the Tharus have been losing ground but within Dandachis, they have managed to retain control over most of the land and positions of power and influence, including management of Dandachis Kulo. As in the case discussed by McDonaugh (1992), the traditional Tharu village leaders (the descendants of the former *jimidar*, the village head (*mahato*) and the leader of the

[5] For a discussion on persons who have interest in a property but not necessarily rights, see Wiber 1992: 472.

village irrigation system (*aguwa*) have managed to retain control over Dandachis Kulo because of the continuity of Tharu social organisation and community solidarity. The Tharus have benefited at the cost of the migrant Pahadis and the elite Tharus at the cost of the small Tharu and Pahadi farmers. We discuss the class conflict between the big landlords and small farmers and ethnic conflict between Tharus and Pahadis over various aspects of water rights.

Tharus and Pahadis in Dang

Dang is located in south-western Nepal, in what is known as inner Terai. It is the largest valley in Nepal and was once densely forested. The Tharus were probably the sole inhabitants of Dang till about the sixteenth century.[6] They had their own kings and village headmen but by early 18th century, they were under the suzerainty of petty kingdoms, ruled by Hindu kings. Prithvi Narayan Shah conquered these kingdoms in the last quarter of eighteenth century. Some of these petty kingdoms were granted the status of vassal states (*rajya*) and the 'kings' were allowed to retain the title of *raja* (king).

Land tenure in the Dang Valley after the conquest was either *raikar*, *birta* or *rajya*.[7] *Raikar* land was crown land (or in Regmi's term, state land). Tenants on *raikar* land paid land revenue and other taxes to the king (state), through revenue collectors (*talukdars*) known variously as *mukhiya*, *jimmawal* and *subba* in the hills and *chaudhari* and *jimidars* in the plains. *Birta* was tax-free land, usually heritable and alienable, granted by the king to members of the royalty and other elite families, and Brahmans. There were three types of *rajya* tenure corresponding to three types of *rajyas*. In *thekka rajyas* (e.g., Gulmi) the *rajas* collected land revenue on behalf of the Nepalese King for which they, like other revenue collectors received a commission; in *sirto rajyas* (e.g., Salyan), the *raja* paid an annual tribute (*sirto*) to the Nepalese King and appropriated the remaining revenue collected in his *rajya*. In *sarbangamafi rajya* (e.g., Phalebang[8]), the *raja* was allowed to keep all the revenue he appropriated in his *rajya* (Regmi 1978: 150). The *rajas*, like *birta* holders, depending on the charters they received from the King of Nepal, could appoint their own officials to collect revenue as well as to supervise and hear cases relating to irrigation (*dittha*) and to administer justice, except for the five most serious crimes known as *panchakhat*.[9] All the *rajyas* and the privileges and rights of the *raja*s were abolished by the Rajya

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[6] See Rajaure (1977: 1-13) for a brief history of the Tharus. Rajaure, writing in 1977, commented, "The history of the Tharus remains for the most part unknown" (1977: 9). This statement is still valid today.

[7] There were also *guthi* (land donated to religious and philanthropic trusts) land in both *raikar* and *rajya* areas (Rajaure 1977: 62-64). For a more detailed explanation of these terms see Regmi 1976, 1978, Burghart 1996 and Pradhan this volume.

[8] Phalebang *rajya* was created in 1837 from the old district of Phalebang and parts of Dang. The first king of Phalebang was the great-grandson of King Prithvi Narayan Shah's daughter who had married the son of the *raja* of Salyan (Gautam 1993: 74).

[9] *Panchakhat* includes crimes such as murder, treason and incest which are punishable by death, branding or confiscation of property.

Rajauta Act in early 1961 to "promote national unity and integration" (Regmi 1978: 151). The land revenue offices (*mal adda*) of the *rajyyas* were nationalised.

The administrative units in the Terai including Dang, in both *rajya* as well as non-*rajya* territories, were known as *pargannas* which consisted of several revenue unit villages known as *maujas*. *Pargannas* were administered by *chaudharis* and *maujas* by *jimidars*, many of whom were Tharus. The *jimidar* was the most important person in the *mauja* and was usually appointed from among the village elite. He was, as Guneratne (1996) points out, an agent of the state in the village with powers and privileges to collect revenue for which he received commission and a plot of land known as *jirayat*, to administer justice, and to demand corvee labour for himself. He also provided credit to the cultivators (*raiti*: tenants of the king) who settled on the land under his jurisdiction. He also often employed *kamaiyas* (agricultural labourers paid on an annual basis, usually in grain, and often translated as bonded labourers)[10] to cultivate land which he held as a *raiti* or a *jimidar*. The *jimidar*, especially if he was a Tharu, was also the village headman, known as *mahato* and often also the head (*aguwa* or *sardaruwa*) of the village canal system (McDonaugh 1992). He had important ritual functions as the village headman, especially in the propitiation of the village deities. The *jimidar*, or in his absence, the *mahato*, wielded considerable power in the economic, ritual, moral and social life of the village.[11]

McDonaugh (1997) has summarised well the general situation of the Tharu in Dang over the past hundred years or so, which he aptly summarised as "losing ground".[12] He argues that the progressive extension of the Nepalese state apparatus in Dang eroded local Tharu influence; the position of Tharu *chaudharis* was undermined by the introduction of the position of *jimidari* towards the end of the nineteenth century. And increasingly Pahadis replaced Tharus as *jimidars* so that by 1961 there were virtually no Tharu *jimidars* left in Dang. The increased control over land by Pahadi *jimidars* encouraged immigration of Pahadis to Dang. Pahadi immigration was accelerated from the early nineteen sixties due to population increase and pressure on land in the hills on the one hand and the eradication of malaria and the land reform measures on the other (McDonaugh 1997: 280-81). Deteriorating access to land, loss of local power and influence, and massive Pahadi influx led to dramatic migration of the Tharus to Bardia and Kailali districts; in some cases whole villages migrated (McDonaugh 1997: 282). The Tharus who remained behind worked mainly as tenants or *kamaiyas* for Pahadi landlords because they owned very little or

[10] On the *kamaiyas* see the chapters by Khadka and Pun in this volume.

[11] Guneratne 1966: 11, McDonaugh 1992, Rajaure 1977. Rajaure (1977: 47-8) describing the functions and power of the *mahato* in the mid-seventies in Dang, writes that the current functions of the *mahato* are i) senior priest in village (community) rituals; ii) administrator who mobilises villagers to carry out 'public works' for the welfare of the village, including arranging for food and labour in times of food or labour shortage; and iii) 'judge' to settle disputes. The *mahato* receives free labour to plough his fields during sowing or cultivation, depending on the size of land. While men plough the women do other works (level bunds, etc.) in the *mahato*'s fields. The *mahato*'s power and position decreased because of the Panchayat system: the *pradhan pancha* and ward members performed his judicial functions, and so on. (Rajaure 1977: 49-51).

[12] See also Gunaratne (1966) for similar situation in Chitwan.

no land. In short, Tharus "have lost hold on positions of local administrative and political power and over this period they have also lost ownership of land in some cases and experienced deteriorating conditions of access to land they cultivate as tenants" (McDonaugh 1997: 280).

The situation of the Tharus that McDonaugh describes for Dang as a whole is also valid for the Bhamke Khola basin except for Dandachis, a small village where the Tharus still largely retain control over land, politics and the village irrigation canal (*kulo*). One of the reasons for this is that the *jimidar* of the village was a Tharu whose descendants have managed to retain control over the village social organisations.

Dandachis

We do not have any recorded history of Dandachis but it was probably founded over a hundred and fifty years ago. The Tharus of Dandachis claim that it was the first village to be established in this locality. Hiralal's father Purandhar was made the *jimidar* of Dandachis by King Shamsher Shah of Phalebang probably around the turn of the nineteenth century.[13] After he died Hiralal was appointed *jimidar* of Dandachis and a few other villages because he helped the king in his hunting expeditions. Dandachis was a 165 *bigha* (approximately 110 ha) *mauja*.[14] Hiralal settled *raitis* in the village to cultivate half the village and employed ten to twelve *kamaiyas* to cultivate the other half, which he held partly as a *raiti* and partly as *jirayat* as part of his remuneration. Currently there are 74 households in Dandachis with a population of approximately 1125. Tharus constitute 44.5 percent of the households. The other households are immigrant Pahadis: Giris (33.7%), Chhetris (10.9%), Brahmins (2.7%) and other castes (8.1%).[15]

Until the late fifties of the 20th Century, Dandachis was populated solely by Tharus but beginning from the early sixties, as in other parts of Dang, Pahadi immigrants began to buy land and settle in the village. Hiralal had died and there were rumours about land reforms, i.e., that the government would confiscate land owned by the farmers more than the fixed ceiling, legislate secure tenancy rights to the tenants, register the *raitis* as landowners of the land they tilled, and so on. The *rajyas* were abolished in 1961. As a consequence, Dandachis, which was part of Phalebang *rajya*, became fully integrated into the Nepalese state. In the early sixties, Hiralal's eldest son, who was a *patwari* (a functionary who assisted the *jimidar* in collection of land taxes) and became a *jimidar* upon his father's death in 1953, sold his as well as part of his brothers' shares of inheritance to Pahadis and migrated to Buran, a term which includes districts west of Dang such as Bardiya.[16] A few other Tharu families,

[13] Shamsher Bahadur Shah was recognised as the king of Sallyan in 1896 (Regmi 1979: 65). Phalebang was probably part of Sallyan *rajya*.

[14] One *bigha* is equivalent to 0.67 ha.

[15] The percentages of households of different castes do not reflect the proportion of population. Tharus usually have larger households than the Pahadis.

[16] Hiralal's second son claimed that his elder brother sold 65 *bighas* of the family land before migrating to Bardiya in early 1960s. The two other sons sold most of their land in the late 1960s to Pahadis because they feared that the government would confiscate their land which exceeded the legal ceiling.

especially the landless, also migrated to Buran in search of a better life.[17] Dandachis still has Tharu landowners, especially the descendants of the former *jimidar* and his brothers, who in addition to owning large tracts of land control the social organisation of the village, as *mahato* and *aguwa*. The poor Tharus cultivate their own land and the land of the rich Tharu landowners as sharecroppers and also provide them compulsory services known as *begari*. Despite the differences in their class and economic status and the exploitation of the poor Tharus by the rich landowners, they display 'community' solidarity especially in relation to the Pahadis.

Most of the land sold by the Tharus was bought by Pahadis (Giris, Chhetris, Brahmins and other castes) who settled in separate hamlets collectively known as Pahadi Tole. The immigrant Pahadis have not been able to buy large landholdings, partly because they were and are not well off. Most Pahadi households own roughly between 1.25 and 2.50 ha of *khet* (low land suitable for rice cultivation) land and cultivate their own land as well as land rented on sharecropping basis (*adhiya*: half share of produce) from Tharu landlords. The Brahmins rent out their land to sharecroppers. The Giris, in addition to cultivating land, raise buffaloes to sell milk. Despite their similar class and economic status, the Pahadis are not united but divided along both caste and increasingly party lines.

Rules, decision making authority and water allocation in the Bhamke Khola basin

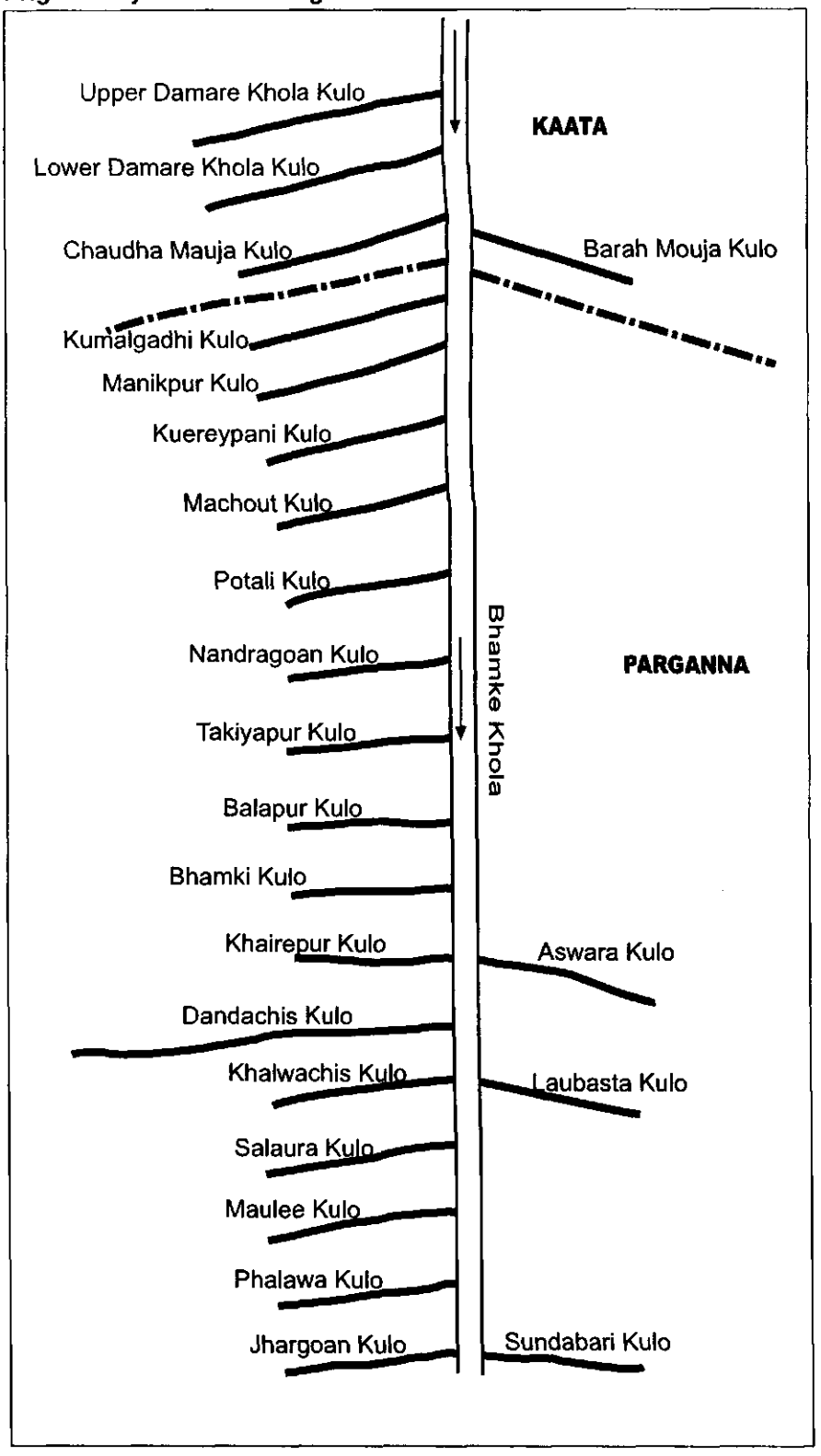
Bhamke Khola, previously known as Chis Khola, is the water source for 23 irrigation canals, most of which were constructed mainly to irrigate mustard crops during winter. The four most upstream *canals* are located in the former *kaata* administrative unit (administrative unit in the hills surrounding Dang Valley) whereas the other 19 *canals* are located in the former *parganna* administrative unit (see Map 1).

Bhamke (Chis) Khola is a perennial river but the water discharge varies greatly between seasons. During monsoon, and soon after, there is abundant water in the river but by winter the discharge in the river is very low and it is virtually non-existent during the hot months. Until the early seventies, monsoon irrigation was not a major problem for the farmers because of the monsoon rains and abundant supply of river water. Further, they broadcasted germinated rice seeds instead of transplanting paddy seedlings; the latter method of growing rice requires more water than the former. During monsoon, rice crop grown on *khet* fields has priority over maize grown on *bari* fields for irrigation.[18] Until the late seventies, the main winter crop was mustard which was grown in *bari* fields. Later, as elsewhere in Dang, the farmers began to grow wheat in *khet* fields. Mustard crop still has priority over the newer wheat crop

[17] Many Tharus who had migrated from other villages of Dang to Buran were tenants or *kamaiyas* of Pahadi *jimidars* and landowners (cf. McDonaugh 1997).

[18] The terms used for *khet* and *bari* in the Terai and especially Dang are *dhanhar* and *bhit* respectively. We have used the terms *khet* and *bari* here for consistency with other papers.

MAP 1
Irrigation systems diverting water from Bhamke Khola



for winter irrigation. It is mainly for the winter irrigation that water supply was and is still problematic in the basin.

Given the shortage of water during winter and the large number of irrigation canals which depend on the river for their source of water, allocating water and fixing schedules for water acquisition from Bhamke have always been problematic. Water allocation and acquisition schedules are regulated by state law as well as local law. A decision making authority, discussed below, decides which law or rule is to be used. With each change in the decision making authority, there have been changes in the rules concerning water allocation and water acquisition schedules.

Currently there are several laws concerning rights to water sources and irrigation water, such as the Water Resources Act (WRA) 1992, the Water Resources Regulations (WRR) 1993, and the Chapter on Land Reclamation of the Muluki Ain (National Code) of 1963 (cf. U. Pradhan 1994, Khadga 1997 and R. Pradhan, this volume). The state law most relevant for the Bhamke Khola basin during the period discussed in this paper is the Chapter on Land Reclamation of the Muluki Ain of 1963 as well as earlier versions, which had very similar provisions (see Pradhan, this volume). The relevant provisions of the Chapter states that i) prior appropriators have first rights to water from the water source, ii) canals should not be constructed upstream of existing canals if the traditionally irrigated fields as a result would receive less than the usual amount of water; iii) water may not be withheld if it had been shared in the past. The first two provisions bestow senior or first use rights on prior appropriators, whereas the third bestows rights based on 'customary' use (*bhog chalan*).

The customary or local law prevalent in most part of Dang is very similar to the state law outlined above, with a few notable differences. The first rule is that the uppermost canal (*siran* or *sir kulo*) has first priority in diverting water from a common water source. The second, and related rule, is the prohibition on *sir katti* ('cutting the head'), i.e., diverting water from above the head. In other words, new intakes may not be located above the existing ones. However, if the users of the existing canals allow farmers to construct intakes above theirs, the users of the new canals upstream of the old ones have first have to water from the water source.[19] The third rule, similar to the state law, is that the oldest canal has first rights to divert water from a common water source. In other words, in local law priority to divert water from a common water source is given to canals either on spatial (uppermost canal first) or historical (the oldest canal first) basis.

[19] It was in accordance with this rule that over ninety years ago there was a dispute between the users of existing irrigation systems (in the administrative unit known as *parganna*) and the new irrigation system which was constructed upstream of the old ones in the administrative unit known as *kaata*. The new canal is known as *sir katti kulo,* i.e., the canal which 'cut' the head. As the uppermost irrigation system it could divert as much water as it wanted. The users of the irrigation systems in the *kaata* and the *parganna* administrative units finally reached a compromise according to which during the monsoon season, the new canal was allowed to divert as much water as it wanted simultaneously with other canals but for winter irrigation, the *kaata* irrigation systems would have to share water on equal basis with the *parganna* irrigation systems. For a few years, the irrigation systems of these two administrative units diverted water simultaneously, sharing water equally but later they agreed to share water on time basis, day for *kaata* and night for the *parganna* irrigation systems.

In the Bhamke Khola basin all three rules have been used but for different seasons and probably at different times. During monsoon, when water is usually abundant, the irrigation canals divert water simultaneously but the upstream canals have priority over downstream canals. Water may be diverted to the upstream canals without limit and concern for the lower canals.[20] For the winter irrigation, the rules may have been changed over time. The four most upstream canals located in the former the former *kaata* administrative unit and the 19 downstream canals located in the former *parganna* administrative unit constitute separate units for the purpose of winter water allocation. After a dispute between the users of *kaata* and *parganna* irrigation canals over water sharing for winter irrigation in the last decade of the last century, the king of Phalebang ruled that the four *kaata* canals had rights to divert all the water from the river during the day and the other downstream canals had rights to the water at night, roughly twelve hours each for the two administrative units. We are concerned with the 19 *parganna* irrigation canals for the purpose of the present article. Henceforth, the terms upstream and downstream canals will be used to refer only to the irrigation systems in the former *parganna*. Dandachis Kulo users claim that their *kulo*, which is the oldest canal in the *parganna* and is the most downstream of all the canals in the Bhamke Khola basin, traditionally had rights to appropriate water first from the river, based on the rule of first priority to first appropriators. However, the users of upstream and newer canals claim that irrespective of the age of the canals, upstream and downstream canals took turns to divert water first on alternate years, as is the rule now.

This shift in the rule from temporal to spatial priority is, as argued below, most probably due to changes of the decision making authority which allocated water shares and turns to the irrigation systems using Bhamke Khola. The decision making authority in 'consultation' with the main leaders of the concerned *maujas* applied either state or customary law or elements of both or even generated new law[21] which benefited a few irrigation systems at the cost of others. Water supply to Dandachis Kulo has been adversely affected by changes in the ability of the Dandachis Kulo farmers to make or influence decision making, including making rules, as well as the social and political relations between Tharus and Pahadis in Dang.[22]

Historically, we can divide the changes of the decision making authority into three periods: first, the period before Hiralal, roughly before 1920; second, from 1920 to 1960 when Hiralal and then his son was the *jimidar* of Dandachis; third from 1960 onwards when the authority and rights to allocate and schedule acquisition of water from Bhamke Khola shifted from the *jimidar* of Dandachis, first to the Chairman of the village council (*pradhan pancha*) of Aswara Village Panchayat (VP) and then,

[20] This rule is observed in the Guhar Khola basin, see M. and R. Pradhan (1997).

[21] There have been and still are numerous conflicts and disputes between users of the different irrigation systems in the Bhamke Khola basin. The conflicts are mainly over water shares and priority in water acquisition from water sources and the related issue of the relative location and age of the irrigation systems. The disputants use state laws as justifications when disputes are taken to forums which apply state laws (such as the courts and offices such as the District Administrative Office). In other cases, they use local laws.

[22] Another reason for the reduction in water supply to Dandachis Kulo is the decrease in water discharge in Bhamke Khola due to ecological changes in the watershed area and more intensive use of water by upstream canals.

after the restoration of multi-party democracy, to the Chairman of the Pawannagar Village Development Committee (VDC).

Pre-1920: The dittha's or chaudhari's authority

We are not sure who had the authority to allocate water from Bhamke Khola before Hiralal was given the authority by the king of Phalebang but it may have been either the *chaudhari* of the *parganna* or the *chaudhari* in consultation with the *dittha* or the *patwari*. An old informant, who was a *patwari* (an official who kept land revenue records) claimed that when he was young, *Dittha* R. Shrestha was given the responsibility and authority to allocate water and fix the water acquisition schedule for the irrigation systems in the Bhamke Khola basin. Either the *chaudhari* or the *dittha* called the village headmen of all the concerned *maujas* for a meeting and announced water turn shares and schedules of acquisition. Water shares - in the form of the number of days and nights the irrigators could divert water from Bhamke Khola to their irrigation canals - were allotted to different *maujas*, each with its own canal, according to their recorded area of arable land. We are not sure about the water acquisition schedule, but most probably the schedule followed either the spatial order of intakes, beginning from the uppermost intake, or the temporal order, i.e., the oldest canal first. A few informants claim that the *chaudhari* or *dittha* favoured some *maujas* over others.

1920 -1960: The jimidar's authority

The king of Phalebang gave Hiralal the authority to allocate water and make schedules sometime in the 1920s after he had succeeded his father as the *jimidar* of Dandachis. He was also appointed the *jimidar* of a few other *maujas*. Hiralal was given this authority even though he was a Tharu because he was very close to the king of Phalebang. Hiralal called annual meetings of the heads of villages and canals to announce, more than consult, his decisions regarding water time shares and acquisition schedules for winter irrigation. Water shares or turns in units of nights (one night equivalent to 12 hours) were allotted on the basis of land size of the villages and a water acquisition schedule was fixed according to the age of the canals. Dandachis Kulo was always scheduled to divert water first allegedly because it was the oldest irrigation canal in the *parganna*. Hiralal was able to impose his decisions on other villages because of his close connection with the king.

When Hiralal died at the age of 65 in 1953, his eldest son was appointed the *jimidar* of Dandachis and was given the authority to schedule water acquisition for all the irrigation systems in the basin. But he was not as influential as his father and there were frequent conflicts and disputes over water shares and schedules.

1960-1996: Village Panchayat and Village Development Committee

In 1960, King Mahendra introduced the so-called partyless Panchayat system. He abolished the petty kingdoms/vassal states as well as the rights and privileges of the

vassal kings. Phalebang was no longer a vassal state but incorporated as an integral part of the Nepal state. A few years later the *jimidari* system was also abolished. Village *panchayat*s, which included several *maujas*, replaced *maujas* as the lowest level administrative and political units. All the *maujas* serviced by the 19 irrigation systems in the *parganna* were divided among four village *panchayats*. The chairman of the village *panchayat*, either elected by the villagers or appointed by the state, was the highest authority in the village. It was during this phase, as described earlier, that the Tharus increasingly and rapidly lost ground to the Pahadis not only in Dang in general but also in the Bhamke Khola basin which was part of the former Phalebang *rajya*.

The *pradhan pancha* of Aswara[23], a relative of the ruler of the former state of Phalebang, was given the authority to fix the water acquisition schedule for all the irrigation systems originating from Bhamke Khola. The *pradhan pancha* called annual meetings of the representative of the four concerned village *panchayats* to fix the schedule. An important change introduced by the *pradhan pancha* was that water shares and turns were allotted to the four village *panchayats*, instead of the smaller *mauja* units, as was done earlier. Water turn shares were based in general on the total irrigable area of the village *panchayats*. The village *panchayat* councils or more likely the *pradhan panchas* then allotted and scheduled water acquisition to the *maujas* under their jurisdiction.

Allotment of water turn shares within the village *panchayats* were apparently made for a few years on the basis of equality and not equity: all the *maujas* within a *panchayat* were allotted 'equal' shares irrespective of the area of arable land and traditional shares. This meant that the bigger *maujas* which had more water shares than the smaller ones suffered because they were allotted less than their traditional share. Further, because the water time shares were allotted to the village *panchayat* as a whole, the *pradhan pancha* could allot more water shares to his own *mauja* or the *maujas* of his supporters. The *pradhan panchas* allegedly allotted water shares to *maujas*, or hamlets, such as Ballapur, Pahaluwa and Khairipur, which did not traditionally have rights to water from the river. The *maujas* which were affected by this change protested several times that they were not getting their traditional share of water and finally water schedules were based on *maujas* and not the bigger *panchayat* territorial unit. But by then there had already been changes in water shares and schedules. *Maujas* which were allotted water shares had in the meantime established rights to water in accordance with the law of 'customary' use and they could not be denied water turns or shares.[24]

When multi-party democracy was re-established in 1990, the village *panchayats* were renamed Village Development Committees (VDC). In general, the VDCs had

[23] To put the record straight, it was the *pradhan pancha* of Amritpur Village Panchayat and not of Aswara who was given this authority but all the informants used the term *pradhan pancha* of Aswara. The *pradhan pancha* lived in Aswara, which was part of the Amritpur Village Panchayat.

[24] The Chapter on Land Reclamation of the Muluki Ain states that fields which have been 'traditionally' irrigated may not be denied water. It does not give an indication as to how long the tradition has to be in place or what established tradition.

roughly the same territorial jurisdiction as the former VPs but territorial boundaries were also redrawn. Dandachis, for example, which was part of Pawannagar Village Panchayat became part of Hekuli VDC and Aswara which was part of Amritpur Village Panchayat became part of Tulsipur Municipality. Members as well as the chairmen of the VDCs are elected, usually along party lines. At the elections for the House of Representatives and later the VDCs held after the restoration of democracy, the Rastriya Panchayat Party (RPP, supporters of the Panchayat political system) lost to the Congress and Communist parties. After the change in the government and the shift of power to the Congress and Communist parties, the authority to allot water shares and arrange water acquisition schedules shifted from Aswara to the Chairman of Pawannagar VDC, a resident of Bhamke village, and a Congress party member. The leading figures of Aswara and Dandachis belonged to and still are members of the RPP.

The Chairman of Pawannagar VDC chairs an annual meeting of the representatives of the concerned VDCs to allocate water turn shares and to arrange water acquisition schedules of all the 19 irrigation systems in the area. In theory the representatives of VDCs and wards negotiate water shares and schedules for winter mustard irrigation (*telia sinchai*) but in practice the Chairman of Pawannagar VDC makes the actual decision.[25] There are allegations that the Chairman has changed water shares and schedules, favouring villages which support his party and conferred rights to divert water from Bhamke Khola for winter irrigation on several villages, such as Khaluwachis and Kahiripur. Residents of Bhamke village now claim that they have first rights to water from the river, and to support their claim they changed the name of the river from Chis Khola to Bhamke Khola. They allegedly get more water and on an earlier date than they did previously because the Chairman of their VDC makes the decision concerning water shares and schedules.

As can be seen from Table 1, although the rule was and is that water turn shares are to be allotted to the canals on the basis of the area of *bari* land irrigated, Bhamke Kulo, Aswara, Manikapur, Dandachis are allotted proportionately more water turn shares per unit of *bari* land then other irrigation systems. For the winter irrigation in 1995, Bhamke was allotted one water turn share for 6 *bighas* of *bari*, Aswara for 12.5, Manikapur for 10, Dandachis for 7, Machout for 15, and Takiyapur for 60 *bighas*.[26]

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[25] There is no organisation at the inter-system level to implement or supervise implementation of the schedules for diversion of water from Bhamke Khola. Once the shares and schedules are announced, it is upto the members of different irrigation systems to divert water from Bhamke Khola to their canals when it is their turn. The farmers guard the diversion weir and irrigation canal day and night while diverting water to their irrigation systems. Many canal organisations also hire guards known as *kulari* or *chawkidars* to guard the diversion weir to prevent other canal irrigators from damaging it and stealing water.

[26] The time unit is in 'nights' which is actually 24 hours. The 19 irrigation systems in the former *parganna* area have rights to the full discharge at night whereas the four irrigation systems in the former *kaata* area upstream of Kumalgadhi Kulo have rights to the full discharge during the day (6 a.m. to 6 p.m.). However, the *parganna* irrigation systems do receive about 50% of the discharge during the day due to the fact that the irrigation systems in the *kaata* area use only about half the available discharge in the river. The 'night' unit thus includes both night (100%) and day (50%) share of water from Bhamke Khola. Water shares and schedules for diverting water from Bhamke Khola are not fixed for monsoon irrigation.

Table 1: Irrigation canals, command areas and water turn shares for winter irrigation

#	Irrigation system	*Khet*	*Bari*	Water share (1995)	Water share (1996)	Remarks
1	Kumalgadhi	150	40	2	2	Irrigates some land in Bhamke, Balapur and Nandragaon
2	Manikapur	90	30	3	3	
3	Quirepani	60	40	2	2	
4	Machaut	100	30	2	2	Irrigates parts of Potali
5	Potali	150	40	2	2	
6	Nandragaon	150	40	1	2	
7	Takiyapur	40	60	1	1	
8	Balapur	70	30	1	1	Formerly part of Dandachis but as unregistered land (*ailani*)
9	Bhamke	90	50	8	7	
10	Aswara	250	150	12	9	Sometimes gives a share of its water turn to Dandachis upon request
11	Khairipur	12	30	2	2	Probably allotted water turn shares only after 1990; earlier acquired water by requesting (*magauni*) other irrigation canals
12	Dandachis	140	20	3	4	Shares water with Laubasta
13	Laubasta	60	30	1	1	
14	Khaluwachis	50	30	1	1	Irrigates parts of Bhamke, and Khairipur (probably allotted water turn after 1990)
15	Salaura	?	?	1	1	Always gets water turn last
16	Maulee	?	?	2	2	
17	Pahalwa	50	16	1	1	Probably allotted water turn after 1970); earlier, was a *'magauni' kulo*
18	Sundabari	32	9	0	1	
19	Jhargaon	18	30	1	2	Water shares only recently allotted
Total		**1512**	**675**	**46**	**46**	

Note: a) *Khet* and *bari* are in *bighas*; 1 *bigha* = approximately 0.67 ha. One *bigha* = 20 *ropani*.
b) In 1996, Dandachis was allotted 4 units but received only 3 nights of water.
c) The total for *khet* and *bari* land irrigated does not include data from Salaura and Maulee.

The water acquisition schedule is fixed not according to the temporal seniority of the irrigation systems but to their spatial distance from the most upstream intake. The most upstream canal, Kumalgadi Kulo, and Dandachis Kulo, which though not the most downstream is sometimes treated as it were, are scheduled to acquire water from Bhamke Khola first and last on alternate years.[27] For example, Dandachis was scheduled to divert water first in 1995 and last in 1996. All the water from the river is

[27] Dandachis Kulo is not the most downstream irrigation system but in the schedule it is assumed that it is. Further, the irrigation systems downstream of Dandachis Kulo are always scheduled last, even if it is said that Dandachis Kulo is to receive water last.

diverted to one canal at a time during the water turn of the canal for winter irrigation. Dandachis Kulo receives insufficient water in the years it is scheduled to divert water last, that is about six weeks after the first irrigation canal diverts water.

Dandachis farmers claim that they should have the right to divert water first because their *kulo* is the oldest irrigation system in the Bhamke Khola basin. They also assert that until 1960s they had diverted water first in accordance with the traditional rule but this rule was changed after the right (*adhikara*) to fix water diversion schedule shifted to Aswara Panchayat and then Pawannagar VDC. However, it is difficult to say whether the rule that the oldest canal has the right to divert water first had always been in use or was instituted by Hiralal because another local and customary rule was and is also prevalent, namely, that the most upstream irrigation system has the right to divert water from a common water source first, even if it was constructed later than downstream canals. The *pradhan pancha* of Aswara Panchayat instituted a new rule, continued by the Chairman of Pawannagar VDC, to alternate first and last turns to Dandachis Kulo.

The rules made or applied by the Chairman of Pawannagar VDC (and earlier by the *pradhan pancha* of Aswara) have legitimacy, at least from the point of view of state law, because he is vested with the authority to do so. Further he makes the decisions 'in consultation' with the representatives of the concerned villages during official meetings. The representatives confer legitimacy by putting their signatures on the document which details the decisions made during the meeting. Copies of the document are deposited in the offices of the VDCs and the District Police.[28]

Dandachis Kulo: Tharu and Pahadi water rights holders

In the larger context of the Bhamke Khola basin, the Tharus of Dandachis may have lost ground, that is, they receive less than their rightful share of water. The Dandachis farmers explain the decrease in their share of water from Bhamke Khola in terms of the shift in the right and authority (*adhikara)* to allocate and schedule water acquisition from their *jimidar* (and village) to the *pradhan pancha* of Aswara and later the Chairman of Pawannagar VDC. However, in Dandachis it is not so much the Tharus as the Pahadis who claim that they receive less water than is due to them from Dandachis Kulo. The Tharus receive more water than the Pahadis not only because they own more land but more importantly, as discussed below, because they control the organisation that makes and implements decisions and rules concerning the operation and management of Dandachis Kulo, including allocation and distribution of water.

Dandachis Kulo is reputed to be at least 150 years old. But it may have been a small irrigation canal earlier or in a state of disrepair because Hiralal rehabilitated and enlarged it using both *raitis* and his *kamaiyas*. *Raitis* and *kamaiyas* from other

[28] Our research staff was not given access to these documents.

maujas may also have helped in the rehabilitation and extension for which they were apparently paid, according to one informant.[29] The Tharus have been operating and managing Dandachis Kulo under supervision of their leaders and canal functionaries right from the beginning. Though the immigrant Pahadis now participate in the operation, repair and maintenance of the canal, the Tharus continue to retain control over decision making and implementation.

Irrigation functionaries

The key functionaries who manage and operate the irrigation systems are the *mahato*, the *aguwa* or *sardaruwa* and the *pancharuwa* (water distributors). The *mahato* is the village headman and is usually hereditary. In Dandachis, *mahatos* were *jimidars* (Hiralal and his descendants). As head of the village, the *mahato* (and earlier the *jimidar*) had and has important roles in all aspect of village life, including management of the canal. He is consulted on all major decisions concerning village communal activities and the *kheriyas* or *khels* (annual meeting of the heads of households) are held in his courtyard. However, the head or leader of the canal system is the *aguwa* or *sardaruwa* (cf. McDonaugh 1992). In most Tharu villages the *aguwas* are usually Tharu headmen of the village. In Dandachis, however, at least since Hiralal's time, *aguwas* have been Hiralal's brother and his descendants. Although the *aguwa* is formally elected every year during the annual general meeting, he is actually the person nominated by the *mahato*. In theory the villagers can select another person if they are not happy with the incumbent *aguwa* but this rarely happens, at least not without the *mahato*'s (or *jimidar*'s) approval.[30] The *aguwa* is usually reconfirmed annually until he retires or dies.

The *aguwa* is responsible for the overall management and operation of the irrigation system. He supervises the repair and maintenance of the system and the allocation and distribution of water. He decides what type of repair and maintenance work is to be done and when. He supervises the work of the water distributor and the *kulari* (canal guard, or more accurately the person who guards the water diversion weir) as well as the labour contribution (*jharali*) work done by the irrigators. He keeps records and imposes fines on absentees and others who violate the rules of the irrigation system. He also deals with functionaries of other irrigation systems (cf. McDonaugh 1992). As remuneration he receives 15 *muris* of paddy[31] from the *mauja* and free labour services (*begari*) for his fields from all the households which uses the irrigation system.

The water distributors distribute water from the main canal to branch canals and tertiary channels. They also irrigate the fields, especially during monsoon. The water

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[29] Hiralal may have received a grant from the king to cover part of the cost of construction. A former *patwari* of the king claimed that he had approved many such petitions.

[30] The incumbent *aguwa* was removed last year because he irrigated his field during another villager's turn. The *mahato* supported his removal. Another Tharu was selected by lottery, see below.

[31] One *muri* is equivalent to 48.77 kg. of paddy.

distributors are appointed by the *aguwa*, usually in consultation with the *mahato*. The water distributors are usually poor Tharus, residents of the village, with rights to irrigation water. Previously there were two water distributors in Dandachis, but for the past three years four water distributors (including one Pahadi) have been appointed. The Pahadi was appointed to ensure a fairer distribution of water to the Pahadis. As remuneration, each water distributor gets Rs. 200 per annum and is fed by different households during the irrigation period.

Another important irrigation functionary is the *kulari* who is appointed for a year during the annual meeting. The person nominated by the *aguwa* is usually selected. The main responsibilities of the *kulari* are to guard the diversion weir, divert water from the river during the scheduled time, inform the irrigators of damage to the weir or water theft and the dates for repair and maintenance of the canal. He also guards the villagers' fields during winter against theft and cattle grazing. He gets paid 13 *muris* of paddy for the monsoon work and a lesser amount of wheat and other food during winter. The *kulari* is appointed for a year at a time during the annual general meeting; most often he is the person nominated by the *aguwa*. The *kulari* of Dandachis Kulo has always been a Pahadi resident of Bhamke because the intake is located in Bhamke village and it is too far (about 8 km) for a Dandachis resident to guard, especially at night. He is, however, often assisted in guarding the intake structure by a few Tharu residents from Dandachis.

All the major decisions concerning the irrigation system are taken by the *mahato* and the *aguwa*. They make the decisions concerning the water shares and water distribution schedule for the branch canals; the dates for repair and maintenance of the canal and construction of the temporary brushwood diversion weir in the river and the basis for labour contribution; the 'fine' (*khara*) to be collected for violation of rules, including being absent from *jharali* work. All these decisions, like the appointments of *aguwa* and *kulari*, are discussed in the annual public meeting of the heads of all the households of the village, including the Pahadis. In theory, all key decisions are made jointly by the heads of households during the annual meeting. However, in practice, and in accordance with Tharu customary law, the decisions are made by the key village and irrigation functionaries and put up for approval during the meeting. There may be some discussion and dissent and the villagers are allowed to make suggestions and minor changes or choose between alternatives but the final decisions are made by the *aguwa* and other important Tharus. In other words, the Tharu elite controls decision making in the village.

A few Pahadis have sometimes demanded that a Pahadi should be elected as the *aguwa*, as in Khalwachis and other adjoining villages, but the Tharus do not want a Pahadi *aguwa*. The majority of the Tharus insist that the *aguwa* of their irrigation system has always been a Tharu and that this tradition should not be broken irrespective of what happens elsewhere. One important consequence of not having control over decision making and implementation is that the water allocation and distribution rules prevalent in Dandachis discriminate against the Pahadis.

Water allocation and distribution

Dandachis Kulo has several branch canals (see Map 2).[32] The major branch canals are Boksiniya Kulo, Galli Kulo, Danda Kulo and Thadi Kulo (also known as Pahadi Kulo). The tertiary canals of these branch canals are known by other names (e.g., Kunti Kulo, a tertiary canal of Boksiniya Kulo). Tharus own land in the head and middle sections of these branch canals and the tail end of Galli Kulo. The former *jimidar* and other better off Tharu families own land mainly in the head end of the branch canals. The Tharu settlement is located on the tail end of Galli Kulo which also services the major portion of *bari* land owned by the Tharus. The Pahadis own land, which they bought from the former *jimidar* family, mainly in the tail end of Thadi Kulo and Gairi Kulo on the western side of the village. The Pahadi settlement is on the tail end of the Thadi Kulo, which is also located on the western side of the village.

Water is allocated to the branch, and sometimes tertiary canals, for both monsoon and winter irrigation, on time basis, roughly according to the land area serviced. *Khet* land (rice crop) gets priority for monsoon irrigation and *bari* (mustard crop) for winter irrigation. Most of the *khet* fields are fallow during winter, except for the fields located at the head end of the branch canals, owned by the bigger landlords, where wheat is grown. Water is distributed to branch canals on the eastern and western sides first on alternate years. In 1995 for example, the branch canals serving land owned by the Pahadis received water first for winter irrigation and the next year they received water last.[33] Similarly, Mairahawa Kulo received water first for the monsoon irrigation in 1996 and last in 1997.

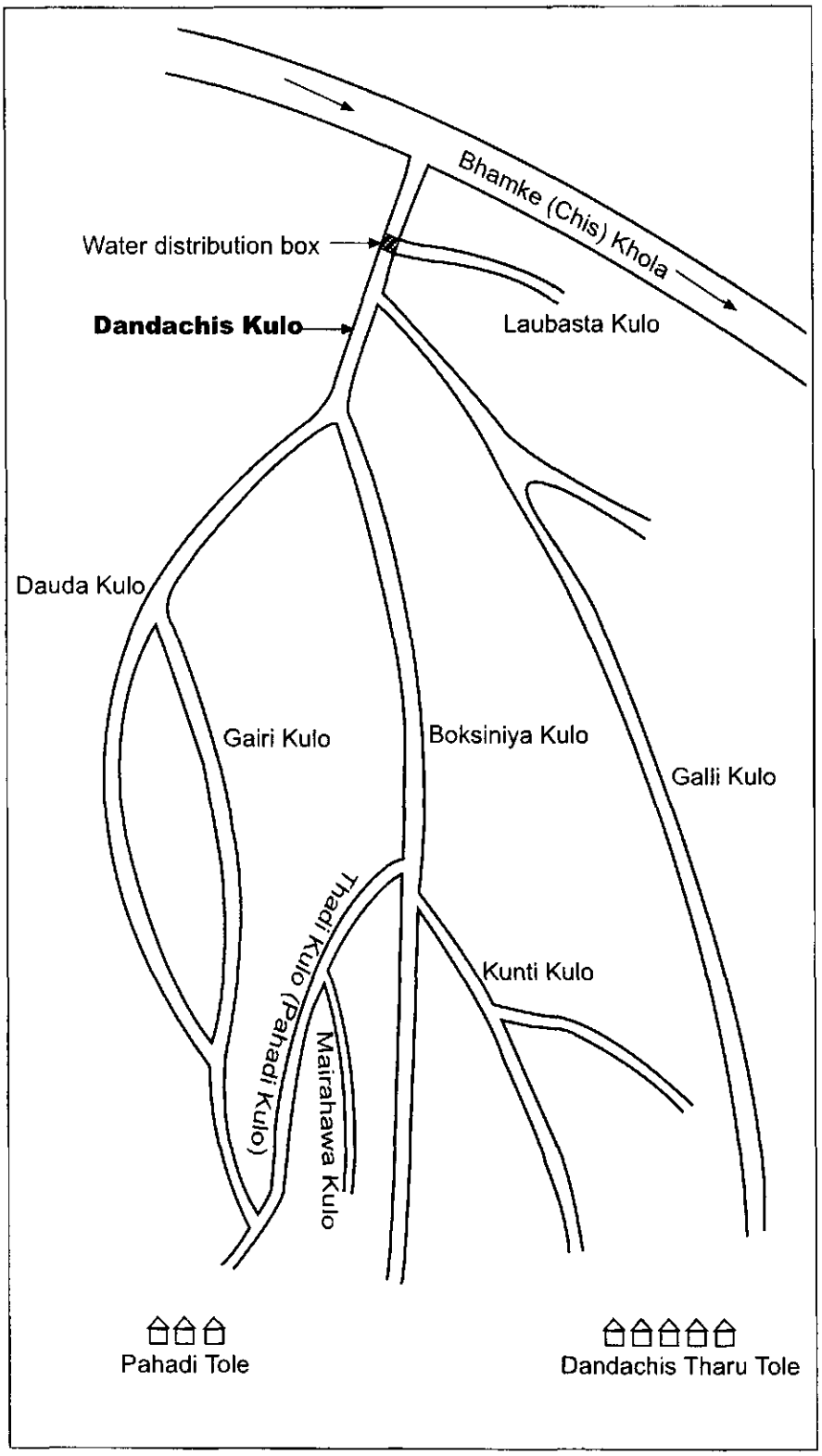
Within the branch canals water is always distributed from the head to the tail, that is, the land nearest to the head of the branch canal is irrigated first. This is has always been their rule, according to the Tharus. They say that by irrigating the fields in the head end first, water is not wasted because the drainage water (*jharan pani*) flows to the lower fields. This customary law is in accordance with the state law (Muluki Ain) which states that as far as possible, irrigation should begin with the fields nearest the source and move away from the source.

The water distributors irrigate the fields for both monsoon and winter irrigation but during winter, the farmers are often present to ensure that their fields get sufficient water. In many irrigation systems, the water guards, contractors or distributors (variously known as *panipale*, *panichowkidar* or *pancharuwa*) ensure that water is delivered to all the fields in accordance with water allocation and distribution rules

[32] There is a water distribution structure (*panibatuwa*) before the canal enters the village which diverts a share of water to Laubasta. Laubasta has rights to two-fifth of the water from Dandachis Kulo for monsoon irrigation as per the agreement reached between Dandachis and Laubasta villages in 1953. The water shares are roughly proportionate to the area cultivated (Dandachis 165 *bigha* (57%) and Laubasta 125 *bigha* (43%). Laubasta Kulo is given a separate water turn for winter irrigation. Laubasta Kulo is operated independently of Dandachis Kulo.

[33] This information was given by a Pahadi (Giri) so it is probably reliable. But he adds that the Pahadis get only half of the water to which they have rights.

MAP 2
Dandachis Kulo



(cf. Shivakoti and Pradhan 1995 and K.C. and Pradhan 1997). In Dandachis, however, the tail ends of branch canals often get insufficient or no water at all because there are no restrictions on the time or volume of water used.[34] In 1996 for example, the tail ends of all the branch canals did not get any water for winter irrigation.

Some years, especially when Dandachis Kulo is scheduled to acquire water last from Bhamke Khola, Dandachis receives so little water that even the Tharus are not able to irrigate most of their fields. On such occasions, they request water from the Thakuris of Aswara with whom they have a long and close association. Furthermore, they belong to the same political party. In 1995, for example, the Tharus requested and received water from Aswara Kulo for two nights to irrigate their mustard crop. When the Pahadis demanded that they too should get water to irrigate their fields, the Tharus were supposed to have retorted, "Why should we give you water which we had to beg from others?"

Many Pahadis complain that the Tharus discriminate against them. The Pahadis may have cause to complain because most of them own land at the tail end of the branch canals and often receive very little or no water at all. A few years ago, a few Pahadi farmers who own land in the extreme tail end of the command area stopped contributing cash and labour for the operation and maintenance of Dandachis Kulo and bought a diesel water pump to extract groundwater for irrigation because they had not received water for a couple of years.[35] Many Pahadis have converted their *khet* fields to *bari*. A Pahadi informant with 2 *bighas* of *khet* claimed to have converted one and a half *bigha* of his *khet* to *bari* because he did not get sufficient water. However, another Pahadi informant confessed that soon after buying two *bighas* of *khet* from a Tharu in the mid-sixties, he converted half of it to *bari* so that he could 'eat' maize and mustard. This conversion of *khet* into *bari* may have been a clever ploy because *bari* fields, and especially mustard crops, have priority over *khet* fields (wheat crop) for winter irrigation. Further, many of these Pahadis rent *khet* fields from Tharus on half share (*adhiya*) basis to grow paddy for which they receive sufficient irrigation water. However, a few Pahadis, especially those who have close links with Tharu elite families, claim that they do get enough water and that in fact everyone in Dandachis has been getting less water because Dandachis Kulo is allotted less water.

The Pahadis have been demanding more water for their own fields from the Tharus. They have tried to convince the Tharus that they should be given more water or that they should rotate water delivery schedules such that they (the tail end irrigators) get water first on alternate years. An informant said that sometimes some

[34] Rules vary according to location. In the neighbouring village of Laubasta, for example, irrigation begins with the head end but the water distributor has to irrigate all the fields, even in the tail end, which means that all the fields get less water. This rule may have been applied because the Pahadis own fields in both the head and tail ends of the command area. However, there are frequent quarrels between farmers over the supply of water and despite the rule about irrigating the head fields first, in practice whoever is stronger irrigates his field first.

[35] Another reason may be that one of the Pahadis had disputes with other Pahadis who owned fields upcanal from his. They apparently greatly troubled him and instead of having to deal with them, he bought a water pump.

Tharus pretend to be reasonable and say that they would give them more water but do not actually do so. More often, many of them get aggressive and argue that the Tharus, who have always lived here and whose ancestors built the canal, have first rights to irrigation water. Immigrant newcomers do not have equal rights to water. Some of the more perceptive Pahadis claim that if they were united they could get more water but at present they cannot fight the Tharus. They realise that the Tharus get more water because they have more power than the Pahadis. Or in their words, "The persons who are powerful can do what they like." A few more discerning Pahadis realise that the Tharus get more water not only because they are more powerful but because they control the management and operation of the *kulo*, or more specifically, control the organisation that makes and implements decisions. As one of them put it, "The person who holds the serving ladle naturally gets more."

The decision-makers generate or implement rules which usually benefit themselves. The rules which benefit the decision-makers concern not only allocation and distribution of water but also labour contributions for repair and maintenance of the canal.

Labour obligations: serving the (land)lords

Rights to irrigation water are intimately linked to obligations. The persons, who have rights to irrigation, whether as landowners or tenants, are obliged to contribute labour, cash and grains for the operation and maintenance of the system in order to maintain their rights. Obligations of cash and grains, for example, to remunerate the *aguwa*, *kulo* guard and the water distributors mentioned above, are usually based on the size of land irrigated and are more equitable than labour obligations. The irrigators have two types of labour obligations: i) *begari* and ii) *jharali*. All households which use the *kulo* are obliged to provide one or more days of free labour service (*begari*) to the *aguwa*, irrespective of the area irrigated. In addition, the Tharus provide *begari* to their *mahato*. Households are also obliged to contribute unpaid labour, known as *jharali*, for construction of the diversion weir and repair and maintenance of the canal. Labour construction for the monsoon *jharali* is based on the area of land irrigated, the larger the land the more the labour contribution. It is usually the tenants who contribute their labour for the monsoon *jharali*. Labour contribution for winter *jharali* is on household basis. All households which use the canal, whether as landowners or tenants or both, have to contribute one labourer per household, irrespective of the area of land irrigated. The big landlords, mainly the former *jimidar* and *aguwa* families, take advantage of the small farmers, Tharus and Pahadis alike, concerning winter labour obligations because they contribute proportionately less labour per unit of land irrigated. The poor thus have to contribute proportionately more labour for winter repairs and thus in a way work for free for the bigger landowners.

Further, rules regarding fines for being absent from *jharali* work also discriminate against the poor. Although the rule is that all households should send one household

member (but not women, children or the very elderly) for the *jharali*, many richer households often do not send any, preferring instead to pay the stipulated fine.[36] The general term used for fine is *khara*, which is imposed for any infringement of rules such as being absent from *jharali* work without a valid reason. Households without resident males have to pay a fine. But if someone is absent due to a valid reason, such as marriage, death or illness, he pays *pankar* (water tax), a term which is also used for cash contribution for repairs and construction works. This term is also used for the fines (contributions) to be paid by the more powerful, richer households for being absent from *jharali* work.[37] Both *pankar* and *khara* amounted to Rs. 70 per day in 1995 and Rs. 90 in 1996, roughly equivalent to the daily wage rate prevalent in Dang. Compulsory labour obligation by males is a burden for the poor farmers because during winter they often work as seasonal labourers outside their village to supplement their meagre income.

The poor villagers, Tharus and Pahadis alike, often rent land as sharecroppers from the better off Tharus. The landlords demand *begari* labour from their tenants. While the Pahadis often refuse to provide more than a day or two of *begari* a year, usually ploughing their landlord's field with a pair of oxen, the Tharus are at the beck and call of their landlords throughout the year, to do odd jobs such as mending fences, digging ditches, and thatching roofs.[38] Compulsory attendance during winter (and monsoon) *jharali* is probably also one way of ensuring that the tenants remain in the village to serve the landlords. However, the small farmers also benefit to some extent by serving their landlords because they, or at least the Tharus, are assured of irrigation for the fields they own as well as rent. The small Tharu farmers claim that the big landowners do provide them with irrigation water. The Pahadis concur when they say that the Tharus, whether they are big landlords or small landholders, share water equally.

The Pahadis claim that though their contribution of cash, grain and labour equals and sometimes exceeds that of the Tharus, they get less water than the Tharus. They get less water because they neither hold the serving ladle nor 'serve' the big, influential Tharus. However, the increasing conflict between the Tharus themselves may provide an opportunity in the near future for a Pahadi to hold the serving ladle.

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[36] The Tharus insist that all Tharu households, even the rich ones, send one household member. A rich Tharu farmer gave this example. One year one of the big landowners (*zamindars*) did not send any household member and offered to pay the fine but we all insisted that he must come for the *jharali*. After much persuasion he finally sent his grandson. The Pahadis, however, claim that not all Tharus turn up for *jharali* work.

[37] They are allowed to send wage labourers or tenants in place of household members for monsoon *jharali*.

[38] The landlords continue with the tradition of *begari* which the *jimidars*, *birtawalas*, *jagirdars*, and other landholders had rights to in the past and which was abolished by state law in the early sixties (see Pradhan, this volume).

Ethnic and class politics

Conflicts between the Tharus

There are two kinds of conflicts between the Tharus. The first is what we may call factional rivalry between the three grandnephews of Hiralal (his brother's son's sons) over the post of *aguwa* of Dandachis Kulo. The three brothers had canvassed to be elected as the *aguwa* of Dandachis Kulo after the incumbent *aguwa* as dismissed. They refused to withdraw their candidacy and suggested that the three of them be elected as *aguwas*, one each for the major branch canals. When it became clear that the *mahato* would not nominate a candidate, a lottery was held to select the *aguwa*. The brother who was selected as the *aguwa* by the lottery did not really want to become the *aguwa* and increase tension with his siblings. Therefore he left the village the next day and set up a shop in his wife's village. Despite several requests, he refused to come to Dandachis to conduct the annual meeting and supervise repair and maintenance of Dandachis Kulo. Even though it was already late, the Tharus refused to repair the canal unless the *aguwa* was present. The *mahato* finally intervened to get the maintenance work done under the supervision of the former *aguwa*. There is still tension between the three brothers and their supporters.

It was during this period of discord that a few influential Tharus suggested, half-seriously, that a Pahadi should be elected as the *aguwa* as a compromise candidate and that the Pahadis should be involved more actively in the management and operation of the irrigation system. But the Pahadis were not keen to contest for the office because they knew very well that the Tharus of Dandachis would never obey a Pahadi *aguwa*.

Class conflict

The second conflict is the on-going class conflict between landlords and tenants. The various land reform measures taken by the government in the sixties bestowed rights on the *raitis* (tenants of the state) who had proof of their tenancy to be registered as landowners (*jaggadhani*) (see Pradhan, this volume). However, as elsewhere in Dang and other parts of Nepal, the *jimidars*, Pahadis as well as Tharus, registered most of the land cultivated by the *raitis* in their and their family members' names (cf. McDonaugh 1997).[39] The *raitis* were forced to rent land from the new landowners paying one fifth, one fourth or one third (*panchkur*, *chaukur*, *tinkur*) of the produce as rent. Later, the landlords rented out their land only under *bataiya* or *adhiya* tenure on an annual basis so that the sharecroppers could not claim tenancy rights (*mohi hak*). The former *raitis* thus lost not only rights to ownership of land but also security of tenancy; and moreover, they had to pay a higher share of produce than before (cf. McDonaugh 1992). The Tharu landlords were no better than the Pahadi landlords of other villages. In fact they may have exploited the small Tharu farmers more than the

[39] The former *raitis* may not have been willing to get themselves registered as landowners because they feared that they would have higher tax obligations (cf. Guneratne 1996).

Pahadis, by continuing with their tradition of Tharu social organisation and leadership, Tharu solidarity and forced contributions of labour services.[40]

There is an undercurrent of resistance by the small Tharu farmers against the landlords. Earlier in the sixties and early seventies some Tharu families who were unable to become landowners migrated to Buran. Others managed to register land in their names and either sold it to Pahadis and migrated or cultivated it as landowners. Those who remained behind have now begun to question their exploitation by the landlords, perhaps more to themselves than publicly and more covertly than overtly (cf. Agarwal 1996). More intensive fieldwork may reveal their everyday forms of resistance (cf. Scott 1985) but the important point is that they have started to demand that they be given more say in deciding water allocation and distribution and more water for their crops.

Ethnic solidarity and politics

The small Tharu farmers, however, demand more water and better access to decision making for themselves but not for the Pahadis. It is probably in response to their demands and the fear that the Pahadis may also start insisting on their rights, that, as most Dandachis residents agree, the Tharus share water more equally among themselves than between them and the Pahadis. It seems that in Dandachis ethnicity or Tharu solidarity is stronger than class interest and solidarity.

Ethnic solidarity may also explain why different rules are applied for Tharus and the Pahadis, at least concerning the relationship between water and land rights. It is generally agreed by Pahadis and Tharus alike that the Tharus, whether big or small farmers, with land in the head or tail end, receive more water than the Pahadis. This is probably the reason why Pahadis claim that the Tharus share water equally, even if the smaller farmers in fact receive proportionately less water than the bigger farmers. The allocation and distribution rules discussed earlier accord priority to the branch canals which serve the lands owned by the Tharus, located mainly in the head and middle sections of the branch command areas. The rule that water should be distributed starting with the fields closest to the head (*siran*) or source of water also favours the Tharus.

It could be argued that it is in accordance with these rules that the Pahadis' fields, located mainly in the tail end of the branch canals, are irrigated last and thus receive insufficient water. However, the Pahadis bought land mainly from the elite Tharus - *jimidar*, *mahato*, *aguwa*, etc. It is very unlikely that their fields, even if located at the tail end, would have received less water and later than the fields of the smaller farmers (*raitis*). It could be that prior to the abolition of *jimidar* and the promulgation of land reform acts in the early sixties, these fields were in fact cultivated by *raitis* and not *kamaiyas* (with the *jimidar* as the official *raiti* of the king on these fields). The fields

[40] A few poor Tharu tenants complained that they are more oppressed by Tharu landowners than by Pahadis. A small example they often cited is that the Pahadis at least gave them food to eat when they provided *begari* services ("Here, eat something, you have worked the whole day.") Tharu landlords did not offer them food.

cultivated by the *raitis* would have been irrigated after the *jimidar*'s fields. The Pahadis may have been sold land which was tilled by *raitis* and should have been recorded in their names as the new landowners but was registered in the names of the former *jimidar*'s sons and other powerful Tharus. If this was indeed the case, then such land would traditionally have received irrigation last. Or, and this would require further research, the Tharu *jimidars* and *aguwas* were more equitable than the Pahadi *jimidars*, and shared water more equitably among all the Tharu households, landlords and *raitis* alike, in the head end or tail end. It is more likely, however, that the local elite allocated and distributed proportionately more water and earlier to their fields than those of the *raitis*.

Whatever may have been the actual case, the reason (and justification) why the Pahadis receive proportionately less water than the Tharus is that they belong to a different community and are newcomers to Dandachis. In many localities, the old rightsholders have senior rights as compared to the newcomers (cf. Martin 1986, Pradhan 1990, K.C. and Pradhan 1997). However, these differences in rights are applicable only (or mainly) for new rightsholders in the extended or enlarged sections of command areas and not for the persons who buy traditionally irrigated land in the old command area. In Dandachis the crucial reason for differences in rights seems to be that the Pahadis belong to another ethnic community.

The Tharus have changed the rule concerning the relationship between land and water rights, not so much for themselves but for the Pahadis. One of the customary rules was that specific plots of land should receive their traditional share of water, that is, that water share was tied to land and not to persons. Thus, a new owner or tenant, irrespective of their class or ethnicity, had rights to the same share of water that the old owner or tenant had been getting for that particular plot of land. The Pahadi landowners, however, do not get the customary share of water for the plots of land they bought from the Tharus probably because they belong to a different community. In Dandachis, therefore, ethnicity influences the share of water one receives. The link between land and water rights is less strong for the Pahadis than for the Tharus. Here, unlike in many other villages, being a Tharu is clearly an advantage, at least concerning water rights.

Conclusion

In this paper we have argued that the right to make decisions concerning allocation and distribution of water and obligations to contribute labour and other resources is one of the most important aspects of water rights. Although, as many authors have pointed out, it is important for water users to participate in decision making to be able to protect their water rights, what is more significant is control over decision making and having the authority to do so. The decision makers select, make, interpret and implement rules and decisions which protect and even change existing water rights relationships to benefit themselves. The Pahadis and the small Tharu farmers do

participate in meetings of Dandachis Kulo irrigators where decisions are made, as do the representatives of Dandachis Kulo and other canals in the meetings called by the Chairman of Pawannagar VDC. However, they are often unable to influence the decisions in their favour. If the headman of Dandachis were as influential as Hiralal had been, Dandachis Kulo would perhaps have been allotted the first turn to appropriate water from Bhamke Khola. One the other hand, if the Chairman of Pawannagar VDC had not been vested with the authority to regulate water shares and turns from the river, he may not have been able to allocate more water share per unit of land to Bhamke Kulo than to other canals. At present we do not know what justifications he used, or whether he used any at all, to allocate to his canal more shares of water than traditionally allotted but his authority to do so seems unquestioned.

It is useful here to make the Weberian distinction between power and legitimate power or authority. This distinction is sometimes made by the irrigators in their use of the terms *shakti* and *adhikara*. The term *shakti* is used when an individual or a group uses power, forcefully as it were, for example to allocate or distribute a larger share of water than the individual or the group has rights to. The Pahadis of Dandachis question the authority of the traditional Tharu leaders (*mahato* and *aguwa*) to allocate and distribute to their (Pahadi's) land less share of water than they believe they have rights to. The Pahadis claim that they are discriminated because the Tharus are more powerful, have more power (*shakti*) than them. The Tharus do not question, at least not openly, the authority of their traditional leaders to allocate and distribute water as they see fit, especially if they benefit at the cost of the Pahadis.

From the perspective of the Tharus, at least in relation to the Pahadis, water rights are linked not only with land but also with being a member of a community and the investment made by the community in the irrigation system. The Tharus claim they have stronger and more rights to water from Dandachis Kulo than the Pahadis because their community built and have been operating the canal. In other words, the Tharus are less willing to accept the rule of the intimate association between land and water rights for the Pahadis.

Political, social and economic changes lead to changes in the power relationships between the users of an irrigation system or different irrigation systems. As a consequence, there often are changes in the decision making institutions or the persons who control such institutions. Laws are changed or interpreted differently. Nevertheless the decision makers operate within the framework of law and institutions accepted as legitimate by the wider community. Especially since the restoration of democracy in 1990, rules and institutions which are not accepted as just or legitimate have been increasingly questioned and contested. This can be seen in the simmering, often covert, conflicts between the big landlords and the small farmers as well as between the Tharus and Pahadis. If and when the small farmers as well as the Pahadis gain positions of decision making authority, they will be able to change and implement rules to acquire better rights to irrigation water.

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Land and Water Rights in Thulo Sangrumba, Ilam[1]

Indra Kumar Sodemba and Rajendra Pradhan

"When you sell a horse you also give the buyer the horse's bridle."

Introduction

Land and water rights are very intimately linked in Nepal but the nature of the relationship between land and water rights has changed over time and differ across communities. Although the Water Resources Act of 1992 has dissociated land and water rights in general (cf. Pradhan, this volume), rights to irrigation water are still very closely tied to land rights, especially rights to agricultural land. In general, two conditions have to be met to establish and maintain rights to irrigation water in farmer managed irrigation systems: first, investment of cash or labour for the original construction or subsequent maintenance of irrigation infrastructures and second, rights to land in the designated command area. In most cases it is not possible to acquire water rights independently of land rights (cf. Pradhan 1987 and 1990 and Martin 1986 for exceptions). On the other hand, rights to irrigation water are transferred simultaneously with the transfer of rights to traditionally irrigated land just as the horse's bridle is transferred along with the horse. In other words, irrigation water rights are appurtenant to land rights (Martin 1986).[2]

The relationship between water and land rights, however, is more complex than simply that of appurtenance. This is because there are diverse kinds and levels of rights to land and water which include rights of 'ownership', control and decision-making, transfer or alienation, and use (cf. F. von Benda-Beckmann 1979,

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[2] Martin (1986) discusses one example of market in water shares in Chherlung and argues that transfer of water shares independently of land is more efficient and equitable than the rule that they have to be transferred simultaneously. Small farmers can buy surplus water from farmers who are more efficient in their water use. There is a case for market in water shares but we also need to first understand how people construct water rights and the relationship between land and water rights.

Wiber 1992; K. von Benda-Beckmann et al. 1997). There are also different kinds of ownership, control and use rights. Further, these various kinds of rights are often dispersed among different individuals or individuals and groups or collectivities such as water users associations, communities and the state. Moreover the complexes of rights relationships are different for different forms of land tenure. The question then is whether water rights and the relationship between land and water rights are constructed differently in different forms of land tenure and whether different kinds of water rights are associated with different forms of land rights.

Most of the studies of (irrigation) water rights in Nepal have been conducted in locations where rights to irrigation infrastructures and water are held collectively by communities of irrigators whereas rights to agricultural land are held individually, or rather by individual households, either as landowners or tenants under *raikar* tenure or were held in the past under *birta*, *jagir* and other forms of tenure.[3] In the past *raikar* land was crown land or state land (cf. Pradhan, this volume) but it is now freehold land. *Birta* tenure was tax-free land gifted to individuals by the king or the state and *jagir* tenure was land given to government employees in lieu of salaries for the duration of their employment. In most of these locations, rights to irrigation water cannot be sold or transferred independently of land.[4] There have been no studies of water rights in locations were rights to land are or were held collectively or in common as, for example, in *kipat* land tenure. Under *kipat* tenure, land was owned communally or collectively by clans, lineages, or local patrilineal descent groups - though individual households had rights of usufruct, devolution, lease and mortgage to specific plots of land.[5] However, they did not have rights to sell land, both to Limubs and non-Limbus, but especially to persons who were not members of their own community. *Kipat* tenure was confined to some Tibeto-Burman communities such as Limbus, Rais and Tamangs, in the eastern and western hills. Are the relationships between land and water rights different in *kipat* and *raikar* land tenures? And are water rights constructed differently in these two forms of land tenure?

This contribution discusses the relationships between land and water rights in Thulo Sangrumba in Ilam District where the *kipat* form of land tenure was prevalent until it was abolished in 1964. This case is of interest for several reasons. First, Ningswa Kulo was constructed by twelve shareholders in 1961 to irrigate fields most of which were owned by Limbus under *kipat* tenure but are now all *raikar* land. Second, a few shares of irrigation water have been sold separately from the land to which they were attached and land sold without transferring the attached water rights. There are disputes about such transfers which help us understand the old as well as emerging rules concerning land and water rights. This case allows us to examine whether irrigation

[3] On irrigation water rights in Nepal, see Martin 1986, Yoder 1986, Pradhan 1990, R. Pradhan et al. 1997. For a historical account to land tenure in Nepal, see Regmi 1976,1978, also Pradhan, this volume.

[4] See Martin (1986) and U. Pradhan (1990) for examples of transactions in water shares.

[5] These rights of individual Limbu households to *kipat* land are similar to the rights of the tenants (*raitis*) on *raikar* land before they were made landowners (cf. Pradhan this volume), except that *raikar* land was crown or state land (cf. Regmi 1976, 1978).

water rights differ in *kipat* and non-*kipat* forms of land tenure. It will be suggested that the model of irrigation water rights in Thulo Sangrumba is similar to the model of *kipat* land tenure, that is, there is more emphasis on tradition and rights of the collective shareholders than in irrigation systems in locations with a history of *raikar* and derivative forms of land tenure. There is also a stronger sense here than elsewhere non-share holders should have access but not 'rights' to water. This may be due to their 'memory' of collective ownership of land and natural resources in the past.

We begin with a brief review of the history of *kipat* land tenure and the relation between the Limbus and the state as well as non-Limbu immigrants followed by a discussion of the history of Ningswa Kulo. The next two sections discuss the relationship between land and water rights in Thulo Sangrumba paying attention to the different types and levels of water rights and different means of acquiring water rights. The penultimate section makes a case for distinguishing between access and rights to water and the paper ends with the conclusion.

The Limbus, non-Limbus and the state

Until the first last quarter of the eighteenth century, Nepal was not a single political unit but a conglomeration of small principalities and chiefdoms.[6] The population in these principalities varied from Indo-Nepalese in the western hills to diverse Tibeto-Burman communities such as Magar, Gurung, Rai, Tamang and Limbu in the central and eastern hills and Tharu in the southern plains. Most of the principalities were ruled by Indo-Nepalese kings who claimed to be of Rajput descent. In the second half of the eighteenth century, King Prithvi Narayan Shah of Gorkha (ruled 1743-1775), a small, poor kingdom (*rajya*) west of Kathmandu, set out to conquer and annex the numerous principalities and chiefdoms.[7] After twenty-five years of military campaigns, he defeated and incorporated many of these principalities into the Gorkha kingdom (latter known as Nepal). While most of the incorporated principalities were ruled directly by the King and his officials, a few were allowed to remain relatively independent under their own kings (*rajas*) or chieftains, depending on their relationship with the Gorkha king or strategic importance. The Limbus, who fiercely resisted the Gorkha attack until they were finally conquered in 1774, were granted more autonomy than the other conquered people because they occupied strategic territory in the confluence of Tibet, Sikkim, India and Nepal.[8]

The Limbus have lived for centuries in Limbuwan (Limbu country), located in the hills of East Nepal, also known as Pallo Kirat (Far Kirat), in contrast to the land of

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[6] This section is based on Regmi 1976, 1978; Caplan 1970, 1995; Sagant 1996 and K. Pradhan 1991).

[7] See Stiller 1975 for the life of Prithvi Narayan Shah.

[8] Some Limbus claim that the Limbus were not conquered by Prithvi Narayan Shah. They fought a long war with the Shah dynasty and after a stalemate; they reached an understanding that they would be part of the Kingdom of Nepal but would retain autonomy regarding their land tenure and other traditional customs.

the Rais, another Tibeto-Burman ethic group who lived in Middle Kirat. Ten mythical ancestors were supposed to have first settled in Limbuwan, each ancestor claiming a territory consisting of forests, pastures, and wasteland. Limbuwan was divided into smaller territories as clans, lineages and sub-lineages separated. Land was held in common by a lineage or sub-lineage but individual households had usufructary and inheritance rights to plots they cleared for cultivation. They practiced shifting cultivation, mainly using the hoe, but later under the influence of Indo-Aryan immigrants, they adopted settled cultivation and used the plough. The lineage or sub-lineage headmen (*hang*), in consultation with members of their kin groups, could grant usufructary rights to land to Limbus of other lineages and to non-Limbus but ownership rights remained in the agnatic kin groups which gifted such land (Caplan 1995: 138).

Politically, the Limbus were probably a loose confederation of 'tribes', under chieftains who owed allegiance to the Sen kings of Vijayapur, at least in the seventeenth and eighteenth centuries (K. Pradhan 1991). The relations between the Limbus and the kings of Vijayapur were probably similar to the relations between the 'tribes' and Hindu kings in many parts of India; they owed allegiance to the king and probably paid tax or tribute but were left relatively autonomous to govern themselves (K. Pradhan 1991, Sagant 1976, Caplan 1970).

The Limbus were granted similar autonomy, at least initially, by King Prithvi Narayan Shah and his descendants. Soon after conquering the Limbus, King Prithvi issued a Royal Order (*Lal Mohar*) granting them rights to retain their customs and traditions as well as rights and privileges they had traditionally enjoyed, including their system of land holding, which was later known as *kipat*.[9] Although King Prithvi's successors reconfirmed the traditional rights and privileges of the Limbus, they at the same time promulgated various regulations, mainly under pressure of the immigrant non-Limbus, which undermined their autonomy and rights and reduced land under *kipat* tenure. The *kipat* form of land tenure as well as all special privileges and rights of the Limbus, especially of the *subbas*, as well as their autonomy were abolished in the nineteen-sixties.

Three phases in the relations between the Gorkha state and the Limbus

The first phase (1774-1820)

As described by Sagant (1996), there were three phases in the relation between the Limbus, especially Limbu chiefs, on the one hand and the Gorkha state and non-Limbus on the other. During the first phase (1774-1820) the state established military posts in Limbuwan and appointed officials, mainly with military functions. The traditional chiefs of lineages or sub-lineages were given political and economic

[9] The older form of Limbu land tenure was known as *thok sing thang sing*. "...[T] he Indo-Nepalese population... codified this system, progressively modifying it and, like all land-clearing tenure system, called it *kipat*. The word seemed to have appeared in Limbu sometime after the conquest, between 1770 and 1820. And with the term came the legislation" (Sagant 1996: 123).

power over their clan or lineage members, which "in effect granted them delegation of royal powers on the condition that they paid taxes to the King of Nepal" (Sagant 1996: 320). Though *kipat* land was not taxed, all Limbu households had to pay household tax to the king from 1782 onwards.

The second phase (1820-1951)

In the early part of the second phase, the various administrative measures promulgated earlier were systematized into the *thekka thiti* system in order to regulate the collection of taxes and maintain peace. The king delegated power to the Limbu headmen to collect taxes and maintain peace and granted them special privileges and rights. The recognition of the headmen, latter known as *subbas*, as the official leaders, tax collectors and dispensers of justice, and local representatives of the king, increased their power over their clan or lineage members as well as over non-Limbus who settled in their territories. The *subbas* "gained rights over the collective holdings comparable to the royal rights enjoyed, for example, by the former heads of principalities... they came to think of the clan segment holding as their own; [and] they acquired considerable control over the way legislation was applied" (Sagant 1996: 125).

The powers and privileges exercised by the *subbas* over their *kipat* territories as well as their fellow lineage members and others who settled in their territories were a combination of state and customary law.[10] The *subba* was responsible for managing land owned collectively by the clan segment but his control bore very little resemblance to the type of management that prevailed earlier under the traditional Limbu headmen when the *thok sing thang sing* tenure system prevailed. Under *kipat* tenure, the lineage territory was divided into 'communal' holdings and individual (or household) holdings both of which were inalienable and remained attached to a particular local group. Communal holdings included non-cultivated land such as forest, pasture and wasteland whereas individual holdings included cultivated land, kitchen garden, homesteads, and hillside plots still being cleared. The *subba* assigned a plot of the communal land to any member of the clan or lineage who wished to bring it under cultivation, for which he received gifts of liquor and meat. The individual who cleared a plot of land had rights to cultivate it and, as long as it was cultivated, it was passed on to direct heirs or close male blood relatives up to three generations. Such lands were sometimes assigned temporarily to women, especially widows and wives in polygamous relationships who wanted to establish separate households. Plots of land held by individual households reverted back to the 'communal' holding if they were not cultivated, e.g., if a household migrated, or in the absence of male blood relatives up to three generations. They also had rights to mortgage their plots to Limbu well as non-Limbu moneylenders. These mortgages were usually possessory mortgage wherein ownership of the land vested in the mortgagor and his heirs whereas the mortgage had usufructary rights to the land until the debt was fully repaid.

[10] According to Sagant (1996: 123), "The rules of the tenure system applied by the *subba* resulted from a combination of custom and law."

The *subbas* had special rights over 'communal' land and produce as well as over their kinsmen and immigrant settlers, similar to the rights enjoyed by holders of *birta* or *jagir* tenures (cf. Pradhan, this volume). Rights over land and produce included rights to hunt, graze and gather (forest produce). The *subbas*' kinsmen and immigrant settlers also had these rights but they had to inform their *subbas* in advance if they wanted to hunt, graze or gather. They had to pay fees for exercising these rights, such as the head and hide of any animal killed for hunting, and cash for other rights. The *subbas* had monopolies on wild products such as honey, fish and vegetable dyes and also on minerals found on his holdings.[11] They had rights to levy annual tributes in cash or kind, to commission on all transactions on *raikar* land within their territory, and to extract compulsory labour for themselves as well as for 'public works' such as building trails. The *subbas* collected taxes on behalf of the king (and later the state) from all the households within their territories, their own lineage members as well as immigrants who settled on their *kipat* 'lands' even when such lands had been converted to *raikar* tenure.[12] They kept peace and dispensed justice to both *kipat* and non-*kipat* members residing in their territories in accordance with their own customary law. They were allowed to keep the fees charged for hearing and resolving disputes.

There were two limitations to their powers and privileges. First, they were not allowed to decide cases involving the five serious crimes (*panchakhat*)[13] which were heard by courts appointed by the government. And second, while the post of *subba* was hereditary, the successor to the post had to be confirmed by on official from the District Land Revenue Office. *Subbas* could be removed from office for failure to submit the stipulated annual tax to the Land Revenue Office.

Over the years, the *subbas* had powers and privileges over smaller territories and lesser number of households. A *subba* had authority and rights over a defined territory and all households living in the territory. However, the territory and households over which he had authority and rights could be reduced or divided so that instead of one *subba* there could be two or more *subbas*, each with rights and authority over the divided territory and households. Any Limbu could apply to the Land Revenue Office and be appointed as a *subba* of a specific (and reduced) territory if he paid the stipulated fee and transferred some *kipat* land to the state.[14] This regulation led to a massive

[11] Regmi's observation regarding ownership rights over natural resources is perhaps more valid for the *subba* than for ordinary Limbus. "In Pallo-Kirat, a Limbu, until recently, exercised ownership rights within his Kipat holding not only over land of all physical categories, such as homesites, dry lands, paddy fields, and pastures, but also all forests, water and mineral resources. Kipat landownership rights were therefore virtually alodial in character" (Regmi 1978: 546-7).

[12] From 1820 onwards each Limbu household paid Rs. 6.50 annually which included three types of taxes i) *thek*: a fixed sum (Rs. 5) from all households; ii) a fee (Rs. 1) for remission of corvee labour (*jhara*); and iii) *niti*, a fee (Rs. 0.50) in exchange of waivers of caste rules. The *subbas* also collected taxes from *raikar khet* and *bari* from all *raitis* (tenants of the state) (Sagant 1996: 133).

[13] The term '*Panchakhat*' means five serious crimes such as murder and incest, which are punishable by death, branding or confiscation of property.

[14] The *subba* had to pay a fee of Rs. 52 and surrender 60 *muris (2 acres)* of paddy land (*khet*) to the government as *raikar*; if he could not afford this, he could submit half the fee and land and be appointed a *rai*. A Limbu who paid only Rs. 52 was called a *tiruwa subba* (Caplan 1970; Sagant 1996: 140).

increase in the number of *subbas* such that by 1966 there was on an average one *subba* for every twenty households (Sagant 1996: 325)!

Several policies and regulations of the state resulted in the decrease in the area under *kipat* tenure. First, new *subbas* had to submit a portion of their *kipat* land to the king in order to be confirmed to their post. Thus every time the incumbent *subba* died and a new one was appointed or the existing territory was divided among two or more *subbas*, a portion of the *kipat* land was converted to *raikar* land. Second, and more importantly, the state encouraged and aided the colonization of *kipat* land by non-Limbus.[15] At first, the state used forced labour to clear forests, build terraces and irrigate fields but from 1805 onwards, forced labour was abandoned for personal initiatives (Sagant 1996: 322-33).[16] The state even constructed and operated irrigation systems to encourage immigration and increase revenue (Sagant 1996: 328). *Kipat* communal land reclaimed by the state and immigrants were registered as *raikar* land and could not be converted to *kipat* tenure. Third, from 1888 onwards the state recognized the Limbus' claims to *kipat* lands only if they had documentary proof that they had been in possession of the holdings from 'ancient' times. Many Limbus lost rights to their *kipat* land because they did not have such documents. Their *kipat* lands were then classified as *raikar* lands and assigned to non-Limbu tenants of the state. Fourth, although *kipat* land in general could not be sold to non-Limbus, the state sometimes promulgated decrees legitimizing such sales; however, these decrees were later abolished due to strong pressure from the Limbus who feared that all *kipat* land would be sold to or possessed by the non-Limbu moneylenders. The Limbus increasingly lost ownership rights over larger and larger tracts of *kipat* land, especially forests, grazing and waste land, and retained ownership rights mainly over cultivated land and homesites. By 1951, less than one-third of Limbuwan was under *kipat* tenure (Regmi 1976: 95).[17]

The Limbus in fact had control over less than one-third of Limbuwan because many of them had mortgaged their (*kipat*) land to non-Limbus (Sagant 1996, Caplan 1970). The Limbus had to borrow money to meet their expenses both for daily needs and special occasions such as marriage and death ceremonies. They turned to moneylenders, mostly Brahmins but also rich *subbas*, for credit in exchange for which

[15] The state promoted the colonization of Limbu territories by non-Limbu immigrants and encouraged the "passage of land cleared by non-Limbus from the communal Limbu *kipat* system to the Indo-Nepalese *raikar*, in which the individual shares his landholding rights with the State. In one way or another, this change of tenure system was the object of numerous decrees..." (Sagant 1996: 323).

[16] Sagant writes, "Beginning in 1779, but picking up noticeable speed form 1804, the central administration exhorted immigrants to clear land, build terraces and irrigate fields. Land was granted on the territories of Limbu clans, which at that time practiced mostly shifting cultivation. To accomplish its goal, the administration first commandeered labour. From 1805 onwards immigration policy remained unchanged, but forced labour was abandoned in favour of encouraging personal initiative" (Sagant 1996: 322 -23).

[17] And only 40 percent of *khet* (paddy fields) remained under *kipat* tenure in the sixties (Caplan 1995: 140).

they mortgaged their fields.[18] The mortgagee either cultivated the fields by hiring labourers or leased them to tenants, often but not necessarily to the mortgagors themselves. The mortgagors were often unable to pay their debts and reposes their lands; on the contrary, they usually borrowed more money from the mortgagee so that in effect, they virtually lost all rights, except formal ownership, to their lands. Debt and 'landlessness' forced many Limbus to migrate to India in search of jobs and land (Caplan 1970, Sagant 1996, K. Pradhan 1991).

By 1951, the Limbus had lost control over most of their territory and arable land and the non-Limbus, especially the high caste Brahmins and Chhetris, had become more dominant, numerically, economically and politically.[19] The *subbas* were still powerful but there were also other state appointed village level functionaries such as *thari* whose jurisdiction extended only over tenants on *raikar* land but who nevertheless played important countervailing roles. The immigrant settlers from other communities increasingly lobbied with the state to reduce the power of the *subbas* and abolish *kipat* tenure so that they could buy land in Limbuwan. However, the Rana Prime Ministers, who ruled Nepal as *de facto* rulers from 1846 to 1951, did not want a drastic change for fear of strong resistance from the Limbus.

The third phase (post 1951)

The despotic Rana regime was overthrown in 1951 and after a short experiment in parliamentary democracy, King Mahendra introduced the so-called partyless Panchayat system in 1960. A more developed form of nation state was sought to be established by emphasizing uniformity of land tenure, better integration of all communities in the political and administration structures and abolition of special privileges and rights of specific communities, including the Limbus. Numerous laws were enacted in diverse fields some of which related to land and natural resources. A series of laws were enacted which abolished the various forms of land tenure (*birta* and *rajya*), bestowed more rights on the tenants, imposed ceilings on landholdings and converted registered tenants on *raikar* land to landowners (cf. Pradhan, this volume). Some of these laws eroded the traditional rights of the Limbus over *kipat* land. For example, in 1957 the state nationalized all forests, wastelands and minerals within the kingdom, including such resources on *kipat* land (Regmi 1978: 580).[20] After 1957, the rights of the tenants

[18] In Indreni settlements, studied by Caplan in the early sixties, 68.2% of the *kipat* land was under mortgage (82.8% of irrigated land and only 38.6% of dry land). About two thirds of the Limbu households had mortgaged more than half their lands - mainly irrigated land. Dry lands are mainly homestead sites that were not mortgaged. Of these, 57.3% of the households had mortgaged all their irrigated lands (Caplan 1995: 92). By far the greatest number of mortgaged lands was held by non-Limbus (72%), mainly Brahmins. Over one half of the mortgaged lands were cultivated by the mortgagee and the rest by tenants. Just fewer than 15% of the mortgaged lands were cultivated by their Limbu owners (Caplan 1970: 91-93).

[19] By 1940s the Rais had lost all their *kipat* land both because they were situated closer to the capital and in less strategic areas and because they presented a less united front than the Limbus (McDougal 1979: 15 quoted in Caplan 1995: 140; Regmi 1971: 53).

[20] Despite these regulations, King Mahendra was still confirming the rights of the Limbus to their tradition and customs (Regmi 1978: 626r).

cultivating kipat *lands* were regulated by state law; they had the same rights as tenants cultivating *raikar* lands Regmi (1978: 555).[21] Finally, *kipat* tenure was abolished in 1964 and all *kipat* land was automatically changed to *raikar* tenure. The Limbus registered their (former) *kipat* land as *raikar* with the Land Revenue Office and began to sell their land, especially to people of other communities. Three years later, the *thekka thiti* system was annulled which abolished the privileges and rights of the *subbas*. The powers they had were taken over by the village councils known as Village Panchayats, by the Land Revenue Office, and by state courts and other state bodies. However, many powerful *subbas* managed to be elected as *Pradhan Panchas* (chairmen of the village councils), for example, Subba Purna Lingdam of Sangrumba discussed below. The Limbus were politically, administratively and economically integrated into the nation state.

Kipat was more than just a system of land tenure; it was the organizing principle of Limbu society (Sagant 1996: 321) and the basis of their identity (Caplan 1995: 138). The abolition of *kipat* land tenure put a great stress on the social structure and identity of the Limbus. Despite the recent resurgence of ethnic movements by various ethnic communities, including the Limbus, their ethnic identity came increasingly under threat (cf. Gellner et al. 1997). With the restoration of multi-party democracy in 1990, party politics began to polarize villagers, crosscutting ethnic, caste and class divisions. Parties became new mediums and forums for initiating and resolving disputes. And slowly the idea of multi-ethnic village society has begun to replace the old model of village society divided along ethnic groups.

Thulo Sangrumba

Sangrumba VDC is located on a hill some five kilometres west of Ilam Bazaar in Ilam district. Sangrumba VDC is populated by different ethnic groups, mainly Limbus, Rais, Tamangs, Lepchas, and 'Parbatiyas' (Brahmins and Chhetris and Kamis). Wards one and two of Sangrumba VDC are collectively known as Thulo Sangrumba which consists of five hamlets, namely: Bafle Tamang Gaon, Kopche Rai Gaon, Thulo Gaon, Ningswa Tar and Masar Gaon. The population of Thulo Sangrumba is 573 (109 households) of which Limbus constitute the majority (52.5%) followed by Rais (17.8%), Brahmins and Chhetris (13.6%), Tamangs (8.03%) and Kamis (8.03%).

In the past the Limbus owned all land in Thulo Sangrumba under *kipat* tenure but over the years non-Limbus began to settle and gain access to land under *raikar* tenure. The Limbus owned land in different sections of Thulo Sangrumba, usually *bari* (dry or upland) in the higher elevation, close to their hamlets and *khet* (irrigated, low land) in the lower elevation. Until the late nineteen-fifties, most of the land was *bari* (dry land) and the main crops were maize, millet and broadcast rice. But after the late

[21] The rights of tenants on *kipat* land were not regulated by state law. However, the 1870 edition of the Muluki Ain granted the tenants of *kipat* land the same rights as tenants on *raikar* land but due to opposition by Limbus such rights of the tenants were removed in the 1888 edition. The rights of the tenants were reinstated in the 1957 edition (Regmi 1978: 555).

fifties irrigation canals were constructed in Thulo Sangrumba and *bari* fields were converted to *khet*. Currently maize and millet are the main crops in *bari* fields and summer and monsoon varieties of rice and wheat in *khet* lands. Vegetables such as potato, garlic and mustard are also grown during winter in both *khet* and *bari* fields.

Numerous springs and streams in Thulo Sangrumba supply water for irrigation, drinking water and more recently, for tiny hydroelectric plants. (See Map 1). Some farmers continue to irrigate their crops from springs and streams located on or near their fields; but many use irrigation canals. Two relatively larger streams, Rate and Kali Khola, supplemented by springs, are used as water sources for the five irrigation systems in Thulo Sangrumba: Siran Kulo, Mul Kulo, Ningswa Kulo, Badare Kulo and Masar Kulo. Mul Kulo is the oldest canal in Thulo Sangrumba which was constructed in 1956 by two persons to irrigate crops on their *raikar* land. Currently it has 14 shareholders known as *palebhais* (turnholders or shareholders). Its intake is located about 100 meters from Ningswa Kulo. Badare Kulo was constructed in 1960 under the leadership of a *subba* to irrigate both *kipat* and *raikar* lands; it also has 14 shareholders.[22] Ningswa Kulo, which was constructed in 1961 by 12 shareholders, is the longest and the most important irrigation system in Thulo Sangrumba.

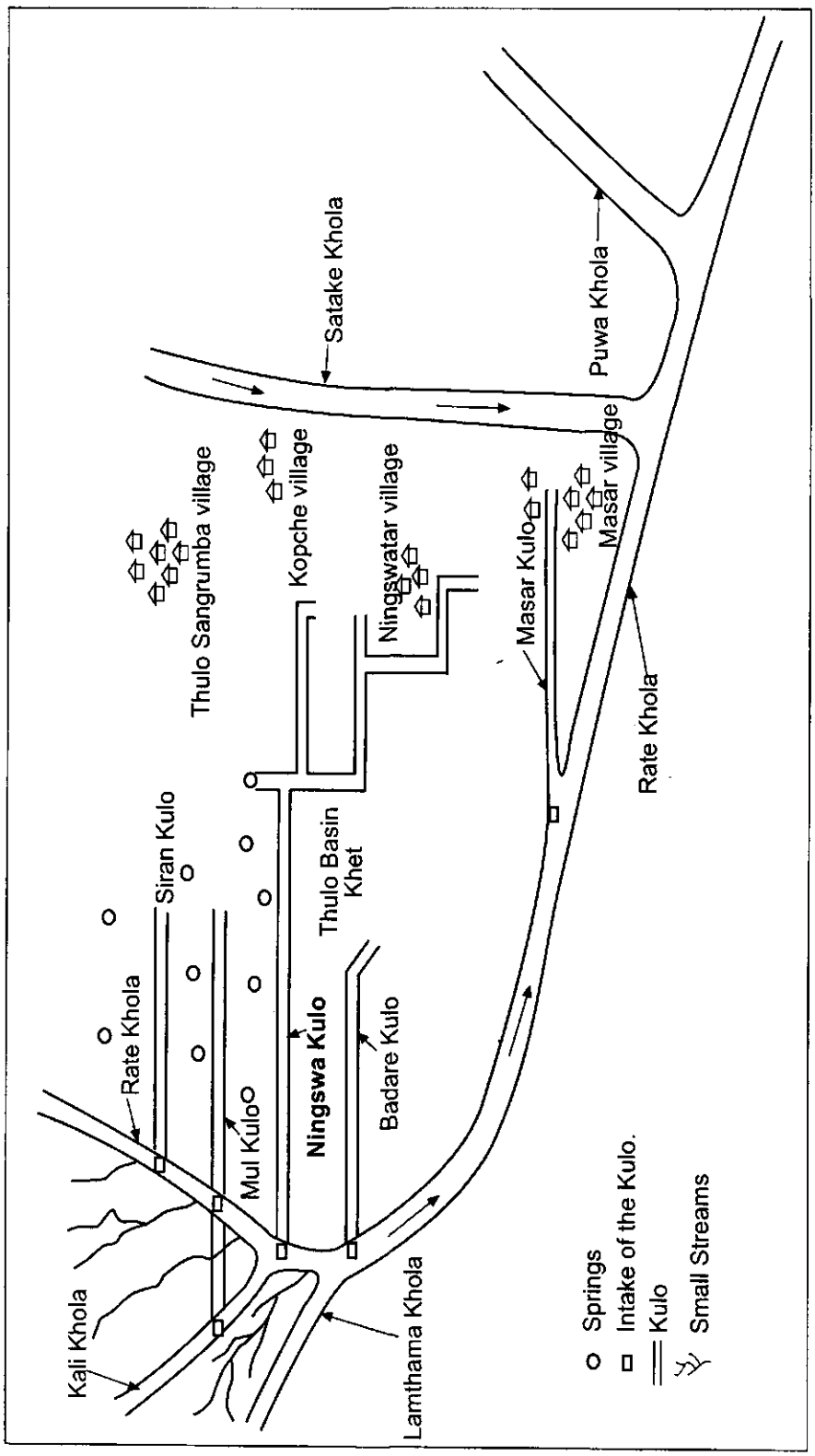
History of Ningswa Kulo

In 1961, Subba Purna Bahadur Lingdam, probably inspired by the success of other irrigation canals in Thulo Sangrumba, convinced five of his fellow Lingdams who owned land in Ningswatar and six others who had rights to land in Thulo Basin to invest in the construction of Ningswa Kulo. Purna, in addition to being the *subba* of the Lingdams, was one of the most powerful persons in Thulo Sangrumba. He was later elected the Chairman (*Pradhan Pancha*) of the Sangrumba Village Panchayat (council). Like other Lingdams, he owned land in several locations, *bari* fields in the higher elevation of the hill and in Ningswatar and *khet* in Masare village. Ningswatar was *kipat* land, owned by the Lingdam lineage. Although Ningswatar, a relatively flat area, was suitable to be reclaimed as *khet*, all the fields were *bari* fields due to lack of irrigation facilities. Ningswatar did not have its own source of water. Most of the land in Thulo Basin, which lies above Ningswatar, was *kipat* land owned by the Nembangs but there were also *raikar* fields. Most of the fields in Thulo Basin were *khet*s which were irrigated by small streams and springs but the supply of water was not sufficient, especially for winter irrigation. The Lingdams and the Nembangs lived in the same village. They intermarried and collaborated on social and religious occasions.

Twelve households contributed cash to underwrite the construction of the canal, six Lingdams who owned land in Ningswatar and six others who owned or had rights to land in Thulo Basin (four Nembangs who owned *kipat* land and two non-Limbus who had rights to *raikar* land). The original investors contributed a total of 2,000

[22] According to some informants, Badare Kulo was constructed much earlier. The older canal ditch still exists but is not used.

MAP 1
Water Sources & Kulos



Indian Rupees [I.C.] and a government agency for village development gave them a grant of Rs. 320 to pay for the construction of the canal.[23] The twelve investors or shareholders are known as *pales* or *palebhais* (turnholders). Eleven of the investors contributed Rs. 140 each and each had rights to one share or turn (*palo*) of twenty-four hours (day and night) of the water from the canal. Subba Purna contributed three times more than the other investors and had rights to three shares or water turns. Water turn shares were based on cash contributed for the construction of the canal and not the size of land to be irrigated (See Table 1).

Table 1: Palebhais, time share, land tenure and land size in Ningswa Kulo

#	*Palebhai* (Shareholder)	Caste/ ethnicity	Contribution [Rs.]	Time Share (*palo*)	Land Tenure	Land size (*ropani*)
Middle Section						
1	Yam Bdr. Kafle	Chhetri	140	1	*Raikar*	14
2	Man Karne Tamang	Tamang	140	1	*Raikar*	35
3	Purna Bdr. Nembang	Limbu	140	1	*Kipat*	15
4	Suk Raj Nembang	Limbu	140	1	*Kipat*	10
5	Kaji Bdr. Nembang	Limbu	140	1	*Kipat*	7
6	Mukh Bdr. Nembang	Limbu	140	1	*Kipat*	26
Ningswatar (tail-end)						
7	Purna Bdr. Lingdam	Limbu	420	3	*Kipat*	35
8	Sher Bdr. Lingdam	Limbu	140	1	*Kipat*	15
9	Gurung Lingdam	Limbu	140	1	*Kipat*	16
10	Raj Bahadur Lingdam	Limbu	140	1	*Kipat*	32
11	Harka Lingdam	Limbu	140	1	*Kipat*	15
12	Mohan Sing Lingdam	Limbu	140	1	*Kipat*	17
				14		237

Source: documents collected in Sangrumba

Some farmers who could have contributed to the original investment in the construction of the canal were either not interested or not allowed to do so. The Fejong Limbus who owned *kipat* land as well as non-Limbus who had rights to *raikar* land in the head section of the canal and some farmers who had rights to land in the middle section, i.e., Thulo Basin, were not interested in investing in the *kulo* because they had easy access to springs and streams which they could tap for their irrigation needs. Other farmers were interested but they were too poor to invest. A few farmers were interested in irrigating their fields from the proposed canal but they were not sure whether it could be constructed and operated successfully. There was some basis for their doubt because the first attempt to construct the canal, sourcing water from Bhatte Khola, had to be abandoned due to landslides. They also had reservations about the attempt to divert water from the present water source because the canal was over 5 km. long. And they believed that water would not be sufficient for winter irrigation.

[23] The actual construction work was done by hired labourers from Panchthar who were considered experts in canal construction.

At the same time, the original investors were not really keen to allow other farmers to invest in the construction of the canal because they were afraid that the water supply might not be sufficient if a larger area were to be irrigated. Further, it was easier to manage a small group of shareholders than a large one, especially if the shareholders lived in other villages beyond the influence of Subba Purna. For these reasons the number of shareholders were limited to twelve and the canal was not extended beyond Ningswatar to Barbote. Subba Purna had the final say on who would be included as shareholders of Ningswa Kulo.

The shareholders of Ningswa Kulo have benefited from the *kulo* because of assured and sufficient supply of irrigation for both monsoon and winter crops. The Lingdams of Ningswatar have benefited more than other shareholders. They converted most of their *bari* fields to *khet* and grow rice and wheat instead of corn and millet. The value of their land as well as their agricultural income have increased dramatically. Better off economically, they have not sold their land. Rather they now live in Ningswatar, where they have constructed permanent buildings instead of temporary structures.

Ningswa Kulo has not changed much since it was constructed in 1961. It is still a simple, unlined ditch and the intake structure is a temporary brushwood and stone affair. There has been a small increase in the number of shareholders but the area of land officially irrigated by the *kulo* the canal has not been enlarged, with one exception mentioned below. The canal officially irrigates 237 *ropanis* of land but, as discussed below, the actual area irrigated by the canal is larger.

Many of the farmers who did not or were not allowed to become shareholders earlier would like to become *palebhais* but the original shareholders and their successors are extremely reluctant to accommodate them. The shareholders are also not willing to ask for help from the VDC or other state agencies and donors to repair or extend the canal because they are worried that other farmers might claim rights to be admitted as shareholders. They are unwilling to expand the command area and include more shareholders partly because they fear that water might not be sufficient to irrigate fields especially for the tailend which is not blessed with springs and streams. But more importantly they are worried that more shareholders would make it difficult to manage the system. The shareholders prefer to keep a tight control over the management of the irrigation system which has been facing problems, especially concerning contributions for repair and maintenance, water 'stealing' and transfer of water shares.

There is no formal organization or committee which manages Ningswa Kulo. While Subba Purna was alive, he shouldered the privilege and the responsibility for mobilizing resources, fixing dates for repair and maintenance and water distribution, transfer of water shares, and so on. Ningswa Kulo functioned well as long as Subba Purna controlled and managed it, partly because he was an influential person and partly because of the small number of shareholders most of who were either kin or friends. The shareholders contributed labour as required for the operation and maintenance of the system and took turns irrigating their fields. There was also less water 'stealing' by non-shareholders. But Chakra, who took over the leadership of

the irrigation system, is not as powerful or influential as his father was even though he is the Chairman of the Sangrumba Village Development Committee. There are problems with repair and maintenance of the canal as well as water theft. The shareholders either do not turn up for work or send small boys; and they make feeble excuses for not contributing labour for repairs. They are not fined for failure to contribute labour. Two years ago, Chakra called the shareholders for a meeting and suggested that they hire a contractor to carry out the regular repair and maintenance work just before monsoon. He argued that this would be 'fair' because all the shareholders would have to contribute cash. For the past two years the shareholders have been contributing cash instead of labour for repair and maintenance; the first year Rs. 50 per share and then Rs. 100 per share. Their cash contribution is expected to go up annually depending on the cost of contract and the state of the canal.

Land and irrigation water rights in Thulo Sangrumba

In Thulo Sangrumba, as in most parts of Nepal, rights to irrigation water are intimately linked with rights to land. It is not possible to have rights to irrigation without having rights to cultivated land in the command area of the irrigation system. Rights to irrigation water are usually transferred along with land rights. The close relationship between land and water rights is well expressed in the statement made by an informant: "When you sell a horse you also give the buyer the horse's bridle."[24]

Rights to irrigation water are usually obtained by acquiring rights to land traditionally irrigated by a canal.[25] Rights to land are acquired either by purchase, inheritance, gift, lease or possessory mortgage. Until the mid-sixties, most of the land in Thulo Sangrumba was *kipat* and only a small portion was *raikar* land. As discussed earlier, *kipat* land was owned collectively by the locally based Limbu lineage or sub-lineage but individual households had various other rights over the land they cultivated. They had rights to use the land for as long as they cultivated it and they could bequeath it to their family members (and thus they had rights to inherit). Though they were not allowed to sell *kipat* land, especially to non-Limbus, they were allowed to rent it to tenants and to mortgage it to both Limbus and non-Limbus. Non-Limbus could acquire rights to *kipat* land only as tenants or mortgagees. As tenants or mortgagees they were not allowed to become official shareholders of irrigation systems but they had use rights to irrigation water. However, it was possible for non-Limbus to become official shareholders of irrigation systems if they were official tenants of traditionally irrigated *raikar* land. After the mid-sixties, *kipat* tenure was abolished and converted to *raikar*

[24] Elsewhere in Nepal, some farmers, commenting on the intimate link between land and water rights say: "When you sell a (pregnant) cow, the calf that is born belongs to the new owner." Some farmers also compare land and water rights to flesh and nails.

[25] It should be pointed out that the rights refereed to here are not so much individuals rights, the persons mentioned in the shareholders list, but all the members of the household (or family) which have rights to the land irrigated by the water. The distribution of rights between household members is another issue not discussed here but see F. and K. von Benda-Beckmann, this volume.

tenure. Holders of the *raikar* tenure became landowners instead of tenants of the state. Landowners of *raikar* tenure have rights to sell, lease, mortgage, and bequeath *raikar* land. Non-Limbus are allowed to buy *kipat* land converted to *raikar* tenure and to become official shareholders of irrigation systems which traditionally irrigated the land they purchased.

It is useful to make a distinction between full and independent rights on the one hand and partial and dependent rights to irrigation water on the other. Official shareholders (*palebhais*) have full and independent irrigation water rights: they have rights to own, use, transfer, lease, participate in decision-making and implementing processes; they also have obligations to contribute labour or cash for repair and maintenance and to observe the rules framed by the shareholders.[26] Other persons have partial and dependent irrigation water rights. Tenants and possessory mortgagees, for example, have rights to use irrigation water but they do not have other rights (ownership, decision-making, transfer, etc.). They acquire use rights, not independently but through their landlord, the official shareholder.

Individual rightholders, even if they have full and independent rights, do not have complete freedom to use or dispose water from the canal. The shareholders as a collectivity make and enforce rules, including rules concerning how individual shareholders may use water and to whom they may transfer their water rights. A shareholder, for example, may not use his share of water to irrigate fields owned by non-shareholders, even if he has taken such fields on lease. He is also prohibited from irrigating his own fields which traditionally were not irrigated by the irrigation system of which he is a shareholder. The collective shareholders may also impose restrictions on sale of land or water shares. For example, as discussed in the next section, the collective shareholders may not recognize and accept as an official shareholder a person who had bought land and attached water rights from one of the shareholders without their approval. Such a person may have rights to use his share of water but usually not to participate in decision-making.

In addition to the full and independent or partial and dependent rightsholders, other farmers also use water from irrigation systems to irrigate their fields. Some of these farmers have 'tolerated' access to irrigation water, that is, the shareholders give them permission to irrigate their fields if there is surplus water so long as they do not claim rights to the water. Other farmers divert water from the canal without permission, i.e., they 'steal' water (cf. Pradhan and Pradhan 1996, 1999). They often justify this water 'stealing' on the ground that the water flows through or adjacent to their land or that water from public water sources and surplus water in irrigation canals is common property. They argue that having access to cultivated land in the command area gives them some rights to the water in the canal.

The rules concerning land and water rights discussed above are relevant for Ningswa Kulo with one exception. Although one of dominant rules is that water

[26] In many irrigation systems the original investors usually have senior rights as compared to newcomers or new right holders (Yoder 1986, Martin 1986, Pradhan 1990) but this is not the case in Thulo Sangrumba.

shares should not be sold separately from land, a few water shares have been sold separately from land and land has been sold without transferring the full water share attached to the land. But such transactions are disputed and the buyers of such water shares or land have not been accepted as official shareholders of the *kulo*.

Three ways of acquiring rights to irrigation water

There are three main ways of acquiring rights to irrigation water of Ningswa Kulo: by original investment in the construction of the canal and inheritance of land, by purchase of land with attached irrigation rights and by purchase of irrigation water shares. These means of acquiring water rights are discussed below.

Original investment and inheritance of land

The original 12 shareholders acquired and established their rights by contributing resources for the construction of the canal and having rights to land either as *kipat* owners or landholders of *raikar* land in the command area. Currently there are 14 shareholders (*palebhais*), only three of whom are original shareholders, but the total number of shares has not increased (see Map 2). The new shareholders acquired rights to irrigation water either by inheritance or purchase of land irrigated by the canal or by purchase of water shares independent of land.

As can be seen in Table 2, currently there are only three original shareholders of Ningswa Kulo: Purna Nembang and Mukh Nembang in the middle section and Ser Lingdam in the tail-end. Seven shareholders acquired irrigation water rights by inheriting land either from their fathers (Bom Tamang, Gunju Hang, Chakra Lingdam, Dhan Raj Lingdam, Bhakta Sanwa, and Anjani Limbuni), or wife (Lal Younghang), who in turn had inherited the land from her father.[27]

Of the seven new *palebhais* only one is a woman- Anjani. (Earlier Gurung Lingdam's daughter, as a only child had also inherited her father's land.) Anjani's father, Yam Bahadur, married a second wife and set up another household in the Terai, leaving the land he inherited from his father, Mohan Singh, for his first wife and her daughter. Anjani lives with her mother, her husband and their children in her father's house in Ningswatar. Her husband is not a Limbu but a Rai. Anjani and her mother have use rights to the land. Although Yam has the formal title to the land they cultivate, the Limbus consider Anjani the "owner" of the land and recognize her as the official shareholder. She is listed as a shareholder in the register. However, the shareholders often refer to Anjani's husband and not her as 'shareholder' (*palebhai*) because he represents her at meetings, goes for repair and maintenance, diverts water from the canal to their fields, and so on. Strong notions of gender division of labour, activities and space preclude women in Thulo Sangrumba and elsewhere in Ilam and Nepal from participating in irrigation management activities (cf. Bajracharaya, Pun

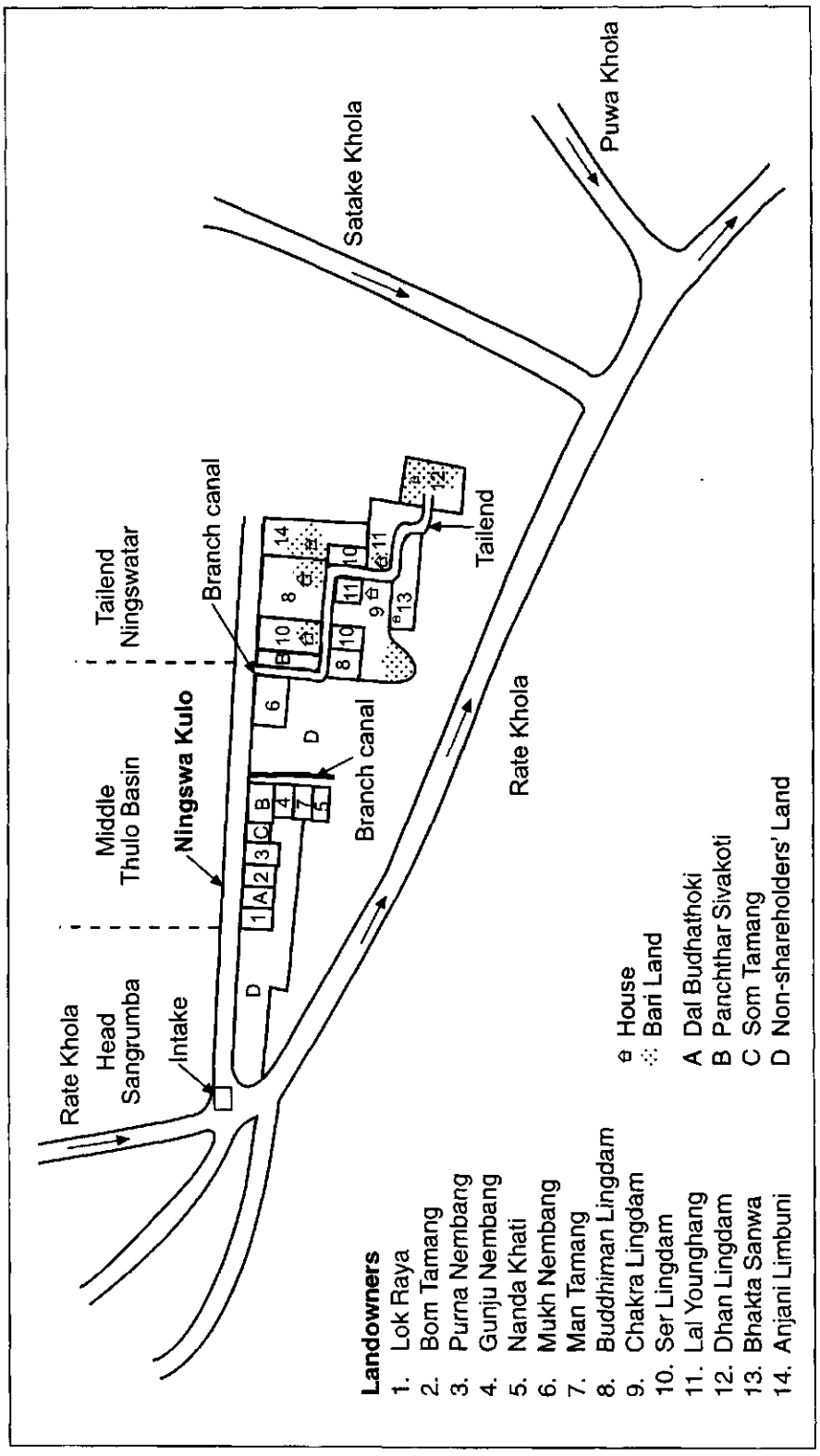
[27] Gurung Lingdam had only one child, a daughter. After she died, her husband inherited her land and associated water shares. He re-married another Lingdam and is now more acceptable to the Lingdams.

Table 2: Old and Current Shareholders (*Palebhais*) and Methods of Acquiring Water Rights

#	Original Shareholders	Official current water shareholders	Caste/ ethnicity	Water Share	*Khet* land	*Bari* Land	Method of acquiring water rights	Remarks
1	Yam B. Kafle	Lok B. Raya	Chhetri	1	14	0	Buying land	
2	Man Karne Tamang	Bom B. Tamang	Tamang	1 [5/6]	35 [23]	0	Inheritance of land	Transferred 1/6th share to Katwal, when he sold him 12 *ropanis* of land; but Katwal is not recog nized as a shareholder; Tamang's land is cultivated by a tenant (Lakpa Tamang).
3	Purna B. Nembang	Purna B. Nembang	Limbu	1	15	0	Original Investment	
4	Suk Raj Nembang	Gunju Hang Nembang	Limbu	1	10	0	Inheritance of land	
5.	Kaji B. Nembang	Nanda B. Khati (bought land from Bal B. Nemb-ang, Kaji's grandson)	Kami	1	7	0	Buying land	Bal transferred 1/2 share to Khati and sold 1/4th shares each to two persons (but did not sell them land).
6	Mukh B. Nembang	Mukh B. Nembang	Limbu	0.5	12	0	Original Investment	Transferred half his time share when he sold land
7.	Mukh B. Nembang	Man B. Tamang	Tamang	0.5	14	0	Buying land	From Mukh B. Nembang.
	Ningswatar							
8	Purna B. Lingdam	Buddhiman Lingdam	Limbu	1	20	0	Purchase of water share	Purchased water share from Chakra (who inherited the share from his father); Chakra and Buddhiman are first cousins. Did not buy land.
9	Purna B. Lingdam	Chakra B. Lingdam	Limbu	2	35	5	Inheritance of land	
10	Ser B. Lingdam	Ser B. Lingdam	Limbu	1	15	0	Original investment	
11	Gurung Lingdam	Lal B. Younghang (from his deceased wife)	Limbu	1	16	5	Inheritance of land	Inherited from his deceased wife, Gurung's daughter.
12	Raj B. Lingdam	Dhan Raj Lingdam	Limbu	1	32	10	Inheritance of land	
13	Harka B. Lingdam	Bhakta B. Sanwa	Limbu	1	15	10	Inheritance of land	
14	Mohan Sing Lingdam	Anjani Limbuni (married to a Rai)	Limbu	1	17	10	Inheritance of land	Inherited from her father (Yam Bahadur).
	Total			**14**	**257**	**40**		

Source: Documents collected in the field.

MAP 2
Ningswa Kulo, Shareholders' and Non-shareholders' Land



and van der Schaaf, this volume). Nevertheless, Anjani and not her husband is recognized as the official shareholder of Ningswa Kulo because she has rights to the land with attached irrigation rights.[28]

Purchase of land with attached irrigation rights

Three new shareholders acquired water rights by buying land with attached irrigation rights but in two cases, the new owners did not get the full water turn shares. Lok Raya, a Chhetri, bought land from Yam Kafle (no. 1) and automatically acquired one water turn share. Man Tamang bought 14 *ropanis* of the total 26 *ropanis* of land from Mukh Nembang and received half a share of 24 hours of water while Mukh, the original shareholder, retained the other half. The shareholders duly recorded the transaction without protest. Nanda Khati, from an untouchable caste, bought seven *ropanis* of land in the middle section from Bal Nembang who had inherited the land from his father, Kaji Nembang. Nanda is listed as a shareholder with one full water turn or share in the shareholders register because he bought the whole plot of land with attached rights to one share. However, Nanda has to share half of his turn with two other persons to whom Bal Nembang had sold one-fourth water turn each without selling them any land (see below).

Purchase of land with attached water rights does not automatically guarantee acceptance as an official shareholder. In 1987 Bishnu Katwal bought 12 *ropanis* of land in the middle section from Bom Tamang, who had inherited the land from his father. Bom retained 23 *ropanis* of land. When they signed the contract, Bom promised to give Bishnu 4 hours (1/6 time share) from his own time share of water. Bishnu irrigates his crops for up to four hours from the time allotted to Bom and contributes his own labour for maintenance work. However, Bishnu is not listed as an official shareholder even though he bought land with attached water rights. One explanation why he has not been accepted as an official shareholder is that he does not have close social relationship with the other shareholders. He lives in another village and hardly ever meets them socially. It seems that the general rule that water rights are transferred with land rights are flexibly applied. Social relationships are important factors when law is concretised in decisions (cf. Adhikari and Pradhan and F. and K. Von Benda-Beckmann, this volume).

Buying water turn shares

It is sometimes possible to acquire rights to irrigation water and become an official shareholder by buying water turn shares independently from land, but only if other shareholders agree. Buddhiman Lingdam was accepted as an official shareholder even though he purchased one water share turn without buying land with attached irrigation rights. He did or could not contribute cash when the canal was being constructed

[28] In terms of state law, Anjani's mother, as co-parcerner with her husband, would have first rights to the land. Daughters, especially married daughters do not have use rights to ancestral land unless they are given such rights with consent of other heirs.

because he was in Bhutan. His wife had converted their *bari* land to *khet*, confident that they would be able to irrigate their crops. After returning from Bhutan in 1971, Buddhiman bought one share of water turn from Subba Chakra for Rs. 140. They had adjoining plots of land and their fathers were first cousins. The other shareholders did not object to the transaction and accepted him as an official shareholder not only because he was a Limbu and had land in the command area of Ningswa Kulo but also because of his close ties with Chakra, the powerful *subba* and leader of the *kulo*.

Buddhiman may have been a special case because other farmers who bought water shares but not the land associated with the water turns have not been accepted as official shareholders though they divert water from the *kulo*. In 1992, Dal Budhathoki and Panchthar Sivakoti bought one-fourth water turn shares each from Bal Nembang for which they paid Rs. 200 and Rs. 300 respectively. As mentioned earlier, Bal had already sold all of his land to Nanda Khati. Nanda is accepted as an official shareholder with one share and as far as the other shareholders are concerned, only he has rights to the water turn share associated with the land sold to him by Bal. However, Nanda has to share half his water turn with Dal and Panchthar both of who are not listed as shareholders.

There is an on-going dispute between Dal, Panchthar and Bal on one side and the official shareholders on the other concerning the question of whether water shares could be sold independently of land and whether the buyers of such water shares have rights to irrigation water. The dispute reveals two different rules concerning transfer of land and water rights, especially the association or dissociation between land and water rights. The dominant view, shared by the official shareholders, is that Dal and Panchthar do not have rights to water from the canal because Bal had already sold all of his land to Nanda. The water turn share attached to the land was transferred automatically when the land was sold. When a horse is sold the horse's bridle too is transferred along with the horse. Water shares should not be sold independently of land.

Bal, Dal and Panchthar have a different view. Bal insists that he has the right to sell land and water shares separately; he further argues that he sold his water shares independently of land because the supply of water in the canal was more than sufficient for the shareholders and in fact it was being wasted. Nevertheless, he plans to return the money to Dal and Panchthar due to pressure from the shareholders.

Dal and Panchthar argue that they have rights to the canal water because they bought water shares from Bal. Both Panchthar and Dal's fields adjoins the canal so it is easy for them to divert water even if the shareholders object. Dal Budathoki has some knowledge about state law. He argues that the shareholders knew about his purchase of water shares; the sale document was signed by four witnesses, including one official shareholder (Bom Tamang). He claims that the document is proof of his rights to irrigation water. He further claims that in any case he has rights to the water based on 'customary use' of water from the *kulo*; such rights are recognized and protected by the courts (cf. Khanal and K.C. 1997). He could take recourse to state law and state institutions to establish his claims but has not done so yet to avoid antagonizing the shareholders.

Currently there is an uneasy compromise between the disputing parties. Although Dal and Panchthar are not recognized as official shareholders, they have been irrigating their fields during the time allotted to the official shareholder (Nanda) and more importantly they have also been contributing labour and cash for repair and maintenance for which they are given official receipts by the shareholders.[29] In many ways, it would appear that they have the same rights and obligations as the other shareholders except that they do not participate in decision-making.

One reason why Dal and Panchthar have not been accepted as official shareholders is that they, like Bishnu Katwal but unlike Lok Raya and Nanda Khati, do not have close and good relations with the other shareholders. Lok and Nanda live in Thulo Sangrumba and often meet the other shareholders with whom they go to markets, etc. Bishnu lives in another village and hardly ever meets the shareholders. Panchthar and Dal live in Thulo Sangrumba but do not interact much with them. Dal did and does not have good relations with the Limbu shareholders because he used to steal water from the *kulo* and was and still is their political rival. He is currently the local leader of the Congress Party whereas most of the Limbus support the United Marxist-Leninist Party. The Limbu shareholders fear that if he were admitted as an official shareholder he probably would gradually take control over the management of Ningswa Kulo. Ethnicity may have played a role but probably not a major one because non-Limbus such as Nanda have been accepted as official shareholders.

Perhaps the most important reason why Panchthar and Nanda were not accepted as an official shareholder is that the shareholders do not want to open the floodgate of transactions in water shares independent from land. If such transactions were allowed there may come a time when water turns could be used to irrigate fields outside the official command area which would eventually cause problems for effective management of the irrigation system (distribution of water, resource mobilisation, water stealing, and so on). By insisting that irrigation water rights are appurtenant to land rights, they are able to maintain some degree of control over the management of the irrigation system and assure themselves of sufficient and timely irrigation.

It could be argued that a new rule concerning rights or rather relations between land and water rights is emerging in Thulo Sangrumba alongside the older rules. We could then speak of emerging legal pluralism of local laws concerning relations between land and water rights. The new rule is yet to be fully accepted and established but it may be done in the future if Bal Bahadur and his friends become politically more powerful and are able to convince other shareholders. New rules and rights. New rules and rights are established through negotiation.

Access and rights to irrigation water

Several categories of users divert water from Ningswa Kulo for irrigation: users who have irrigation rights, either full and independent rights such as official shareholders

[29] The sale document states that Dal Budathoki has to contribute labour for repair and maintenance (as part of Bal Bahadur's share). He says that he does not contribute labour but he does contribute cash (his share of 1/4th share) to pay the contractor for repair and maintenance of the canal.

or partial and dependent rights such as tenants, mortgagees and farmers whose purchase of land or water shares have not been endorsed by the shareholders. Other users have access but not rights to Ningswa Kulo. They irrigate their fields either with permission from the shareholders, i.e., they have 'tolerated access', or without permission, i.e., they 'steal' water. In this section we will discuss the latter two categories of users.

Tolerated access

A few farmers divert water from Ningswa Kulo to irrigate their fields with permission from the shareholders. They are allowed to divert water under certain conditions: i) the irrigation needs of the shareholders and other rightholders are not affected; ii) they contribute labour or cash for repair and maintenance of the *kulo* whenever they are asked to do so; and iii) they do not claim rights to water from the *kulo*. Som Tamang has four *ropanis* of *khet* in Thulo Basin which can be irrigated in two hours.[30] Following an agreement between his father and Subba Purna soon after the canal was constructed, he is allowed to irrigate his field during the turn of one of the shareholders. Most of the shareholders do not require all the water during their turns so Som does not have any difficulty in irrigating his field. Similarly, Bhim Raya diverts water from the *kulo* to irrigate his fields located in the headend of the command area on the date allotted to him by Chakra, the leader of Ningswa Kulo. Both Som and Bhim contribute labour for repair and maintenance of the *kulo* and both are careful not to claim rights to irrigation water. They receive sufficient and assured supply of water so long as the requirements of the rightholders are met. Som and Bhim have 'tolerated access' (provisional, temporary permission to withdraw water) but not rights to irrigation water.

Stealing water

Some farmers divert water from Ningswa Kulo irrigate their fields without asking permission from the shareholders probably because this is the only way they have access to the water in the *kulo*. Such diversion of water which stops the flow of water further down the canal is called '*pani marne*' in Nepali, as in the expression "who stopped or 'killed' (the flow) of my water? (*mero pani kasle mareko*?)" Another term used for diversion of water is '*pani chorne*' (stealing water), as in the expression, "They give us trouble by stealing water (*pani chorera dukha dinchan*)." The person who diverts water without permission is called '*pani chor*' ('water thief').[31] As these terms imply, the rightholders consider the water in the *kulo* as their 'property' and the diversion of water without their permission as an illicit or illegal act, i.e., theft. The 'water thieves', however, often justify their action by claiming that the water source of the *kulo* is common property (*samudayak sampati*) and not a 'dowry'[32] of the *palebhais*. They claim that all farmers with land in the command area should have rights to the water diverted from the common source.

[30] Som Tamang says he owns only 4 *ropanis* of land but other farmers claim he owns 10 *ropanis*.
[31] The Limbu term for water thief is '*chawal keghupa*'.
[32] The term used is '*pewa*', that is gifts given to a bride by her husband's relatives and friends.

Though water stealing is quite common and troublesome, the rightholders do not take it very seriously, especially when water supply is abundant. The shareholders are more lenient about water theft during winter when the demand for water is less pressing than during monsoon when both the supply and timing of irrigation are very important for the paddy crop. Water thieves from the head end or the middle section are more likely to steal water during the water turns of the middle-section shareholders than during the turns of the more powerful and united tailend *palebhais*. The 'water thieves' are not punished as they would be if they stole money or other valuables, though of course, in the heat of the moment, they may be abused or thrashed, depending on the relationship between the thieves and the shareholders as well the gravity of the theft. Sometimes the thieves are scolded but later they may be allowed to divert water. The more powerful the thieves, the less likely are they to be punished. For example, a Limbu priest, a tenant of Rohini Ghimire who is not a shareholder, is the most notorious water thief but the shareholders dare not prevent him from stealing water or scold him because they fear that he may curse them or even kill them through his special 'magical powers'.[33]

There are two additional reasons why water thieves are rarely punished. The first is that the shareholders do not want to create bad feelings with fellow villagers; as one shareholder put it, "We all have to live together in the village." In one incident, the shareholder who abused a water thief caught red-handed diverting water, later repaired their relations by sharing a bottle of home-brewed beer. Second, the shareholders do subscribe to the view that water sources are common or public property and that their fellow villagers should be allowed to use surplus water. At the same time they argue that the non-shareholders do not have rights (*adhikara* or *hak*) to the water from the irrigation canal; they may use the water after the rightholders have irrigate their fields so long as they (the non-rightholders) do not claim rights to use the water.

Access and rights to public water sources and 'private' irrigation water

There are no disputes between the different users of the canal over access and use rights to public water sources such as streams.[34] They may dispute about who should have priority in withdrawing water and for what purpose but all agree that public water sources are public or community property to which everyone in the locality should have access and rights to use. But there are dispute about rights to water in irrigation systems which divert water from public water sources.

The dominant view, or perhaps rule, is that the investors who financed the construction of an irrigation system as well as their successors (by inheritance, gift, purchase and so on) have full rights over the water captured from a public water source and conveyed in their canal. In other words, the irrigation infrastructures as well as water flowing in the canal are 'private' property of the original investors and

[33] On the magical powers of Limbu priests, see Sagant (1996).

[34] For a discussion of the difference between access and rights, see R. Pradhan and U. Pradhan (2000).

their successors. As owners, they have rights to use, manage and control the irrigation system and water in their canal; they have the right to decide how they will use the water, who they will admit as shareholders and to whom they will give access to their water and under what terms. Farmers who have rights to water in Ningswa Kulo as well as many who do not have rights subscribe to this view. As one farmer who does not have rights to water in the *kulo* argued: "The shareholders and their ancestors constructed Ningswa Kulo so they have rights to the *kulo* and the water (in the *kulo*). This is the tradition (*parampara*). We cannot and should not break tradition; if we do so, society will break down."

Other farmers agree that Ningswa Kulo and water in the *kulo* are private property of the shareholders but they argue that they should have access and perhaps even use rights to the surplus water in the canal which diverts water from public or community water sources. A few farmers argue that the command area of Ningswa Kulo should be enlarged and more farmers should be admitted as shareholders because water supply in the canal is more than sufficient to meet the irrigation needs of the present shareholders. They question the 'tradition' whereby irrigation rights are restricted to the original investors or their successors. As a farmer whose request to be admitted as a shareholder was turned down by the shareholders complained: "Abundant water flows in the canal above our fields but we are not allowed to use the surplus water. We are compelled to steal water to irrigate our fields. We are greatly troubled by tradition."

The shareholders subscribe to the view that the non-shareholders with land in the command area of Ningswa Kulo should have some form of access to surplus water in their canal. They are willing to grant a few of the non-shareholders tolerated access to surplus water under certain terms but they are not willing to concede that they (the non-shareholders) have rights to the water in the *kulo*.

Conclusion

There are several kinds of relationships between land and water rights which may vary across time and space or found in one locality. In Thulo Sangrumba, as in most parts of Nepal, irrigation water rights are generally appurtenant to land rights. One of the essential, though not sufficient, conditions required to acquire and maintain rights to irrigation water is to have rights to cultivated land in the command area. Villagers who do not have rights to land in the command area of an irrigation system cannot claim rights to water from the *kulo* but all villagers who have land rights in the command area do not have irrigation rights. Rights to irrigation water may not be sold, leased, bequeathed and so on separately from land to which the irrigation water rights are attached.

There are several ways to acquire irrigation water rights. Farmers who have land in the command area and invest in the original construction of an irrigation system establish rights to the irrigation infrastructures and irrigation water which they retain as long as they maintain rights to the land. Subsequent to the establishment of the original irrigation rights, other farmers obtain rights to irrigation water of the *kulo* by

acquiring rights to the land officially irrigated from the *kulo* either by inheritance, gift or purchase. All these farmers acquire and establish full and independent irrigation rights. Other farmers who acquire rights to use land as tenants or mortgagees obtain partial and dependents rights to the water turn share attached to the land. In most cases, they do not have rights to participate in decision-making.

It is possible, at least in theory, for farmers with land in the command area to acquire rights to irrigation water by contributing cash or labour for operation and maintenance of an irrigation system or its expansion if the existing rightsholders agree. However, unlike rightsholders of many other irrigation systems (cf. Pradhan et al. 1997), the shareholders of Ningswa Kulo have not so far agreed to enlarge the command area and admit new shareholders even though water supply is more than sufficient to meet the needs of the current rightsholders.

It is sometimes possible for farmers to buy or sell water turn shares independently of land to which the water shares are attached, as in the cases of irrigation systems in Palpa discussed by Martin (1986) and Pradhan (1990). Such transactions in water shares do not necessarily mean that the water shares can be used for non-irrigation purposes or for irrigating land outside the command area. There have been several transactions in water turn shares of Ningswa Kulo independently of land to which the water shares were attached and land has been sold without transferring the attached water turn share. However, only one buyer of water turn shares, a Limbu with land in Ningswatar, was accepted as an official shareholder and he may have been a special case. The other shareholders did not object, at least openly, to his purchase of water turn share without buying land and to his admission as an official shareholder probably because of his close ties to Subba Purna. The other buyers of water turn shares, non-Limbus with land in Thulo Basin which is part of the command area, have not been accepted as official shareholders but they have been permitted to irrigate their fields during the turn allotted to the official shareholder and to contribute labour for repair and maintenance. There are several reasons why they were not accepted as official shareholders. The justification offered by most of the shareholders is that irrigation water rights are appurtenant to land rights - water turn shares should not be sold separately from land to which the water turn shares are attached even though in one case they have allowed such transaction. It is up to the shareholders to decide which rules they would like to implement. The second reason is that the purchasers of water turn shares did not have good social relations with the official shareholders. They feared that if these farmers were accepted as official shareholders they may gradually take control of the management of the *kulo*. They were also afraid that as transactions in land increased, more and more farmers would sell land and water turn shares separately. The official shareholders are still united and powerful enough to deny approval of such transactions.

The transactions of water shares separately from land question the dominant rule concerning the appurtenance of irrigation water rights to land rights. A new rule concerning the relationship between land and water rights, or rather the decoupling of irrigation water rights from land, is emerging but the majority of the shareholders

of Ningswa Kulo has not yet accepted it. However, it is very likely that as transactions in land increase and newcomers with little social ties to the old landowners begin to own land in Thulo Sangrumba, there will be more sales of water turn shares separately from land. If such transactions are permitted by the shareholders then irrigation rights would no loner be attached to specific land and water in the irrigation canal would have market value. In such a situation it would be very unlikely for the shareholders to grant 'tolerated access' to surplus water in the *kulo* to other landowners in the command area because they (the shareholders) could sell the water which they do not need. And this would affect the claims, even if contested, of the local community to surplus water from the canal.

There are various kinds and levels of rights to and over water often described in terms of the 'bundle of rights' metaphor (cf. F. and K. von Benda-Beckmann and Spiertz (1996, 1997) and Schlager and Ostrom (1992)). Two major categories of water rights are rights to control and rights to use. Individual shareholders have rights to use water (and rights of ownership over irrigation infrastructures and water in the canal); they also have rights to transfer their rights to others. The shareholders as a group have rights to make and enforce decisions concerning all aspects of water including for which purposes and where and when water from their canal may be used, who may have access or rights to their water, and the conditions for transfer of rights to irrigation water. The rights of individual shareholders are secondary to the rights of the collective shareholders. Although the collective shareholders claim exclusive rights to water in the irrigation canal diverted from a public water source, they concede that other landowners in the command area should have access to surplus water. They are not willing to accept that the other landowners have rights to use the water, much less to participate in decision-making. However, it could be suggested that as in the case of drinking water (cf. Upreti, this volume), the claims of the community members with land in the command area to irrigation water, especially surplus water, overrides ownership rights of the shareholders. This is probably why the shareholders are willing to grant provisional, temporary permission to withdraw water from their canal to landowners and tenants with whom they have good social relations without the intention of giving them a strong use right.

When the irrigation canals were constructed in Thulo Sangrumba, the Limbus, the majority of the shareholders of water shares, still held land under *kipat* tenure. As mentioned earlier, *kipat* was more than just a land tenure, it was the organizing principle of Limbu society (Sagant 1996: 321) and the basis of their identity (Caplan 1995: 138). It is likely that the different types of rights of different claimants to water (water sources and irrigation water) were influenced by the model of rights to *kipat* land - collective ownership by local agnatic group, reversionary rights of the group to unused land, non-alienability, but strong rights of individuals to use, inherit and mortgage ancestral plots, and the special powers and privileges of the *subbas*. However, with change in the form of land tenure from *kipat* to *raikar*, increase in transaction of land especially with non-Limbus under *raikar* tenure, decline in the power and influence of the former *subbas*, and increasing dominance of non-Limbus have led to a gradual

shift in and contestation over rules concerning relations between land and irrigation water rights and over rights to surplus water. The dispute over the right to buy or sell water shares independently of land and without approval of all the shareholders is an example of such shifts and contestation. All these changes are part of the process begun after the conquest of the Limbus by King Prithvi Narayan Shah which gradually reduced their control over land, water and other natural resources in Limbuwan.

These changes have led to contestation over the rights of the shareholders to exercise control over surplus water in a canal and the emergence of pluralism of local laws concerning the relations between land and water rights. Which rule will prevail depends on the social, economic and political relationships between the shareholders and other farmers and negotiations between them.

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Gendered Water Rights in the Hile Khola Kulo Irrigation System, Shakhejung VDC, Ilam[1]

Prabina Bajracharya

Introduction

In most of the literature concerned with irrigation very little attention is paid to gender differences and especially to the roles and rights of women. The reason behind this is that the studies are often based on the assumption that farmers, especially irrigators, are predominantly of the male gender and, further, that they function as individuals and not as representatives of households (Zwarteveen 1994, Zwarteveen and Neupane 1996). The few gender sensitive studies that have been carried out strongly argue that this assumption is not true. Farming is almost everywhere a collective endeavour, involving both male and female members of farm households (Zwarteveen 1994). Some studies have shown that in Nepal, too, both men and women are involved in agricultural and irrigation activities (N. Pradhan 1989, B. Bajracharya 1994, Zwarteveen et al. 1995, Zwarteveen and Neupane 1996). These studies show that women actively participate in almost all agricultural work including irrigation. In irrigation their participation is mostly seen in water use activities but they hardly participate in decision making. As we shall see women have access to irrigation water but their rights are weaker than those of male heads of households.

There are different aspects or elements of rights to natural resources such as water. It is important to differentiate between these different aspects because access to and control over natural resources are usually different for men and women (K. von Benda-Beckmann et al. 1997). K. von Benda-Beckmann et al. present a list of seven elements of rights which help examine to what extent water rights are gendered. Men and women may have different rights in each of these elements.

1. Acquiring, establishing and maintaining a right - the basis for entitlement to use and to exploit the resources. How do men and women acquire or establish water rights?

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2. Use-use rights and its extent. Can users, men or women, claim the use as a right?
3. Management - maintenance and improvement of the resources. Do users have a right or obligation of maintenance?
4. Disposition – the right to take decisions on transactions regarding the resources.
5. Regulation - drafting and amending rules governing the aforementioned aspects. Do users have right to take part in meetings and assembly?
6. Sanctioning - enforcement of the regulations. Can users charge a fee and fine those who disobey the rules?
7. Ritual and socio-political roles. What social, political and ritual positions exist that have to do with irrigation water?

One way of studying these different elements of water rights is by looking at the three main types of irrigation management activities outlined by Uphoff (1986): (i) the physical system activities, such as construction, operation and maintenance of an irrigation system; (ii) the water use activities, such acquisition, allocation and distribution of water; and (iii) organizational management activities, such as resource mobilization, decision-making and conflict management. These three types of irrigation management activities may be seen as different means to actualise and protect water rights (K.C. and Pradhan 1997: 136). By examining the physical system activities, insight may be obtained in the acquisition, establishment and maintenance of rights because irrigation water rights are mainly acquired, established and maintained through the investment in construction and regular maintenance of irrigation infrastructure and by bringing land under cultivation (K. von Benda-Beckmann et al. 1997). Observation of water use activities and organizational management activities may show other elements of rights.

Here it is crucial to identify the unit that is really involved in each of these activities, that is, whether it is an individual male or female or a household, because it is often assumed that it is the individual and not the household that is the actual unit of irrigation management activities and the corresponding rights. In this study the household and not individual male or female farmer was found to be the basic unit. However, within the household there is much differentiation between the roles, positions and rights of household members.[2] Similarly the household members have different access to and control over resources.

The present study is an effort to see irrigation water rights from a gender perspective. It examines the roles and positions of male and female members of households in irrigation activities and their access and control over irrigation water and irrigated land. The study focuses on the role of the head of the household because the head is often supposed to represent the household and considered the sole rightholder (Zwarteveen 1994). Generally only men become heads of households but

[2] Water rights for irrigation are acquired on the basis of land holding in the command area and investment in the canal by landowners. Land is considered to be joint family (household) property. To get water rights to irrigate household land any male member can take part in the construction. All other members are then entitled to use water for irrigation. The household head takes part in the meetings and represents the household.

women also become the head in the permanent or long-term absence of an adult male. A comparison is made between male headed and female headed households to identify whether the position of the head is significant by itself or only because the position is reserved for the male.

The paper is based on a field study that was conducted in Hile Khola Kulo irrigation system which is located in Shakhejung VDC in Ilam district. I will first describe the general context of the Hile Khola Irrigation System and then discuss the gender division of labour in the domestic and the public spheres. The next section focuses on gender differences in access and control over resources and production followed by gender roles in irrigation management activities. In these two sections attention is paid to gender differences in male and female headed households in access to resources and production and irrigation management activities. Women's participation in different irrigation activities differs. While they actively participate in water distribution and field irrigation, in resource mobilization they generally do not participate physically but provide cash or labourers. But they do not participate in the decision making process or in the controlling body (cf. N. Pradhan 1989; Zwarteveen and Neupane 1996). In this study women's participation in irrigation activities is somewhat different from other studies. It shows that women are active only in *bari* (upland) irrigation. Why women are inactive in other activities will be discussed below. The paper tries to analyse how gender affects the various elements of water rights in Hile Khola Kulo. I have discussed mainly about establishment and maintenance of water rights for irrigation but some remarks will be made about decision making by the water users.

The Hile Khola Kulo Irrigation System

Description of Hile Khola Kulo

The Hile Khola Kulo is situated in Ward no. 7 of Shakhejung Village Development Committee (VDC). The source of the canal is the Hile Khola, one of the tributaries of Kankai Mai river, the largest river of Ilam district. The canal which is about two kilometres long, irrigates approximately 100 ha of land including *khet* (irrigated, low land), *bari* (upland) and *aleichibari* (cardamom fields). *Khet* fields are located only in the tail end of the command area. The canal is used by 55 households. The Hile Khola Kulo was constructed around 1985 by four rich households, who had land near the water source, to irrigate their cardamom field. Three of the households were Chhetris and the fourth a Limbu. Cardamom had just been introduced as a new cash crop in Ilam and they wanted to benefit from the high value crop. They used the canal for two years as their private canal, refusing to let other households use it. The four original investors thought that the canal belonged only to them because they had constructed it. After two years other households requested the Head of the Village Council (*Pradhan Pancha*) for help in gaining access to the canal. The Head of the Village Council mediated between the two parties and they agreed to the following two terms:

1. The other households could extend the canal to irrigate their fields.
2. The four households would not have to contribute labour for annual repair and maintenance work and would get priority in water distribution because they had constructed the canal first.

Thus the canal was extended and since then it has been used by 55 households. The ethnic and caste composition of the user households is provided in Table 1.

Table 1: Ethnic and caste composition of the canal user households

Ethnic group/ caste	No of Households	Population		
		Male	Female	Total
Gurung	21 (38%)	61 (34%)	67 (40%)	128 (37%)
Magar	19 (34%)	60 (34%)	64 (38%)	124 (36%)
Chhetri	10 (18%)	40 (22%)	25 (13%)	65 (19%)
Brahmin	3 (5%)	12 (6%)	9 (5%)	21 (6%)
Other (one each of Rai and Limbu)	2 (3%)	2 (11%)	1 (0.6%)	3 (0.8%)
Total	**55 (100%)**	**175 (100%)**	**166 (100%)**	**341 (100%)**

Source: fieldwork

From Table 1, we observe that the users of the canal belong to different ethnic groups and castes (*jati*). The largest group in terms of households and population is the Gurungs (38%), followed by Magars (34%), Chhetris (18%), Brahmins (5%) and others (3%).

Out of these 55 households, three households are headed by women, of which two household heads are widows and the husband of the third female head works outside the village. These three women headed households belong to Chhetri, Gurung and Magar caste or ethnic groups respectively.

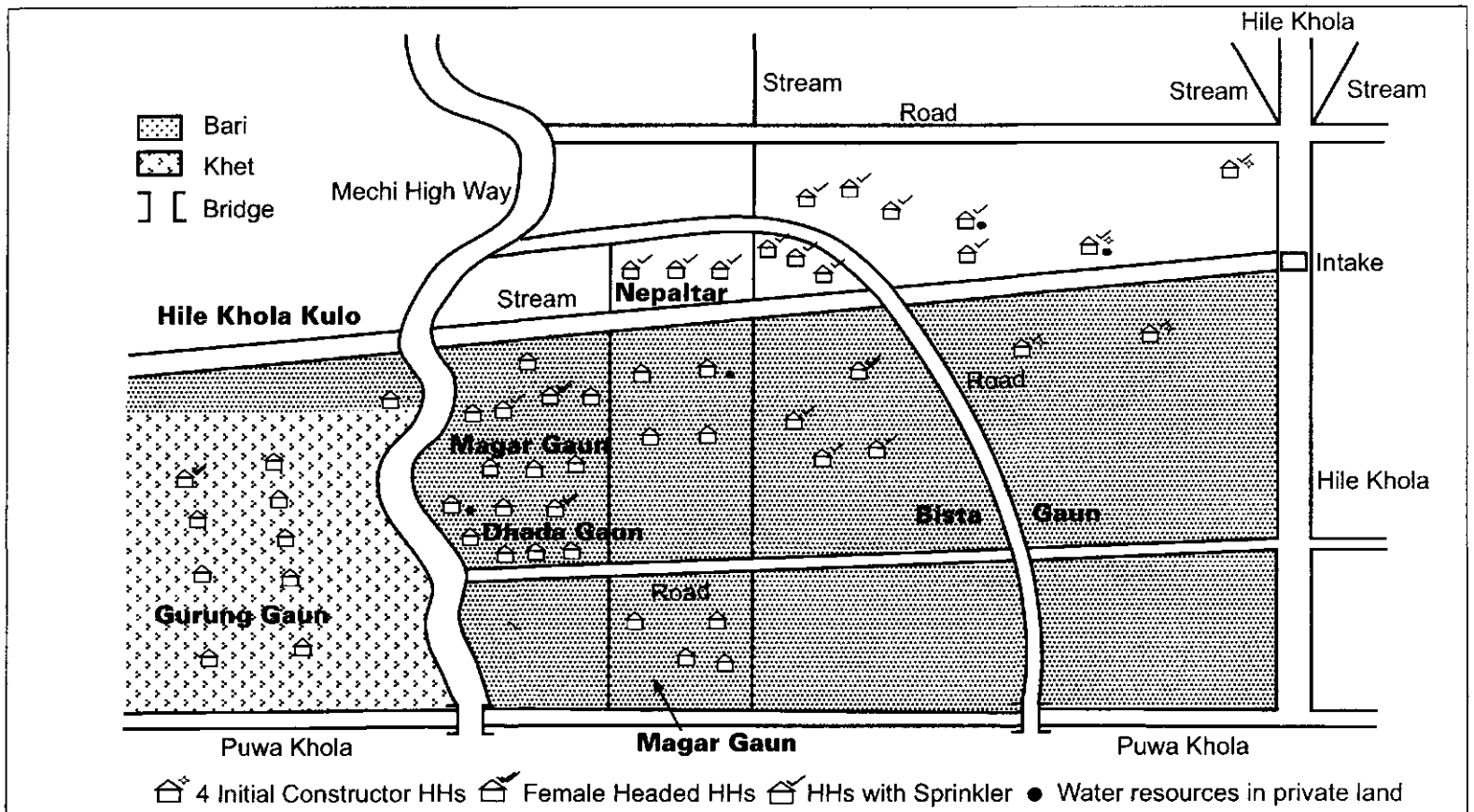
The irrigation system serves 5 hamlets (*gaun*) which are divided according to ethnicity and caste of residents (see Table No. 2 and Map). Many of the households of the same caste in each hamlet are related to each other by blood. They have common ancestors. Two of the user households live outside these five hamlets.

Table 2: Hamlets, castes/ethnic groups and households

Name	Location	No of Households	Jati (caste or ethnic groups)
Nepaltar	Headreach	14	10 Gurung, 1 Brahmin, 1 Magar, 1 Chhetri
Bista Gaun	Headreach	6	6 Chhetri
Magar Gaun	Middle and Tailend	17	14 Magar, 1 Gurung, 1 Chhetri, 1 other
Dhada Gaun	Tailend	6	3 Magar, 3 Gurung
Gurung Gaun	Tailend	10	9 Gurung, 1 Magar
	Total	**53**	

Source: fieldwork

MAP
Hile Khola Kulo Irrigation System



The socio-economic situation of the canal users

Gender differences may vary across different caste/ethnic groups and classes. Generally women of the larger farm households do not participate in any way in field activities. Women of rich families are considered a symbol of prosperity and honour and thus they usually remain inside the house (Zwarteveen 1994). A sketch of the socio-economic situation of the canal users has been made to get an idea of gender relations under different household situations.

The primary occupation of the canal users is agriculture. About 67% of the households derive their livelihood solely from agriculture while 32% pursue other occupations besides agriculture, which mainly include wage labour (21%) and business (9%) (See Table 3). Only men are involved in the occupation of service (salaried work) and business while both men and women are involved in wage labour.

Table 3: Occupation pattern of the canal users

Occupation	Number of Households	Percentage	Caste/ethnic group
Agriculture Only	37	67.00	All
Service (salaried employee)	1	1.81	Magar
Business	5	9.09	2 Brahmin, 1 Chhetri, 1 Gurung, 1 Limbu
Wage labour	12	21.81	Magar
Total	**55**	**100.00**	

Source: field work

Land is considered to be a very important immovable property and it is the symbol of social and economic prestige in the village. It is also a source of power. All the 55 households own at least some land (which range from less than 10 *ropanis* to more than 70 *ropanis*) and cultivate crops with family labour and in some cases wage labour.[3] Table 4 provides the land holding pattern of the canal users. Most of canal users (49%) have less than 25 *ropanis* of land. They are mainly Magars. Other users (44%) have between 25 to 70 *ropanis* of land. These users are Gurungs, Chhetris and to some extent Magars as well. Only 7% of the users are big landowners with more than 70 *ropanis* of land. These people are Brahmins, Chhetris and Limbus.

From the occupation and land holding patterns it is observed that, among the canal users, Chhetris and Brahmins are financially the most well off, followed by Gurungs. The Magars are poor here. Most of them have to work as wage labourers for other users.

Here sprinkle irrigation and 'peltric set' (minuscule hydro-electric generators) are indicators of socio-economic position; only the better off households can afford to own sprinkle irrigation and peltric sets.

[3] 20 *ropanis* equal one hectare.

Table 4: Land holding pattern

Less than 10 *ropanis*	10-25 *ropanis*	25-50 *ropanis*	50-70 *ropanis*	more than 70 *ropanis*
1 Magar	15 Magar*	8 Gurung*	7 Chhetri	2 Brahmin
	9 Gurung	2 Magar	4 Gurung	1 Chhetri
	1 Brahmin	1 Chhetri*	1 Magar	1 Limbu
	1 Chhetri		1 Rai	
Total 1	**26 HH.**	**11 HH.**	**13 HH.**	**4 HH.**

Source: fieldwork
*Note: HH.=household; * = includes female headed HH*

Sprinkle irrigation

Sprinkle irrigation was introduced about four years ago. It is preferred by all because it is easy to use and does not consume much labour and time but as it is expensive, it is accessible only to the richer farmers. Poor villagers (mostly Magars) who have to work as daily wage labourers for their subsistence cannot afford it. This is why out of 55 households only 21 have a sprinkle set each for irrigation. Sprinkle irrigation is mostly favoured by women because of its convenience. But none of the female headed households have a sprinkler because they cannot afford one. They believe that they cannot get loans from banks to buy sprinkle irrigation sets because they are women.[4]

Sprinkle systems tap water from the Hile Khola canal, from streams or from their drinking water source. Users of sprinkle irrigation are able to tap these sources of water for irrigation at the same time: the canal is used as a source to irrigate cardamom fields and water from the drinking water source or streams is to irrigate their potato and mustard fields.

Peltric sets

A peltric set is a minuscule hydroelectricity plant. The six rich households in the head reach have been using a peltric set which is kept in Bista Gaon. The peltric set uses the canal water that does not flow back to the canal but to a stream through Bista's land. The Bista sometimes uses that water for irrigation. Canal water is used by 55 households for irrigation but 6 households also use it for their peltric set. These 6 households are male headed and belong to Chhetri, Brahmin and Gurung castes or ethnic groups. Of these six households, four are the initial constructors of the canal and the remaining two are socially powerful households, i.e., the Chairman of a Ward the Vice President of Shakejung.

[4] To get a loan from a bank they have to mortgage their land to the bank for which they require land ownership certificates (*lalpurja*). Two women have landownership certificates, but they have not tried to get a loan because they think it involves a formal procedure and they think they are not capable to do this kind of work.

Cropping pattern

The principal crops grown in these hamlets are cardamom, maize, potato and mustard. In addition to these crops, paddy, wheat and *amleso* (a special kind of grass used for making brooms) are also grown. Paddy is cultivated in *khet*, wheat is cultivated in both *khet* and *bari*. Maize, potato, mustard, and "*amleso*" are cultivated in *bari*. Cardamom is cultivated in cardamom land. Potato is grown in both seasons. During summer users of the head reach area cultivate maize and potato, while the tail end users (mainly Gurungs and Magars) cultivate paddy in *khet* and maize and potato in *bari* fields. In this season the canal is used only for paddy irrigation because rain water is usually sufficient for maize and potato. Canal water is used for these crops only at the time of drought. During winter both the head reach and the tail end users cultivate wheat, potato, mustard and vegetables all of which need irrigation. In this season cardamom also needs irrigation. Both canal and sprinklers are used. Sprinklers are used mainly for mustard and vegetables but sometimes they are also used to irrigate potato and cardamom crops. *Amleso* is usually not irrigated.

Table 5: Cropping pattern

Season	Headreach (*bari* only)	Tailend (*bari* and *khet*)
Summer / Monsoon	Maize, Potato	Paddy, Maize, Potato
Winter	Wheat, Potato, Mustard, Vegetables	Wheat, Potato, Mustard, Vegetables

Source: fieldwork

The gender division of labour

Unlike in some of the literature on gender and agriculture (Bajracharya 1994 and Zwarteveen et al. 1995) in Shakejung there is no strict gender division of labour for crops. Both men and women are involved in cultivation of all crops; however, while most of the activities for paddy and cardamom cultivation are done by men, vegetables are usually grown by women.

The gender division of labour and access to and control over resources and production were observed to analyse the position of men and women within households. The division of labour between male and female members of the household is based on ideological notions concerning male and female roles (Zwarteveen and Neupane et al. 1996). For example, among most Nepalese communities men are not supposed to cook meals and women are not supposed to plough the fields. Zwarteveen and Neupane et al. (1996) argued that an important aspect of the ideology that govern gender division of labour is that a distinction is made between tasks for men and women on the basis of the supposed physical strength required to carry these out. But this seems to be only a cultural norm. Women often do work that need much physical strength. In Shakejung too gender division of labour is made on the basis of cultural norms. It is socially and culturally prohibited for women to plough and they are not

supposed to do canal maintenance work because it requires physical strength. But these reasons are indeed cultural norms because women carry quite heavy load of cereals when they go to the mill to grind their wheat or corn.

From Table 6 we observe that household tasks like cooking meals, fetching drinking water, childcare, etc. are done only by women. These activities are considered 'domestic work' or women's work among most Nepalese communities. Most of the agricultural activities like sowing, manure transport and application, irrigating *bari*, etc. are done by both men and women, whereas ploughing, irrigating *khet* and cardamom-land, etc. are done only by men. The division of labour is somewhat different according to the gender of the head of households and their socio-economic position. Differentiation according to caste or ethnic group is not seen here.

Table 6: Gender Division of Labour

Work done by women	Work done by men	Work done mainly by women but also by men	Work done mainly by men but also by women
Sweeping courtyard and floors	Milking animals	Cleaning sheds	Smashing clods
Cooking meals	Selling milk	Cutting grass	Manure transport
Cleaning utensils	Ploughing	Feeding cattle	Manure application
Fetching drinking water	Irrigating *khet*	Cutting firewood	Irrigating *bari*
Washing clothes	Irrigating cardamom fields	Sowing	Harvesting
Taking care of children	Canal maintenance		Selling the harvest
Feeding small livestock	Attending meetings		
Going to the mill			
Growing vegetables			
Storing			

Source: fieldwork

Division of labour according to gender of the head of household

In female headed households all activities related to agriculture and irrigation are done by women except for ploughing, irrigating *khet* and cardamom land, canal maintenance and attending meetings. Of the three female headed households, one household has no male member but the remaining two households have sons and a husband but the adult man stays very rarely at home and only very young boys stay at home. These three households use paid labourers to plough their fields. Their neighbours, who are also their relatives, help them to irrigate their *khet* and cardamom fields. They do not participate in canal maintenance and meetings.

In male headed households, women are supposed to perform the tasks listed in column 1 of Table 6 and almost of these are done by them in practice too. Men never cook meals and take care of children but they sometimes, especially during an emergency, feed small livestock, go to the local water mill to grind cereals and press oil. The tasks of column 2 in Table 6 are supposed to be done solely by men and in practice all these activities except for selling milk are done only by men. Women do sell milk but rarely. Out of the tasks of column 3 in Table 6, cleaning sheds, cutting grass, feeding chattels, sowing are usually done by women but men also perform

these tasks. Cutting firewood, smashing clods, manure transport and application, irrigating *bari*, and selling the harvest are usually done by men, although these activities are also done by women.

Division of labour according to socio-economic position

The richer households usually hire wage labourers for going to the mill, transporting manure, irrigating cardamom fields and cutting firewood. Both male and female labourers are used for going to the mill and for manure transportation but only male labourers are used for irrigating cardamom fields and cutting firewood.

Access to and control over resources and production

Although only males may have formal titles to land, land is used for all members of a household in both male headed and female headed households. All members of the household have access to land; they can work on the land and derive benefits from it. In female headed households, the female head decides how the land is to be used. In male headed households, such decisions are taken by the male head in consultation with the woman who looks after the household and its members. In some households this 'woman' is the household head's wife, while in others she is the daughter-in-law.[5] In Hile Khola the 'woman' has an influential role in household decisions concerning the use of land and in other matters discussed below.

The products of the land are used by all family members. In female headed households, the female head decides how much of the produce is to be used for consumption and how much to be sold. In male headed households the decision is taken by male head but he is influenced by the 'woman'. In female headed households, the household head has full right to use and manage all three types of land, but in male headed households women do not have a full right to manage land. Here, both men and women exercise the right of management and use of the land. Women have an influential role rather than decisive power. However, in male headed households they have a more effective role in *bari* rather than *khet* or cardamom land. While in female headed households the harvests are sold by the female head, this is done by the male head in male headed household. Decisions for transactions of land are solely taken by men in both male and female headed households. Female heads say that men should take decisions regarding transactions of land, either the male members of their family who work outside, or else they ask male neighbours for advice for fear they could be cheated.

When there is a water source in their land, the men decide whether to permit other households to have access to the water. However, drinking water is fetched only by women, whether from private or public water sources.

Both men and women cut firewood from forest. Almost all households have private forest. Decisions for selling forest or clearing it for cultivation purpose are taken by

[5] In some households a daughter-in-law of the male head has a more important role than his wife because the wife is physically not well and is not involved in agricultural activities.

household heads in male headed households. Other members of the household are just beneficiaries. In female headed households the matter is similar to the matter of land transaction.

Small livestock like goats and chicken are raised as women's individual property. Benefits from these are solely taken by the owner and she can sell it without consent and consultation of other members. All members of a household benefit from big livestock like cows and buffaloes. Decisions to sell these are taken by men as in the case of land and forest. Women in both male headed and female headed households decide how much milk should be used for household consumption and how much is to be sold. Thus, women in both male headed and female headed households have access to resources and production but they have very little or no control over resources and production, with the exception of small life stock. Women have very little control especially on the matter of transaction of land and other valuable property.

Thus it has been seen that women's position within the household is different in female and male headed households. In female headed households women have some advantages of headship. But the female household heads do not have advantages equal to male household heads. Women are always dependent on men for transactions such as sale, purchase, mortgage, etc. of property, because it is believed by both men and women that they are ignorant and will be cheated by others.[6]

In male headed households, although women participate actively in most agricultural activities and have an influential role in household decision making process, their position is one step behind men because they are not heads of households.

Gender roles in irrigation system activities

Different kinds of irrigation system activities have been studied to better understand gender differences in establishing, securing and retaining irrigation water rights. Canal construction activity will be discussed because irrigation water rights are mainly established through contribution in canal construction. In order to understand all possible elements of rights to irrigation water, we will further look into the obligation of canal maintenance and the right to take part in meetings (K. von Benda-Beckmann et al. 1997).

Construction of the canal

A study conducted in other hill irrigation systems of Nepal (N. Pradhan 1989) showed that women's participation in canal construction is very low. Less that 12% of total labour force was contributed by women. The reasons given for the low participation of women were the necessity of obtaining their husband's permission, availability of

[6] Household land is usually registered in the name of the head of the household. Even though widows have land registered in their name, they do not want to take decisions regarding transactions of their land.

male labourers and the heavy daily work burden for women. In Shakhejung, construction of a canal is considered men's work. Both men and women in the village thought that women are biologically incapable of doing this kind of work and women are not supposed and allowed to do construction work. According to their rule and practice one labourer is required from one household. So when the household head or another male member goes for canal construction, then other members do not have to go. Though this may be one reason why the women of the system do not go to construct a canal, men do not agree that this is the reason. They claim that women are physically incapable of heavy work. They say that if no man from the household is able to go for construction or if there is no male member in the household, the household should send a paid labourer rather than sending a wife or a daughter.

The four households that initially constructed the canal were male headed. Among the 51 households who extended the canal, only two households were female headed at the time of the extension of the canal. The third female headed household lost their male head after the construction of the system was completed. Both households did not contribute labour or cash for canal construction. Nevertheless, they got water from the canal because their neighbours, who are also their relatives, allowed them to irrigate their fields. Other users did not protest against their use of the canal water, allegedly because they had sympathy with these women.

Repair and maintenance of the canal

As per the rule of the irrigation system, all user households are responsible for repair and maintenance of the canal. One member of each household should be present for maintenance work. But there is no participation from the four female headed households. Why do they themselves not go or send other paid labourers for maintenance work?

These women and other men responded differently to this question. The women answered that they do not go because they are not called for maintenance work; if they are called they certainly will go. But male users said they do not call them because women are biologically incapable of doing that work.[7] They said that they accommodated such women because they are women and do not have any adult male member in their household. Male headed households do not send their women for canal maintenance.

Thus women from both female as well as male headed households do not participate in canal maintenance work. In Chhatis Mauja (Zwarteveen and Neupane 1996) and other hill irrigation systems (Pradhan 1989) women do not directly participate in repair and maintenance of canal, but they either send hired labourers or make cash payment. In these studies women's non-participation is a result of social constraints and for their non-participation they are obliged to pay cash or to send labourers. In Hile Khola women do not participate in canal maintenance because the

[7] They said women are naturally weaker than men; women do not have the strength that is needed for the heavy work like construction and maintenance of a canal.

men think that women do not have the physical strength that is need for maintenance work. This is why they do not call women for work and out of compassion for them, the women are exempted from the obligation to pay or send labourers by the men. One of the reasons for the compassion for these women is that almost users have some kinship relationship.

As per the rule of the system, all the user households are responsible for maintenance of the canal. One member from one household should contribute labour in maintenance work. However, the four households who originally constructed the canal do not need to contribute labour or cash. This was established as a rule when the canal was extended. The female headed household do not contribute labour, but, as explained before, this is not taken as a breach of rule. Female heads are exempted from this obligation. Thus in practice only 48 households contribute labour or cash for canal maintenance work.

Water distribution

Water distribution is based on users' need. A user who needs water goes to the intake point, diverts water through rivulets or the branch channel and irrigates his fields as needed. This is the rule in the system. And as per the rule any household of the head reach or tail end can divert water first if he reaches the intake point first. But the practice is somewhat different. In practice water is distributed differently in summer and winter. In winter the rule is converted into rotational water distribution from head to tail end. A household whose land is close to the intake point diverts water at first, then others divert it one by one. In summer water is distributed in the tail end first because paddy is grown only in the tail end. As mentioned earlier, the four original households have priority rights to use water. In summer they do not claim their priority and let the tail end users divert water first because when water is needed for the tail end they do not need it as they do not cultivate paddy. Only male members of households go to the intake point and divert water. Women divert water to their field from their neighbours' field channel.

Water sharing is based upon the land size and cropping pattern. Each household has a right to use water but not a right to an equal quantity of water. Those who have more land get more water. The richer farmers get more water than the poorer farmers as they have more land.

Field irrigation

Both men and women of the household irrigate *bari* from the canal or by using sprinklers. Women do not irrigate *khet* and cardamom fields. According to the women it is heavy work to irrigate *khet* and cardamom land. They say it is difficult to irrigate terraced rice-fields and cardamom land is almost like a jungle, so they do not want to irrigate it. Only one female headed households has *khet*. The household head said her neighbour, a nephew, irrigates her *khet* and she works on his field in return for this service.

Organization and management

Until last year there was no canal users' committee in the system. The users held informal meetings to discuss any matter related to the canal. The meetings were organized usually by the male household heads of Bista Gaun. Women were not supposed to attend and they never participated in such meetings. As in other irrigation systems (Pradhan 1989, Zwarteveen and Neupane 1996) women do not attend the meetings because of the stereotype that women should not attend meetings and women are not knowledgeable about the irrigation system to participate meaningfully in the meetings. Female heads are not supposed to take part in the meetings because men are of the opinion that, as these women do not have to contribute in canal maintenance, they should not participate.

Last year the irrigators constituted a users' committee in order to get a grant from the 'Mechi Hill Development Project' (MHDP), funded by an international donor agency. An assembly of kulo users selected the members of the committee. However not all of the user households attended this meeting. The three female headed households did not participate in the assembly because they were not called for the meeting. Men thought that there was no need to call them. Although no women attended the meeting, the meeting appointed two women to the committee because, according to the men, there had to be at least one woman in the committee in order to be eligible for the grant. The female heads of households were not selected because they were illiterate and were considered ignorant. The two women who were selected came from a Brahmin and a Gurung male headed household respectively. They were selected because they were literate and on the basis of the social status of their household heads. The Brahmin household head was the former Vice-Chairman of the VDC. But the women had not been consulted before they were appointed, nor were they informed of any of the committee's activities after their appointment. The only thing they knew was that their names were put on the committee's list.

Rights to water

The Hile Khola Kulo was constructed originally by four households. They established water rights through their investment in construction of the canal. At the time their rights corresponded with obligations of canal maintenance. As the four households were male headed, the management of the irrigation system was done by male heads. The male heads took decisions for allocation and distribution of water, maintenance of canal, etc. Women were involved only in *bari* irrigation. The canal was extended after two years of construction. Thus for two years only four households had rights to irrigation water.

The other 49 households were able to establish their rights to the canal by negotiation and by extending the canal. The two female headed households did not participate in negotiation and the extension of the canal. At first they irrigated their fields during the water turns of their neighbours and they later established rights to

use the water by regular use of their neighbours' water turns. Currently all the 55 households use water from the canal but only 48 households regularly contributes labour for canal maintenance. The four original households are exempted from canal maintenance work. The three female headed households do not have obligation to do maintenance work out of compassion by the other men.

Rights to irrigation water are thus established in three different ways (cf. Sodemba and Pradhan, this volume). First, and very crucial, is through investment in the construction or extension of a canal by the landowners within the command area. Almost all user households have obtained rights on this basis. Second, mainly for female headed households, by making long-term regular use of water or getting water turns. Third, by purchasing land that has been irrigated from the canal. One of the four heads of households who constructed the canal sold his land to a non-user. By purchasing his land the buyer acquired water rights as well as the priority right of initial constructor. The buyer does not have to contribute in canal maintenance.

The user households maintain water rights in different ways. The 48 households maintain their rights by making contributions for canal maintenance, by regular use of water, and by participation in irrigation management. The four original constructor households maintain their rights through their participation in irrigation management and using water regularly and by an agreement with the other rights holders. The three female headed households maintain their rights by using water regularly; however it is not sure that they are really maintaining water rights.

The head of the household has the main role in the establishment and maintenance of water rights. It is the head who takes decisions concerning rights or he or she is thought as responsible for that. The household head is entitled to take part in irrigation management. But the role of the head seems to be significant only for male head, as female heads are not allowed to participate in meetings.

All 55 households have rights to use water of the canal. But the use right are not equal among the households. A user household is entitled to get that quantity of water needed to irrigate its land. A household, whether male or female headed, has the same right to water based on land size and cropping pattern. Obviously the richer households (Chhetri and Brahmin) get much more water than the poorer households (Magar and some Gurungs). In this way, use rights are affected by the economic position of the household. Further, water use rights are affected by the social position of the household. The six richer and powerful households also use water for peltric sets. Of these six households, four do not have to contribute labour in the canal maintenance work. They have no labour obligations but are able to use more water than other households.

Since it is the household as a unit and not individual which have water rights and land rights, all members of household, irrespective of gender and generation have the right to use a resource and benefit from it. However, the use right is shaped by the household head's decision or instruction.

Management and regulation rights to the irrigation system are vested in all user households and these rights are exercised through meetings that the users informally hold. But as women never participate in these meetings the rights are actually vested

only on male headed households. These meetings are usually attended by the male head of the household but sometime other adult men, sons or brothers, attend in his absence. If both the head and other adult males are not available then there will be no participation from the household. That is why women, heads or non heads, are deprived from the right of irrigation management and regulation.

Gendered water rights

As mentioned earlier, the basic unit for water use is the household. Rights and obligations to use water are based on households and not on individuals. Though rights are vested in a household unit and all members of the household have a right to use water, the rights are exercised mainly by the household head, either a male or a female. But this advantage of headship is not equal for men and women. Although female heads are thought as rightholders, they only have use rights to water. Because they are not contributing labour in canal maintenance and they are not participating in meetings their right are not secured at all. For instance, they lost a chance to be committee members because all decision were taken by men. Women whether they are household heads or not have access to but not control over water.

About three years ago a survey was conducted by MHDP in Magar Gaon for a drinking water project. However, the project could not be implemented because there was a conflict over the water source. Male users refused to allow the use of the water source tapped by the Hile Khola Kulo for drinking purposes. They said that the source was not hygienic for drinking purpose even though most households fetch water from this source. There is another water source located in a private land but the landowner did not give permission for the project to use this source because he was furious with the villagers who had said that the land belonged to another person. Even now they sometimes say that the project should be implemented. But men do not pay any attention and the project has not yet started. Perhaps they were not really interested because drinking water is considered women's matter or affair. If women had the power to make decisions or were allowed to participate actively in meetings and demanded that their interests be considered seriously, the project might be implemented.

Conclusion

In Hile Khola Kulo different aspects of water rights are affected by different social factors. Establishment of water rights are affected by socio-economic status of users rather than gender. Water rights are established by the households having land in the command area and by equal contribution of labour for the construction and maintenance of the irrigation infrastructure irrespective of land size irrigated. But water sharing is based on land size and cropping patterns. Households which have more land get more water than the households with less land, irrespective of whether they are male or female headed, and irrespective of the fact that each household contributes equally to maintenance and repair the canal. Thus gender does not directly affect the establishment of water rights and sharing of water or contribution of labour.

However, gender affects other aspects of rights, mainly in decision making. Women are not obliged to contribute labour for the maintenance of the canal because the men consider them physically incapable of working in the canal and ignorant about the work required. Further, the men claim that they have sympathy towards the women especially towards women with whom they are related by blood or marriage. The exemption from having to contribute labour mainly because of kinship ties at the same time prevents the women from participating in the decision making process. The women do not protest against their exclusion from the decision making process because they accept the ideology that women and men should not participate jointly in public meetings and that women are ignorant. The men, on other hand, argue that women should not be called for meetings because they do not contribute labour. Women are thus not invited to attend meetings. This means that female headed households are not allowed to participate in the management and regulation of the canal. Such households are compelled to follow the rules whether they like them or not.

In male headed households water is used by all the household members for their benefit. But only the males participate in canal maintenance and the household is represented by the male head in meetings. Women do not, or are not, allowed to participate both in maintenance work and in meetings. The question is, are women's access to irrigation affected by their exclusion from participation in maintenance and meetings? Most authors believe that exclusion of women from formal participation in decision making constrains their ability to get their need accommodated. However, Zwarteveen and Neupane (1996) argue that, at least in the Chattis Mauja Irrigation System they studied, women's nonparticipation does not seem to adversely affect their access to irrigation services. On the contrary, women succeed extremely well in getting their irrigation needs accommodated; because women do not participate in the irrigation management they are not only able to acquire more water than they are entitled to they also contribute less labour than their labour obligations. Thus in Chattis Mauja women's nonparticipation does not make them victims, rather they are free-riders.

In Hile Khola Kulo too women have irrigation water use rights but they do not have obligations to participate in canal maintenance. Does this mean they are also free-riders? Though their non participation has not negatively affected their access to irrigation water, their access is controlled by male users. Moreover, they did not use the water without permission, as is the case in Chattis Mauja Kulo. One reason for female household heads' access to water is their kinship relationship with male users who own adjacent fields. But their compassion extends only to water use and the exemption from canal maintenance. When they needed female members for their water users committee in order to meet the demands of a donor agency, they selected two women of their own choice without consulting the women. In the case of the potential drinking water project, a few women were allowed to participate in the public meetings, but they were unable to convince the males to implement the project because the source of the water was being used for irrigation which the men valued more than drinking water. Managing drinking water is considered a women's affair.

But this is not something to discuss with them in the meetings of the water users committee. Had female heads of households been members of the committee these issues might be decided differently. In the Hile Khola Irrigation System, women have use rights in irrigation water; securing and retaining these rights may not be difficult for them as long as the other users are related by kinship ties. But it may become difficult for women to secure and maintain their use rights if their relatives sell their land to outsiders because women do not have rights to participate in the management and regulation of the canal and it is not certain that outsiders would show the same compassion towards them as relatives usually do.

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Struggle for Water Rights in Thulotar Kulo: A Historical Analysis[1]

Rabi Poudel

Introduction

Some of the small-scale run-of-the-gravity irrigation systems built and managed by farmers (FMIS) in the hills of Nepal are among the world's oldest irrigation systems (see Poudel et al. 1994, IIMI 1991, Pradhan 1989, Martin and Yoder 1987). They are of great significance for Nepal because about 70 percent of the total irrigated area in the Southern plains (Terai) and 90 percent in the hills are irrigated by them. A recent study indicates that there are 17,700 units of FMIS in the country that account for roughly 75 percent of the total irrigation development (Shukla and Sharma 1994).

In this paper, I shall focus on the Thulotar Irrigation System (TIS)[2] in Rupakot village in the district of Tanahun. The centrepiece of my paper is the history of a dispute between people in two adjacent irrigation systems, Thulotar and Ghartiswara. I shall explain why an event which occurred in 1935 - the construction of the Ghartiswara system - was to become a major dispute and why it was raised by the Rupakot farmers only after a long period of 25 years in 1960. My account also involves the story of how a young man in 1960 became a successful chairman of the TIS water users association (WUA) and replaced the traditional leadership; why he got a direct intake to his *chuhan khet*[3] at the very tailend of TIS after his active involvement in the dispute between the systems; and what made negotiation the most successful and effective form of dispute settlement. More generally, I shall show how the socio-political position and relationships of local leaders in Thulotar and Ghartiswara have influenced the kind of disputing or non-disputing strategies and what circumstances

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[1] This contribution is a revised version of the paper presented at the workshop on "Land, Law and Water: Legal Anthropological Perspectives," Kathmandu, 18-20 March 1998. I wish to extend my sincere gratitude and appreciation to Franz von Benda-Beckmann for his constructive comments and suggestions on the earlier version of this paper.

[2] The old river terraces in the hills of Nepal are called *tar*. The term '*tar*' is usually suffixed to the names of the locality, thus Thulotar.

[3] *Khet* is a Nepali term for rice field. A *chuhan khet* is a field within the irrigation system that has no direct intake to one of the channels. Such fields get water only after the upland field(s) have been fully irrigated. Apart from this, the rights to such fields are the same as pertaining to other fields (cf. van der Schaaf, this volume).

inspired the disputing parties to choose negotiation as a tool to resolve their dispute. At the same time, this paper shows how successful negotiations are important for local leaders to acquire and maintain their reputation and status. It also shows the negotiability of water rights, and how the concretisation of water rights changes with the changing sets of social relationships between the disputing parties, and of the relationships of the disputing parties with the outside world. But before dealing with the inter-system dispute between the two FMISs, I shall provide some background information on the status, importance and performance of farmer constructed and managed irrigation systems in Nepal. In order to understand my case study, it is also necessary to give some historical information on how irrigation dispute cases in the rural hills of Nepal were managed in the past. Then, I will describe and analyse the history of the dispute between Thulotar Kulo and Ghartiswara Kulo.

The management of irrigation and irrigation disputes in rural Nepal in historical perspective

Farmer managed irrigation systems

FMIS in Nepal have been managed by many different kinds of formal and informal officials and institutions for several centuries (Poudel et al. 1994).[4] Their position depended on socio-economic factors such as the type of the national governing institutions, the educational, economic and social status of the farmers and their organizational affiliations. Caste, religion, age and occupation were and still are the major factors affecting farmers' social status. In these institutions, some leading farmers, often landlords, usually are more active and prominent than the rest. Historically, *parganna choudharies*, big farmers and under the Rana regime government representatives who collected taxes of all types of lands in the Terai, were among the leading personalities to build and manage irrigation systems in the Terai (Shukla et al. 1993, see also R. Pradhan and F. and K. von Benda-Beckmann in this volume).[5] In the Hills, the *jimmawal* or *talukdars* (farmers leaders and the then

[4] There was quite a gliding scale of formalities. Some officials or institutions were appointed by the government. Some informal institutions are established and maintained by farmers themselves, but they are not necessarily registered or taken into account by any governmental or quasi-governmental agencies. Other locally established institutions such as water users associations may or may not be registered by the government.

[5] *Praganna choudharies* in the Terai, and *jimmawals* in the hills, were representatives of the Rana rulers at the village level until 1950. "Rana" is the name of the family which ruled Nepal for 104 years until they were overthrown by a popular revolution in 1950. Ranas were prime ministers and occupied most of the top positions in the government. These posts were distributed and rotated among the brothers and/or sons of the prime minister. In this era, Nepal was a feudal state. Rana prime ministers pleased the big landlords in the countryside in order to maintain their rule. They were the most unpopular regime Nepal ever had. Most people could not put forward their grievances in this period, but the local representatives of the Rana could almost do whatever they wanted to please their masters in Kathmandu. In this period the kings of the Shah dynasty, although regarded as the supreme ruler, had no ruling power and few opportunities to interact with their subjects.

government representatives in the Hills of Nepal to collect the land tax from irrigated rice land) were among the major figures who constructed and managed irrigation systems. Mostly, irrigation management were "one-man shows" before the trend of forming Water Users Association (*kulo samiti*) was institutionalised.

The development of organizing farmers in associations or other institutions started during the 1950s when the then dictatorial ruling system of the Ranas was replaced by the democratic institutions in the new national political organization of the Kingdom of Nepal. In this period, many FMIS activities both in the Hills and the Plains of Nepal established their water users associations to take care of the management. Although organized in different forms, most irrigation institutions were actually involved in water acquisition, allocation and distribution, resource mobilization, rules making and dispute management. The systems are increasingly converted into "community-managed irrigation systems" due to these political developments, but also because of the entry of new farmers as users of the system or due to the increase of households among the children and grandchildren of the *parganna choudharies*. In these institutions, some leading farmers, often landlords, usually are more active and prominent than the rest. But although the old influential families may no longer occupy their formal governmental positions, they and their descendants still play an important role in the contemporary systems.

Farmer managed irrigation systems in Nepal have been recognized as potential and cost-effective alternative to government managed systems through which to expand and intensify irrigation development in the country and improve the performance of irrigated agriculture (Poudel et al. 1994). A number of studies on FMIS during the 1980s have reported a relatively better performance of FMIS over government run irrigation schemes.[6] There are quite convincing reasons why the performance of FMIS is better than that of the agency or government managed irrigation systems (AMIS). Panta and Lohani (1983) have identified a number of such strengths of FMIS (see Shukla and Sharma 1994: 4):

- They are management intensive and technical deficiencies are largely compensated by intensive management inputs backed by flexible but strong organizations.
- They are low cost systems, based on mobilization of local resources.
- Water users in FMISs usually base membership on some forms of property rights.
- In many FMISs, there are effective and functional irrigation organizations, and the initiative for such organization mostly comes from the users themselves.
- The leadership of the system is accountable to the users.
- Rules and roles for water allocation, distribution, resource mobilization, system maintenance and conflict resolution are made to fit local needs, usually governed by social and economic forces.

[6] Pradhan 1990, Martin 1986, Yoder 1986, Panta and Lohani 1983, Laitos et al. 1980, see further references in Shukla and Sharma (1994).

Farmers water users associations (*kulo samities*, WUA) have good performance records in terms of water allocation, system organization, management of resources for system repair and maintenance, and dispute management (Khatri-Chhetri et al. 1988).[7] The WUAs are dominated and managed mostly by the local leaders and the richer and high caste farmers with a strong commitment to work in irrigation management. Generally, the WUA is kept away from the politics. However, as Maskey et al. (1994) have questioned, the frequent greater efficiency of farmer managed systems notwithstanding, it is less clear whether they are necessarily equitable in their functioning, for instance by actually allocating and protecting water rights in proportion to the size of landholding and/or to the labour or cash invested into the construction and maintenance of the system.

Disputes and dispute management

Irrigation disputes

Although farmers manage their irrigation systems relatively well and frequently better than governmental agencies (see Pradhan 1994, Acharya et al. 1994, IMC 1989), there are hardly any irrigation systems without conflicts and disputes.[8] Generally, the emergence and magnitude of disputes depend on the distribution and use of power and resources in a society. Disputes tend to become more intense the more power or resources become scarcer. Irrigation water frequently is a scarce resource, especially when a large area of land is to be irrigated by a small amount of water. Inter-system disputes are almost inevitable when more than one system must share the same source of - limited - water. The major issues in water disputes are the volume of water and the time and duration of the flow (see Malla and Khadka 1996, Bumalag and Bhuyan 1986). Disputes on irrigation management emerge due to changes in the ecology; through development policies and their implementation by the government or its agencies, particularly the rehabilitation or extension of the existing systems; and through the introduction of new regulations about access, distribution, operation and management of irrigation water. Especially the construction of new canals, introduction of new crops or new crop varieties or new farming systems with new water requirements are likely to trigger off disputes about the ways the changes in irrigation infrastructure should be given form and how water should be distributed (see F. and K. von Benda-Beckmann and Spiertz 1997, Poudel 1995, Shukla et al. 1993).

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[7] Khatri-Chhetri et al. (1988) do not talk about the performance of systems as such but are primarily concerned with the farmers' water users associations.

[8] "Conflict" here denotes any difference in ideas, values or interests between two or more persons. "Dispute" is a process in which a conflicting and contradictory claims are made public and brought to the notice of a third party. It then may be processed through various modes of dispute management. For information about the reasons behind irrigation disputes, see Malla and Khadka 1996, Poudel 1995a, Shukla et al. 1993, Maas and Anderson 1986 in Tang 1992, Wiber 1992, and Coward 1990.

Traditional rural institutions of dispute management

Traditionally in rural Nepal, local officials such as the *jimmawals, talukdars*, or *mukhiyas*, the tax collectors for uplands (*pakho*), the *parganna choudhari*, the *jamindar*, the landlords[9], the *baidhya*, the traditional herbal doctor in the rural areas, and the *budha-paka*, the aged members of the society, were important persons and institutions to handle disputes in small meetings or mass meetings of the local people called for special purposes (*sabha* or *kachahari*).

Among the institutions taking care of social problems in rural life including irrigation disputes, the *pancha-bhaladmi* is historically the most dominant one. Literally, it is a group of five members among the villagers. In practice, it is a voluntarily constituted arena by a collection of village leaders, and the exact number of its members is not important. The leadership of such members has been established either by age, belonging to the oldest members of the society means long experience which is highly respected by the members of the society; by being educated or literate such as the *pandit* (priest); or by having gained much confidence among the farmers by successfully handling dispute cases previously. Generally and relatively speaking, those who are better educated, have been more exposed to different societies and experiences, and have shown leadership qualities in earlier cases are the most dominant leaders among the members of *pancha-bhaladmi*. Active or retired government officials like *dittha, bichari, baidar, subba, mukhiya, writer* and military or police officers and teachers are also regarded as members of the *pancha-bhaladmi*. For them, age is not the important status element. High caste and high socio-economic status, of one's ancestors and oneself, are also important if a person is to be considered as a member of the *pancha-bhaladmi*. Women are only very rarely members of the *pancha-bhaladmi*. Though there is no absolute exclusion of females, women only exceptionally can attain the status criteria required for being regarded as a member of *pancha-bhaladmi*. They are usually less literate than men, and, although the rate of social change even in the rural areas is very fast today, traditional culture in Hindu society mainly recognizes women as important actors only for household chores and family activities inside the home. Public social activities in the village or neighbourhood were seen as the task of men.

The concept of *pancha-bhaladmi* and their practical involvement in irrigation management in Nepal has been important since the era of Ram Shah, the King of Gorkha, when he established "*panchayats*"[10] for irrigation canal management. *pancha-bhaladmi* has been popular throughout the rural Nepali society independent of the institutional changes in the public organization of the kingdom. The role of *pancha-bhaladmi* was played by the same members of rural society even when they had other official functions or worked in other organizations.

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[9] The author has used the term '*jamindar*' instead of '*jimidar*'. The term '*jamindar*', alternate spelling of '*zamindar*' is currently used to refer to big landowners. The correct term in our opinion should be '*jimidar*', a revenue collector in the Terai. See Glossary [Editors' note].

[10] Literally, "*panchayat*" is a group of five members. The concept was used as the name of an institution that functioned as the government institution at village level until 1950.

Traditional government institutions of dispute management

If local dispute management institutions could not solve a dispute, the farmers in Nepal had the opportunity to report their case to one of several government agencies. Before 1950, the Police, the *badahakim* (during the Rana period "judicial legates of the central government") and courts were the most common government agencies to handle disputes. Sometimes, a special group of government officials from Kathmandu was also delegated in order to study trouble cases and either to settle the cases in the field or to present a brief report to the government. Such delegations were commonly known as "*daudaha*". After 1950, the Chief District Officer (CDO), the Police and the state courts are the dominant agencies to handle the dispute cases among the farmers (see Khadka 1997).

Disputes emerge when an aggrieved person or community feels that they have undergone some injustice by the action of others communities (see also Felstiner et al. 1981).[11] However, the definition of injustice differs in many cultural, economic, political, and social contexts. The distribution of wealth among the water users and their locational differences (Tang 1992, Poudel 1990, Bumalag and Bhuyan 1986), local political relationships and other socio-economic factors (Poudel et al. 1994, Poudel 1990, Pormento and Poudel 1989) are also responsible for the involvement of irrigators in irrigation disputes. Sometimes, water users are exposed to educational media about irrigation management and particularly about water rights, access to land and water, water laws, etc. Through this exposure, farmers become increasingly aware of their rights. Borrowing the concepts of Felstiner et al. (1981), "unperceived injurious experiences" (unPIE) then can be transformed into "perceived injurious experiences" (PIE), and induce those with a perceived injurious experience to claim their rights. In this sense, education (and legal literacy projects) may also be one of the catalysts for irrigation disputes in farmer managed irrigation systems. Simple conflicts, if not handled properly in proper time, may lead to an expansion of disputes. In other cases, one dispute may invite further and more intensive disputes even after the so-called formal process of resolution by outside agencies has been concluded (see K. von Benda-Beckmann 1985).

Conflicts or disputes in irrigation management do not necessarily always mean that there are great problems for the management of irrigation systems. Although there is always some negative consequence to one or all disputing parties, the dispute resolution itself may also have positive outcomes. But no disputing party really benefits when disputes continue for too long and most people therefore have a preference for getting the problem out of the world. Farmers usually want to resolve their irrigation disputes by their own choice among the available means. Mostly they prefer negotiation for dispute resolution (see also

[11] In this paper I shall use the ideas which Felstiner et al. (1981) have developed for understanding and analysing the genesis and transformations of disputes. I shall also rely on the contributions in Nader and Todd (1978) and K. von Benda-Beckmann (1984).

Nader and Todd 1978, Gulliver 1969). That is, disputing parties themselves (or their representatives) get involved in a dialogue of bargaining seeking a solution acceptable to both parties. Such process may involve frequent offers and counter-offers until a compromise solution is reached. In such compromises, people may also develop new rules and principles concerning the disputed issue of water allocation and distribution, etc. and thus generate their own local law. Such new rules do also work as dispute prevention for the future. disputants. If compared with court procedures, negotiation is an effective and efficient practice for the resolution of water disputes for the rural people. The understandings or agreements adopted during negotiation are usually long lasting (see Gulliver 1979). In case negotiation is not possible, the disputing parties choose one of the available forums that they perceive to be more appropriate for reaching their objectives (see K. von Benda-Beckmann 1984). Almost all rural societies are pluralistic in nature (see F. von Benda-Beckmann 1997). Therefore, the disputing parties have many alternatives for resolving disputes.

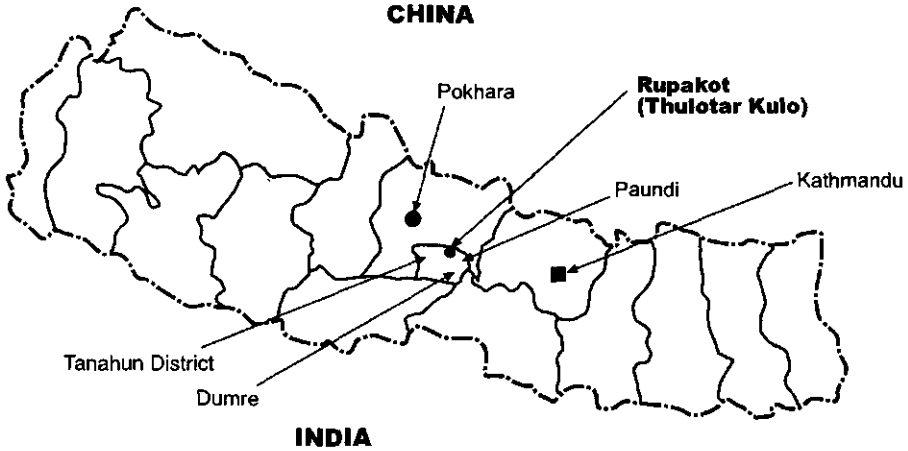
As much research on dispute management has shown, disputants generally rely on negotiation or mediation leading to compromise solutions when they have continuing multiplex social relationships. But an important role is also played by the relationships between local leaders and their followers, as well as by the relationship between the leaders themselves (Nader and Todd 1978, K. von Benda-Beckmann 1984, Reyes and Jopillo 1986). The leaders' power over disputing parties is high if their position is also based upon strong social ties with their followers, for instance based on common descent or other social relationships, characterized by power differentials and economic dependence. The will of leaders to resolve disputes is likely to be stronger when they are convinced that the outcome of the dispute resolution has some positive consequences for them personally, their family members, their relatives, neighbours or friends. Such positive outcomes do not have to consist of economic material gains. Leaders can also gain much social capital from their active role in dispute management. There is a high probability for successful dispute resolution through negotiation if the leaders and representatives of both or all disputing parties are almost equally influential over their followers, and if the leaders have more or less the same socio-economic status within the locality where the disputants live. Negotiation becomes easier when the leaders of the disputing parties have strong mutual relationships such as common descent, ritual kinship (*mitra saino*[12]), friendship, common peer group relationships or common organizational affiliation.

[12] *Mitra-saino* is established between families that are distantly related through patrilineal descent. A member of one family offers "*mit*", a special sort of friendship bond with a high affective content, to a member of the other family. It is usually practiced between members of the same sex, especially when they look alike and have the same facial and bone structures. *Mitra-saino* is usually arranged by the guardians of both persons. They then address each other as *mit*, and also other family members of their *mit* are called *mit*-sister, -brother, -father, etc. Marriage is not allowed between families having *mitra- saino*. Both families act as if they were descendants of a common ancestor.

The setting of the disputing irrigation systems

Both Thulotar and Ghartiswara irrigation systems are located in Tanahun, one of the Mid-Hill districts in the Western Development Region of Nepal. The Kathmandu-Pokhara highway (Prithvi Rajmarga) divides Tanahun district almost half to the north and south, starting from Trisuli river at Mugling to Kotre Khola towards Pokhara. These systems are situated towards the Northeast boundary of Tanahun about two hours walking distance to the west from Paundi Bazaar along the Dumre-Besishahar road (see Map 1). These two systems are a part of more than a dozen of farmer managed irrigation systems that are fed by Sabadi Khola in Rupakot. Sabadi Khola[13] is a small perennial stream at the boundary of ward number three and ward number four of Rupakot Village Development Committee (VDC) in Tanahun.[14] It is one of the tributaries of Naudi Khola. Marshyandi River is the ultimate drainage system of Naudi Khola. The village of Rupakot is located in ward number 4 of Rupakot VDC, about three kilometres southwest of Sundar bazaar, Lamjung. The village of Khalte lies in ward number 3 of Rupakot VDC. The boundary between the wards is formed by Sabadi Khola, the water of which was to become the object of the dispute.

Map 1
Location of Rupakot



[13] *Khola* is Nepali for small creeks.

[14] It has an average discharge rate of about 300 litres per second (LPs, DIO Tanahun 1996).

The history of Thulotar Kulo and its management

Thulotar Kulo[15] is the earlier name of the present Thulotar Irrigation Project (TIP) in Rupakot Phedi of Ward number four of Rupakot VDC, Tanahun.[16] At present, the canal system of TIP consists of a permanent headwork and a 1430 meters long main canal. The upper 740 meters of the main canal are lined with concrete; the remaining 690 meters of the canal consist of earth-work. The total length of the ten earth-worked irrigation branch canals is around 1255 meter[17] (see Map 2). The system irrigates about 20 hectares of lowland (*khet*) belonging to 67 farm households from Rupakot village. Rice is the main crop grown in the irrigated area during the rainy (monsoon) season.

Only a small area is used for growing wheat, potatoes and mustard in winter; the rest of the land is fallow. Maize is the main crop during summer.

The ethnic/caste composition of the farmers having fields in the system consists of 51 Brahmin and Chhetri households, eight Nepali (also called Sarki, Shoe-makers), seven Bishwokarma (also called Kami, Blacksmiths) and one Bhujel (also called Gharti). In the caste hierarchy, the Brahmin and Chhetri castes occupy the highest position, followed by the Bhujel. The Sarki and Kami are lowest in rank. In conservative Hindu thought, Sarki and Kami (and Damai or Pariyar, the tailors) are called untouchable castes.

Egharhasayatar was the previous name of the present Thulotar lowland rice area. Similarly, Thulotar Kulo was called Egharhasayatar Kulo. Little is known about the original construction, operation and management of Egharhasayatar Kulo. However, some old farmers of Rupakot believe that Egharhasayatar was settled hundreds of years ago. Although it is not remembered when and by whom it was made, farmers constructed an irrigation canal for Egharhasayatar hundreds of years ago. The total area of Egharhasayatar at that time was only about 14 hectares (1100 *mato muri*).[18] At the beginning, Egharhasayatar Kulo irrigated only Egharhasayatar. Later, the settlers of Thulotar moved to Rupakot Gaun. When the villagers of Rupakot felt that a large and wide stretch of land was not properly used for several decades, they started to think about the use of the Egharhasayatar irrigation canal for a more productive use. Irrigated farming was more beneficial than upland farming, and there was upland that could easily be converted into rice terraces. Most of the head parts of the present service area of Thulotar Kulo, a forest area, were converted into *khet* land after several decades of the history of Thulotar Kulo early sometime in the 19th century. Thulotar Kulo was one of the early constructions from Sabadi Khola. At the time it was constructed, there were only a few irrigation systems getting their water from Sabadi

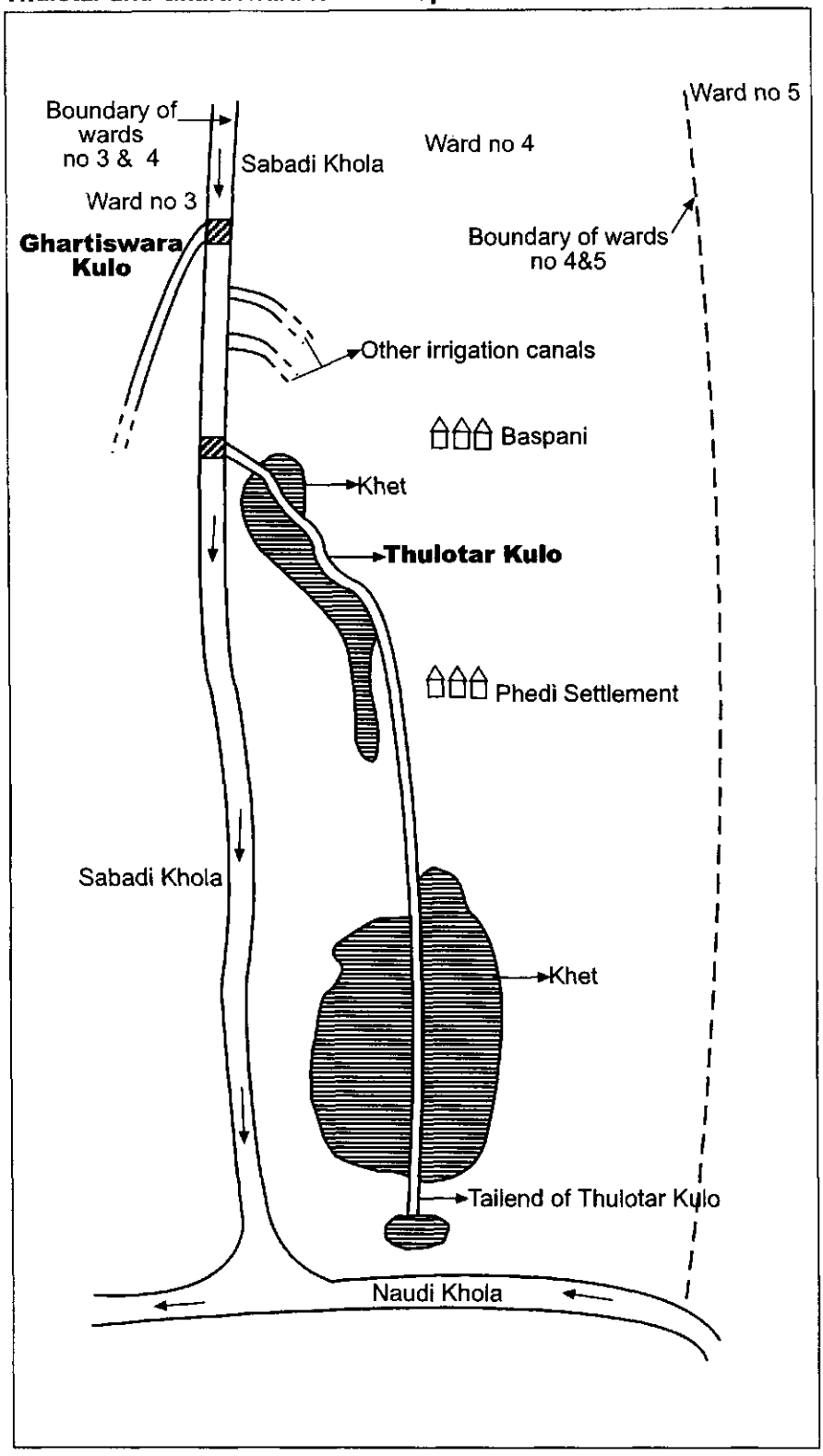
[15] *Kulo* is Nepali for irrigation canal.

[16] On the history of the Thulotar Irrigation System, see also van der Schaaf in this volume.

[17] Its average discharge rate at the main canal is 200 LPs (DIO Tanahun 1996).

[18] Before the proclamation of the Land Related Act of 1964, all cultivated lands in Nepal were measured in terms of soil (*mato*). *Muri* is a volumetric measure for some farm products and soil. The *mato muri* was estimated but not exactly measured in terms of the soil covering the plough-layer of the land surface. 4 *mato muri* is approximately 1 *ropani*, and 20 *ropani* is equivalent to 1 hectare.

Map 2
Thulotar and Ghartiswara Kulo in Rupakot



Khola. Therefore, there was no competition with other systems for sharing water from the same source. It only had to irrigate a small area in Thulotar. At that time, water distribution was not a problem because there was no tradition of growing other crops than rice in the *khet* lands. All farmers could flood their lands simultaneously during the same periods as and when they needed. As time advanced, the people of Rupakot realized the importance of rice crops to support the growing population.

The owners of the forest lands in the lower riparian area close to the head parts of the main canal gradually started to convert their land into rice terraces. They added about six hectares of newly irrigated service area to the initial 14 hectares in Thulotar Kulo. These new members of the irrigation system were no strangers. Some of them were related by patrilineal descent to the old water users; some of the old water users had also extended their farms within the Thulotar command area into the new area. Apparently there were no clear rules about the way in which the new farmers got access to Thulotar Kulo. In the beginning they seem not to have been recognized as full members of the irrigation system. But oral history has interesting stories about the ways in which these farmers used water from the canal during the early days for their rice fields. The main canal used to very wide, in some sections wider than two meters. Because the new farmers were not restricted from allowing their buffaloes from wallowing in the canal, the clever farmers used to get their buffaloes to wallow close to their rice fields so that the flow of water in the canal would be blocked and enter their fields. Since there was sufficient irrigation water in the canal, the downstream farmers had no reason to complain and made no trouble with the new "free riders". As the tradition of growing rice became more and more important, the new farmers were gradually accepted and welcomed as members of Thulotar Kulo in later years.

The management of the system until 1960

Very little is known about the early history of the management of Thulotar Kulo, but it is probable that like in most farmer-built irrigation systems in North-East Tanahun they had some form of organization and institutions to manage irrigation water and irrigation structures for several centuries (Poudel et al. 1994). However, the farmers are able to describe how Thulotar Kulo was managed for the last 150 years. During the Rana period, there was no problem of water supply for the rainy (monsoon) season. Winter and summer farming was not practiced in Thulotar. During this period, the dominant positions were occupied by tax collectors. A *mukhiya* or *thari* was responsible to collect land tax (*malpot*) for upland (*pakho* land). Similarly, a *talukdar* or *jimmawal* was responsible for collecting the tax for irrigated land. Towards the end of the 19th century, one of the farmers using water of Thulotar and a popular *pandit* (priest) in the Rupakot area was the *jimmawal* in northeastern part of Tanahun. In exchange for collecting land tax from the farmers, he got a certain percentage of cash as his remuneration. His father also had been one of the influential residents of Rupakot. Now, one of his sons is the member of Thulotar Water Users Association (WUA). Mr. Pandit was the acknowledged leader of the farmers of Rupakot, and, as such, managing

Thulotar Kulo was one of his responsibilities. During his tenure, all farmers of Thulotar were obliged to pay land tax in *Chaitra*[19] (February-March) or before the end of every year. If farmers were not able to pay land tax before the beginning of the next year, they risked loosing their land rights. Therefore no farmer wanted to miss this crucial date to pay land tax. Mr. Pandit was clever enough to use this opportunity to get the canal cleaned. Usually, he fixed the date to clean the Thulotar canal and pay land tax during the last week of *Chaitra*. Everybody was called to attend the meeting and to clean his or her part of the canal. The *kattuwal*[20] ("village herald") was asked to announce it one day before the meeting. Mr. Pandit never accepted tax before this day so that every farmer was pressed to attend. Every household had to send one man of working age. Households which did not participate were fined in cash. Cash was very rare during that period. Barter and exchange labour were the dominant forms of economic exchange in rural Nepal. Farmers therefore rarely missed the date fixed to pay cash or clean the canal.

After the overthrow of the Rana regime and the beginning of democracy in 1950, several local leaders became aware of people's democratic rights to participate in development and some showed their interest to join Mr. Pandit in the management of the irrigation system. They were mostly older farmers with a high social status, among them a *mukhiya* and a "writer" (clerk) among them. They had demanded government assistance to renovate Thulotar Kulo from one of the most popular national democratic leaders when he visited Rupakot in 1951. He had been the most popular leader in the 1950 revolution. Although various leaders showed their interest to participate in the management of Thulotar, Mr. Pandit remained the unopposed leader until 1960. Before 1958, there was no village level government organization in Nepal. The first multi-party system ever, adopted in 1958, tried to institutionalise villages and municipalities. This system was replaced by the Panchayat System as the national political-administrative system in 1960. Village Panchayats and Wards systems were formed as local political units. In 1960 the old Talukdar system was replaced by the Land Revenue Office (*malpot adda*). However, the tax collector (*talukdar*) Mr. Pandit continued to work as *jimmawal*, the official representative of the Land Revenue Office. Being the *jimmawal* and having no competition from other older village leaders, Mr. Pandit continued his leadership for the management of Thulotar irrigation system until 1960.

The formation of water users association in Thulotar

At that time, Mr. Pandit made it known to the farmers in Thulotar that due to his old age he could no longer lead irrigation management affairs and looked for an appropriate

[19] *Chaitra* is the last month of the year according to the Nepalese calendar.

[20] The *kattuwal* was and still is a kind of rural official in many villages in the Hills of Nepal to communicate the public messages to the villagers. Generally, a man from the Pariyar caste is appointed as *kattuwal*. He is paid either in cash or kind by every household in the village equally. In addition to cash, he also benefits by getting a share of the food during the major festivals like *Dashain*. Nowadays, VDCs appoint and pay *kattuwals*. However, some villages (or wards) still maintain their own heralds.

person to replace him. Mr. Writer became the new leader. The first Water Users Association (WUA) in Thulotar Kulo was formed in 1960 under his chairmanship. He was joined by other popular leaders, among them the oldest farmers of Thulotar Kulo, a *mukhiya*, a political leader of the village, and by the son of Mr. Pandit. Only 36 years old when he became the first chairman of the irrigation system, Mr. Writer was relatively younger than other village leaders in Rupakot. He was an official in the Land Revenue Office that was at a distance of about five kilometres from his home. He was literate in Nepali and Sanskrit and quite knowledgeable about water and land rights and the laws of His Majesty's Government of Nepal (HMG/N). Like the previous leader, he also belonged to a high class Brahmin family. He belongs to the Adhikari family which constitutes about 70% of the water users in TIS. The new leader was also relatively richer than the other farmers of Thulotar. He was also one of the active democratic leaders in the village and his initiative and desire to engage in social activities had been boosted by the rule of the first elected government in Nepal, at least for the two years of the 1958-1960 period, when he was one of the active leaders of the ruling political party.

The construction of Ghartiswara Kulo in 1935 and the "silent" conflict between Khalte and Rupakot

Ghartiswara Kulo is located about 300 meters above the headwork of Thulotar Kulo, in Ghartiswara. Ghartiswara is part of ward number three of Rupakot VDC. Before 1935, Ghartiswara was an upland (*pakho*) belonging to the farmers from Khalte village.[21] It was relatively flat and easy to convert to rice farming. Six farmers of Ghartiswara decided to convert part of their *pakho* land at Ghartiswara into rice fields. Ghartiswara Kulo was constructed in the same year from the right bank of Sabadi Khola to irrigate these fields (see Map 2). The canal system currently consists of a temporary headwork made of brushwood and an earth worked main canal 2500 meters long. It has no branch canals.[22] It irrigates about six hectares of *khet* land owned by nine Brahmin and two Gurung households. All the 11 households come from Khalte village in ward number three of Rupakot VDC. Similar to Thulotar, rice is the main crop grown in the irrigated area during rainy season. In winter, a very small area is allotted for wheat, potato and mustard; the rest of the land remains fallow. Maize is the main crop during summer.

The Rupakot farmers did nothing to oppose the construction of Ghartiswara Kulo. The case only emerged as a major dispute between the same parties after 25 years of the construction of the *kulo*. They knew that any new irrigation system to be built above Thulotar Kulo (their own) their prior permission, according to the regulations of prior rights to irrigation water of first users laid down in the first national legal

[21] *Pakho* land is upland used for unirrigated agriculture. In most cases, the names of land ending with "*swara*" are *pakho* lands.

[22] Its average discharge rate at the main canal is 62 LPs (Poudel et al. 1994).

code of Nepal, the Muluki Ain of 1853 AD (see Pradhan 1994, WECS 1987).[23] One of the reasons why they did not oppose the construction probably was that sufficient water was available to irrigate the service area of Thulotar Kulo, even after the construction of Ghartiswara Kulo. The other reason was the dominant social position of the water users of Ghartiswara Kulo and their supporters during its construction period. Most of the inhabitants of Khalte village were and still are Brahmans. All water users of the newly built Ghartiswara Kulo were Kumai Brahmans, generally regarded as the highest and socially most important category of Brahmins in Nepal.[24] Although there were only six farmers using water from this canal in the beginning, there were many other households of Kumai Brahmans in Khalte village all of whom supported the construction of Ghartiswara Kulo. Moreover, one of the Khalte villagers was an official in the district court (*bichari*). His social and economic status was very high compared to the other farmers in the Rupakot region, including Rupakot village. His influence reached beyond the district to the institutions of the government. His son was a strong village leader. The water users of Ghartiswara were connected to these households by common patrilineal descent, neighbourhood and friendship relations. Although about three fourth of the farmers in Thulotar Kulo were also Brahmins and many of them were literate and working as priests in the region, their influence outside the village and their relations to dispute managing institutions was less than that of the residents of Khalte.

[23] There were no separate codes for irrigation or water management. It was only in 1963 that the National Code of 1853 was amended for the first time. However, the provisions of the National Code 1853 referred to in the charter still exist under the new National Code of 1963 (see Khadka 1997). According to the section on "*Jagga Abad Garneko Mahal*" (On Land Reclamation) of the National Code 1963, the construction of any irrigation canals above the existing one may only be undertaken if it does not reduce the amount of the water flow in the existing canal. At the same time, the traditional customary laws also guarantee the rights of prior users by restricting the possibilities to construct new upstream irrigation canals without the consent of the prior users. The National Code 1963 thus has also recognized the existing customary norms for water distribution patterns which have been followed for the past centuries (see also Pradhan in this volume).

[24] In Nepal, there are different categories of Brahmin families, based on their place of origin from which they migrated to Nepal and to the type of marriage systems. Most Brahmin families in the Hills of Nepal immigrated into Nepal in the pre-historical time from the Western and Eastern borders of Nepal. Immigrants who settled in the East are known as Poorbia, and those who settled in the Western Kumaun region are called Kumai. Kumai Brahmans perceive themselves as the most superior families among all Brahmins. Other people of Nepal have a general opinion that the Kumai Brahmans are very clever and that they can dominate all other families, castes and races of people in Nepal. There are also two classes among Poorbias according to the marriage system they follow. The Brahmins following the traditionally prescribed cultural practices for marrying Brahmin girls are called Upadhyaya Brahmans. Those who marry Brahman girls but without the prescribed practices are called Jaisi Brahmans. Traditionally, in the status hierarchy, Jaisi Brahmans are below Upadhyaya Brahmans. Only Upadhyaya Brahmins can work as *pandit* (priest). Jaisi Brahmans are not allowed to do so. In general, Kumai Brahmins are regarded as being socially more influential than the Poorbia. However, Poorbia Brahmins also regard themselves as superior to Kumai Brahmans. All categories of Brahmins who marry girls of other castes are demoted to a lower caste, depending upon the girl's caste. If the girls come from so-called untouchable schedule castes, all progeny of such unions follow their mother's caste. The children of the girls from any other touchable caste are called Chhetri.

Here we see that the event of the canal construction may just have entered the phase of "naming". Although it was difficult to fully understand from the interviews how the Rupakot farmers exactly experienced the construction of Ghartiswara Kulo in and after 1935, one gets the impression that they realized that in some way their prior rights to the water of Sabadi Kola had been violated, but they did not make a point of that because they suffered no material consequences in terms of water supply – and because they could not do anything anyway against the more influential people of Khalte. In the terms used by Felstiner et al. (1981), there may have been "naming", but no "blaming" or "claiming". The potential dispute was, as it were, in a state of "incubation" until the dispute fully emerged and water rights were claimed by Rupakot farmers in 1960. As I shall show in the following part of the paper, this was mainly due to the initiative and ambition of the new young leader of Rupakot, Mr. Writer, his close ties with the Khalte leader, and the changed social relationships between the villages in general.

The 1960 dispute over water rights to Sabadi Khola

The beginning of the 1960 dispute: An unPIE becomes a PIE

In 1960, irrigation water was not sufficient for the *khet* fields in Thulotar due both to the reduction of the volume of water in Sabadi Khola and as a consequence of the extension of the irrigated area under the Thulotar Irrigation System. As already mentioned, by that time the traditional leadership by the tax collectors in Rupakot had already been replaced by Mr. Writer. One day, when Mr. Writer was walking along Sabadi Khola he saw how the water flowed into the service area of Ghartiswara Kulo, actually more than the land in Ghartiswara needed, and that at the same time and for that reason, Thulotar was left without sufficient water to irrigate the fields in Rupakot. As the chairman of the water users association of Thulotar, he was concerned about the lack of water in the Thulotar system. He started planning how more water from Sabadi Khola could be diverted to Thulotar Kulo. Coming back to Rupakot, he put the matter to the other leading farmers and asked them to support his plan to reduce the volume of water flowing into Ghartiswara Kulo. This idea was supported by all other leader farmers. They stated that Thulotar Kulo was hundreds of years older than Ghartiswara Kulo. The construction of any new irrigation systems above the intake of Thulotar Kulo, including Ghartiswara Kulo, therefore required permission from Thulotar Kulo. What until then had been a largely "unperceived injurious experience" now was clearly regarded as "injurious" and had become a "grievance". To use Felstiner et al.'s words, the UNPIE had become a PIE.

The next phase: from grievance to dispute

After gaining the support of the other leading farmers in Thulotar, Mr. Writer made up his mind to talk with the leading farmers of Ghartiswara Kulo in order to get more

water into the Thulotar system and reduce the volume of water to Ghartiswara, on the basis of the argument that Thulotar had prior rights to the water in Sabadi Khola. In July 1960, he went to Khalte and tried to convince Ghartiswara farmers personally to reduce the amount of water in Ghartiswara Kulo. The Ghartiswara farmers, however, flatly rejected this demand. This did not discourage Mr. Writer, and he did not withdraw his claim. At this point the Rupakot farmers' grievance had become a public inter-system dispute between Rupakot and Khalte. At the same time, the first attempt to settle the dispute had failed. Looking at the process of dispute management during the following weeks, we see several different modalities and styles of attempted, and finally successful, dispute resolution.

The second unsuccessful attempt to negotiate and resort to self-help

Some days after his unsuccessful meeting with Ghartiswara farmers about sharing water from Sabadi Khola, Mr. Writer invited the Ghartiswara farmers to a meeting at the intake of Ghartiswara Kulo for another attempt to end the dispute. But at that stage, the social atmosphere between Rupakot and Khalte had become so bad that no party was willing to take a step back from their own claims to the water. The people from Khalte had a problem with saving their face. They wanted to maintain their social superiority in the region and felt that they could not submit to the demands of "those Rupakot people". The leader of Rupakot, on the other hand, also could not back down from his claim to water based on the prior rights of Rupakot, because he had a strong and ambitious ego. He wanted to demonstrate his ability to lead and maintain his reputation and leadership position. Therefore, it was almost impossible to avoid a potentially intensive dispute between the two parties. Mr. Writer received strong support from the people of Rupakot, including from many Rupakot villagers who did not use water from Thulotar. About 70 persons, at least one from each household in Rupakot village, followed him to the intake, fully prepared to face any challenge from the Khalte people. A large number of women and children from Rupakot had also gone to the nearby forest to watch the event.

Some farmers from Khalte also came to the intake. Khalte's most important leader, Mr. Bichari, the court official (who was not a water user of Ghartiswara) was absent, but his son went as leader of the Ghartiswara farmers. The atmosphere was tense. According to a few older farmers of Rupakot, some of the farmers from Ghartiswara Kulo were armed with sticks and threatened to beat up Mr. Writer. But the farmers from Rupakot did not tolerate that any harm done to their leader. In the beginning, Mr. Writer tried to convince the Ghartiswara farmers for the last time that they should reduce the volume of water entering into their *kulo*. His arguments were that the area irrigated in Ghartiswara did not need such a large volume of water while on the other hand the water could be very productively used in the Thulotar Irrigation System. But once again his demand was rejected by the Ghartiswara farmers. Faced with this refusal, Mr. Writer permitted his followers to dismantle the headwork of Ghartiswara Kulo. This was done within a few minutes. At this stage, the Rupakot farmers were

not willing to allow any water to enter into Ghartiswara Kulo. The Ghartiswara farmers could not react immediately.

From public dispute to private negotiation

An impasse had been reached which was troubling to several persons. Some members of Mr. Writer's patrilateral kin in Rupakot also had fields and used water in the Garthiswara system. They hoped that their Rupakot leader would allow at least the minimum required volume of water into Ghartiswara which would be sufficient to irrigate their fields in Ghartiswara. But Mr. Writer rejected these private initiatives which would soften the hard claims of Rupakot.

The next move was then made by Mr. Bichari, the court official and the most influential leader of Ghartiswara. He was not using water from the irrigation system, but he was related through common descent to most of those farmers whose fields were irrigated through Ghartiswara Kulo. Moreover, being an important official, he was regarded as one of the most important personalities and *pancha-bhaladmi* of Khalte village and the wider region. The dispute became a matter of prestige for him. His position as the popular leader of Khalte was in danger if he could not assure his brothers, friends and co-villagers of sufficient water to plant rice as had been done for the past 25 years. He therefore could not sleep in peace until this dispute found a satisfactory ending. So he decided to take the initiative. This was rather easy because he was related to Mr. Writer by one of the strongest social relationships, *mitra-saino* (ritual friendship, see note 12). One of Mr. Writer's patrilateral cousins was the *mit* of Mr. Bichari's son. This also made him Mr. Writer's ritual father *(mit-babu)* and Mr. Writer his ritual-son *(mit-chhora)*.

Shortly after the open conflict and the destruction of the Ghartiswara headwork, Mr. Bichari went to Rupakot early in the morning to wake up Mr. Writer in his house. Since Mr. Writer was his *mit-chhora*, Mr. Bichari hoped that they could find a solution which would be agreeable to both parties. At first Mr. Writer refused to have a private meeting with him but because they were tied by the *mitra-saino* relationship, there were no personal misunderstanding between them. And because both of them were the most prominent leaders in their respective village, they also knew that it was their responsibility to handle any trouble in this locality successfully. So Mr. Writer eventually also agreed to discuss briefly the dispute. In a short meeting, the two reached the solution that the water of Sabadi Khola would be equally divided between the two systems at the intake of Ghartiswara Kulo. Then both agreed to inform their followers and call a meeting the same day at Rupakot Phedi in the centre of Rupakot village.

The public ratification of the leaders' agreement

Consequently, a mass meeting of both disputing parties was held. In this meeting, the Rupakot and Khalte farmers agreed to share water equally. They also decided to put this agreement into written form in a charter.

The agreement between Rupakot and Khalte village ending their inter-system dispute[25]

"We, the following two parties among the citizens of Tanahun, Jyamruk, Rupakot, and West No. 3 Khalte hereby state that traditionally we had a common understanding of sharing the source of water of Sabadi Khola (including water from the creek of Dharapani) equally, to irrigate Ghartiswara Khet and Thulotar (also known by the name of Egharhasayatar). Although the long drought led to a misunderstanding between us this year, we now agree to share the specified sources of water for the whole future equally. Non-compliance of this agreement will be punishable according to the prevailing rules and regulations. We have written this document with the joint agreement of both parties and have kept a copy by each. The document is written at Charkune Chautaro of Rupakot Beshi in Tanahun Jyamruk in the presence of the following witnesses."

The charter was signed in August 1960 AD by seventeen representatives from Rupakot, including the two tax collectors for *khet* and *pakho* land, the oldest farmer and Mr. Writer, their highest leader, and by five representatives from Ghartiswara. Four witnesses (*sakchhi*) including the Mr. Bichari, the court official, also signed the agreement. *Sakchhi* is an institution of witnesses or observers which is used in all types of formal and informal affairs in Nepal. It is a person or group of persons which take the responsibility to be present when the agreement between parties is concluded and provide evidence of that in the future in case the understanding should be violated by one of the parties. In the case a document is made up of an agreement and the conditions of the understandings are written down, the witnesses do also join the respective parties in signing the agreement. The agreement itself, however, was not registered with any external agencies. Both parties have a copy.

The consequences of the dispute

The agreement reached by the disputing parties had a number of consequences.

The agreement signed by the both disputing parties has indeed become a charter for sharing equally the available volume of water in Sabadi Khola at the headwork of Ghartiswara Kulo for the following years. This charter has become the standard to check any potential dispute between Gartiswara and Thulotar. During the nearly four decades since the agreement was concluded, it has never been violated by either party, although the technical construction through which the water sharing is effectuated seems to favour Ghartiswara. Ghartiswara Kulo has temporary headwork made from stone and brushwood across the river and Ghartiswara farmers do not leave any space at this diversion in order to let half of the volume of water flow downstream. There is no permanent structure for dividing the water. However, the volume leaking through

[25] This translation of the original document has been made by the author.

the brushwood diversion is almost half of the water flowing through Sabadi Khola. The farmers from each system regularly go to the Ghartiswara intake to check whether the volume of water is divided equally, especially in July when there is sometimes too little water in both systems. The results of such meetings are always productive and both parties affirm that the water is distributed correctly.

The resolution of the dispute also had a number of consequences for the political and economic status of Rupakot's young leader, Mr. Writer. The first was that the position of Mr. Writer as the prominent leader in Rupakot was strengthened. He continued as chairman and leader of the water users association of Thulotar for another three decades until 1993 when he could no longer shoulder this responsibility due to his old age. Everyone was convinced by the leadership qualities he had demonstrated when handling the dispute. He became respected as the most important leader among the *pancha-bhaladmi* in the region and his requests and suggestions were also taken seriously by external agencies and officials outside Rupakot VDC.

The second consequence was economic. In exchange for his bold and successful leadership during the dispute with Ghartiswara, he was rewarded a separate field channel to his *chuhan khet* which is at the very tailend of the irrigation system (see Map 2). The retired land revenue collector, a very distant patrilineal kinsman, sacrificed a portion of his private land for creating this direct access to the irrigation canal. A *chuhan khet* is a field within the irrigation systems that has no direct intake to one of the channels. Such fields get water only after the upland field(s) have been fully irrigated. Apart from this, the rights to such fields are the same as pertaining to other fields (Schlager and Ostrom 1992). This was a rather "private" reward. The decision to change the irrigation structure in this respect was not discussed or sanctioned in the meetings of the WUA or its General Assembly; nor had other farmers proposed that a reward be given to Mr. Writer.

Conclusions

The Thuloar Irrigation System (TIS) has a long history of operation and management. The farmers were quite aware of their water rights as early as 1935 when the Ghartiswara Kulo was constructed about three hundred meters above the headwork of Thulotar. Under the then prevailing law the farmers of Kahlte village could only construct the new canal above the Thulotar canal if the diversion of water to the Ghartiswara Kulo would not have an adverse impact on the Thulotar Kulo or if the farmers of Thulotar Kulo would give their consent. But the grievances of Thulotar farmers - losing a significant volume of water from Sabadi Khola - were not claimed or disputed with their opponents, due to their lower social and political status. Only 25 years later, led by one aspiring young farmer of Rupakot, did they confront their opponents with their feeling of dissatisfaction in order to secure their prior users' rights. The outbreak of the dispute after such a long time after the event causing the original grievance shows that Felstiner, Abel and Sarat's (1981) assumption that

once a grievance is perceived as injurious experiences, claims are made against the other party and a dispute then arises, has to be qualified. My case study illustrates that not in all cases are such grievances claimed immediately after they are felt by the concerned party.

Although the increasing shortage of irrigation water in Thulotar was one of the important events leading to the inter-system dispute, the new initiative and spirit of the Rupakot farmers to claim their prior rights was mainly due to various social factors, especially changes in the positions of and relationship between the village leaders and farmers in Rupakot and Khalte villages. In the first place, it was due to the emergence of a relatively more literate, vocal and well trained leader among the Rupakot farmers who also was a government official (writer) in the revenue office - Mr. Writer. He could aspire to talk directly to Mr. Bichari, the leader in Khalte, a personality with a high social status. But the successful and effective negotiation between the disputing parties is largely due to the following elements in the strong multiplex relationship between and among the leaders and farmers of these villages (see also Mitchell 1983):

- Between 1935 and 1960 the very important *mitra-saino* relationship between these two leaders had come into existence.
- The two leaders had a similar social status, the same level of education and knowledge of the legal system.
- They also had a similar socio-economic status and access to external agencies and arenas.
- As leaders, they represented followers who were related to them by strong bonds of common patrilineal descent and neighbourhood.
- Also, both leaders belonged to high caste Brahmin families and represented the dominant families in their villages.
- Both leaders, and the great majority of their followers, shared the same political ideology and belonged to the same political party.
- Further, among the farmers, there were cross-cutting social ties and interests because some Rupakot farmers also had fields in the Ghartiswara system.

The conformity of the parties and the next generations of villagers even after more than three decades shows the importance of negotiation in handling disputes at village level. It has also shown the great importance of local leaders whatever official or customary role they occupy. The traditional institution of *pancha-bhaladmi* as such does not have to be invoked or mobilized when the persons who would be the prominent members of the *pancha-bhaladmi* such as Mr. Bichari and Mr. Writer appear in other roles (such as chairman of the Water Users Association) which are of primary concern for the people in the Hills of Nepal.

Looking at the agreement itself, however, one may conclude that the compromise reached and written up in the charter still reflects the superiority of Khalte village over Rupakot. In any case, by allowing half of the water of Sabadi Khola to Ghartiswara in the agreement, the farmers of Rupakot and Khalte have not given due respect to what is called "horizontal equity" (cf. Maskey, Weber and Loof 1994), i.e., the

distribution of water according to the size of the area to be serviced. Although the volume of water for Thulotar Kulo is significantly augmented even below the headwork of Ghartiswara Kulo by the small brooks and natural springs, the eleven hectares land of the Ghartiswara service area may not need half of the total flow of Sabadi Khola. More water for Thulotar would have a higher marginal value for their 20 hectare of land area. Certainly, if an irrigation systems having the service area almost double than that of another just receives an equal share, one cannot regard this equal sharing of water as justifiable in terms of social justice, especially since Rupakot farmers had the right to claim their prior water rights.

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Land, Water and Gender in Rupakot Village, Nepal[1]

Charlotte van der Schaaf

Introduction

In Nepal irrigation plays an important role in the income generation of households. Irrigation system management has become an important issue of development in Nepal. because 81 percent of the population are still economically more or less dependent on agriculture and because irrigation is one of the main factors in agriculture. It is now acknowledged by the government and international development agencies that it is important to look deeper into irrigation management activities and the rights and obligations connected with them (Pradhan and Pradhan 1996). In the past decades research has been conducted in this field but little emphasis has been given to the role of gender in the acquisition and maintenance of water rights for the farmers (see Zwarteveen 1994, Zwarteveen, Neupane and Pradhan 1995, Koppen 1998, Deutsch-Lynch 1991, and Ghimire 1996). 'Gender' refers to the socially determined attributes of men and women, including male or female roles, which are not merely based on biological factors (Zwarteveen 1994, 1995, Meinzen-Dick and Zwarteveen 1998). A gender-based ideology is "the way a group perceives the proper social roles of men and women in certain socio-cultural contexts based on sexual-biological differences of being male and female" (Simbolon 1998). Gender ideologies influence the family - and household structure, kinship and other social relations, rights and obligations and also decision making within the households and the division of labour. They also influence the public sphere in which the individuals stand and perform (Agarwal 1989, 1994; Kurian 1989).

In Nepal's male dominated society gender ideology is expressed in the patriarchal structure, in which the private sphere (domestic life, household, family) is considered the traditional domain of women, while the public sphere (work and

[1] This paper is based on a case study field research, conducted in Rupakot village, ward no. 4, Tanahun District, situated in the mid-hills of Nepal, between December 1997 to May 1998. It was conducted in kind cooperation with the IAAS Rampur, Tribhuvan University, Nepal and Rabi Poudel, research fellow and teacher at this campus. An earlier version of the paper was read at the workshop, " Water, Land and Law: Legal Anthropological Perspectives", Kathmandu, March 18-20, 1998.

politics) is seen as the male domain (Acharya and Bennett 1981, Strii Shakti 1995). In addition, rights to land, from which rights to water are largely derived (see Pradhan 1994), are traditionally predominantly held by the male household members, according to both state law and customary law and practice (Singh 1998, Strii Shakti 1995). As a result men have more access to and control over these resources, which results in the dependence of women on the men for resource allocation (F. and K. von Benda-Beckmann in this volume, Meinzen-Dick and Zwarteveen 1998). It has mostly been assumed by development agencies and institutions that men are predominantly involved in irrigation activities and system management. However the involvement of male farmers in non-agricultural income generating activities and male out-migration as well as changing traditional structures, norms and values, have influenced the structure of households and the division of labour between men and women (see Zwarteveen, Neupane and Pradhan 1995, and Oniang'o 1995, for Kenya). Women as household heads have become more involved in activities, including irrigation, which traditionally were perceived as belonging to the male domain. However, due to social norms and the traditional assumption that women should confine themselves to household tasks and certain agricultural tasks, they are largely restricted in their ability to perform these new activities and obligations. Their ability to acquire rights to use land and water for securing their basic food necessities is very limited. Women remain in a less favourable position than men to sustain the economic and social welfare position of the household (Agarwal 1988, 1994, Koppen 1998, Ramamurthy 1991).

This paper will examine what rules, regulations and obligations exist in relation to rights to water and land, in both state and local customary legal systems in Rupakot, Tanahun District. In addition, it examines the role of gender ideology in the acquisition and maintenance of the different aspects of these rights and to what extent other factors, like the household situation, kinship relations, domestic cycle, stage of life, status and caste, play a role. I shall specifically discuss the water users organisation of the Thulotar Irrigation System, the formal and informal rules and regulations regarding the acquisition of water, both in this system and smaller systems in the area and compare these two. I shall look also at the social relationships between different individual water users, and what role these play in the acquisition and maintenance of rights to water and land. This paper shows the great importance of the patriarchal ideology which dominates Nepalese culture (especially high caste Brahmin and Chhetri culture) and shapes the norms and values relating to the different roles of men and women in society. This has an impact on the ability of women, as compared to men, to obtain and maintain their different rights to natural resources (F. and K. von Benda-Beckmann, this volume). However, the position of women also varies as a result of different factors such as the composition of their households, migration, their stage of life, their age or their caste. In describing and analysing gender relationships I have therefore distinguished different types of households. I have looked at the different roles members of each household, both men and women, play in different activities, and which role family members and

relatives from outside the household play. By making this distinction we can see that various factors put women in different situations which in their turn influence their ability to acquire and maintain rights to land and water.

Background

Rupakot has a population of approximately 800 inhabitants, divided into 138 households. According to the voting list of the ward, 5 families are joint, the rest nuclear households. Joint households include all family members living together in one house and sharing the same kitchen. A nuclear household includes a husband, wife and children. Sometimes a man's parents live with their son in the nuclear household. Although an originally and traditionally agrarian community, there is a high percentage of economic out-migration in Rupakot. About 60% of the households have one or more men involved in non-agricultural income generating activities outside the area, 50% of whom live outside the district or the country. The village is caste structured. Around 90% of the population consists of high caste Brahman and Chhetri families, the other 10% to 15% are members of low caste Damai, Sarki and Kami. There is one Gurung household.[2] The caste stratification is also visible in the diversification of size or type of land. The highest percentage of *khet* (irrigated lowland) is owned by the higher caste families. The lower caste families own smaller plots of *khet*, or only *bari*[3] (upland). This forces most of them to work as sharecroppers or wage labourers to earn an income. Due to the high percentage of out-migrated men, many households have female heads, who in addition to their domestic activities are also more involved in agricultural tasks including irrigation.

Administratively, Rupakot is a ward, governed by a Ward Committee (WC). It is one of nine wards which together are governed by the Village Development Committee (VDC). The WC is the institution to turn to in case of any problems, disputes or other issues in which the involved individuals and families cannot come to a satisfying solution, including problems relating to water and land rights. If this committee is not able to deal with the issue, it will forward it to the VDC, which has more authority and a higher rank in decision making, although officially it does not have judicial power. The other tasks of the VDC include the implementation of 'development projects', the initiation of new projects and the management of disputes regarding land, water and other issues. The WC also mediates between the local inhabitants and the VDC in case projects in the ward need to be improved or implemented.

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[2] Nepal is predominantly a Hindu society. Over time Nepal has developed its own indigenous caste system to encompass the different ethnic communities resided in the country. This caste system consists of three broad categories, *Tagdhari* (Brahman and Chhetri), *Matwali* (ethnic groups as Newars, Gurungs, etc.) and Untouchables (Kami, Sarki, etc.).

[3] *Bari* is land which is mostly rainfed, where no irrigation source is available; on this land mostly rainfed crops or kitchen vegetables, irrigated by hand, are being cultivated.

The Thulotar Irrigation System: History and regulation

The water which is used by the Thulotar Irrigation System (TIS) in Rupakot comes from a river, Sabadhi Khola[4] . Settlers built the Thulotar Irrigation System when they moved down to the Thulotar area due to a malaria epidemic. The area was still uncultivated and suitable for paddy cultivation due to its flatness. The system provides half the number of households in the ward with irrigation water. The other households depend on other sources, like natural springs (*mul, kuwa*), small rivers (*kholsa*), and drainage water (*chuhan*). Earlier in the history of the system a rotation scheme had been set up to allow farmers to distribute water equally to the fields. This scheme, however, did not function well. There was much competition over water and the more dominant farmers obtained more water. Tail end fields were disadvantaged compared to the head part fields, because most of the water was already used by the water users in the head parts before it reached the tail part. Because of the many problems in the water distribution, the farmers in 1980 decided to form a *pani samiti* (water committee) to improve the water distribution. They selected members for the committee among the water users. But this committee did not manage the system well. There was no involvement from the farmers because no meetings took place. The committee was also not registered so it did not have official right to fine people or decide on irrigation management issues. Because the water distribution remained problematic, the farmers decided to appoint a *panipale* (water distributor) in 1983. He was responsible for water distribution in the monsoon period, until no more water was required.

From 1951 until the 1980s the state was involved in the development and control of water resources, which included construction and financing of construction or repairs of irrigation systems and management supervision over many farmer managed irrigation systems in Nepal (Pradhan and Pradhan 1996). At that time the system was 'government'[5] managed which meant that the government was responsible for paying the *panipale* and for financing and supervising the maintenance of the canal. Maintenance activities took place every year, just before monsoon. The government only paid the *panipale* a salary for three months in a year, when the *panipale* performed his work.[6] In 1982 the government started the rehabilitation of the canal, cementing the main canal and implementing pipe intakes instead of the existing ones. The rehabilitation was started at the head part of the canal. After three years, in 1985, the project was stopped without giving a reason, leaving the job half finished and the responsibility for renovation to the water committee. The members of the committee did not have the knowledge to finish the work. According to them this was due to the fact that all the educated people were at that time working outside the village. And therefore the rehabilitation remained unfinished.

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[4] See also Poudel in this volume on the history of the TIS.

[5] This is how the informants expressed it. The actual department involved was the Department of Irrigation.

[6] The *panipale* was at first paid by the farmers in grains (rice); after state intervention in the system, the government paid his salary in cash.

In 1992, after democracy was declared, the newly formed government, under pressure from donor agencies, began to privatise irrigation systems. Like many other irrigation systems Thulotar Irrigation System was completely "turned over" to the farmers. This happened without announcement. Only the chairman of the committee was informed at that time. He signed a paper, with which the official turnover was a 'legal' fact. With the turnover the committee officially became responsible for paying the *panipale* and for the regulation of the maintenance. The farmers were not aware of this. The next year when no government officials came for the maintenance, they started asking questions and found out that the system was already turned over. At first nothing happened, the committee did not perform its duties and the canal was not maintained. A year after the turnover the canal was damaged at several places. The committee then asked the VDC for support regarding the renovation of the canal. In 1996 the VDC requested the District Irrigation Office to support the renovation project, which in turn asked the 'government' and the 'government' requested the Irrigation Line of Credit (ILC) project, funded by the World Bank, to rehabilitate the cemented part of the canal. In accordance with the project rules, ILC would bear 85% of the costs for the rehabilitation, while 15% would have to be borne by the water users. The money was donated to the 'government' and the 'government' renovated the cemented part of the canal whereas the villagers contributed their share of 15 % by providing labour and materials. In that year a *'jal upabhokta samiti'* or Water Users Association (WUA) was formed in Rupakot The WUA has a Water Users Committee (WUC) as the main managing committee. It has nine members, all water users, who have been elected for these posts. All other water users are members of the Association. The WUA has been registered at the District Administrative Office in Damauli. The main reason for this was that the farmers would receive money from the ILC project only if they were registered and had a bank account. It was also seen as useful because registration was legally helpful when people would have to pay fines for the violation of rules or regulations. Besides, the idea behind forming the WUA was to get the farmers more involved in the management of the system and to give them more influence in the decisions made by the WUC.

Land, water and gender

Acquisition and maintenance of water rights via the acquisition of land rights

Rights to water are in the first place obtained by ownership rights to land. Rights to water in the system are based on land ownership which originally was acquired by cultivation of land nearby the water source from which water was allocated for irrigation. Later these rights were acquired by inheritance and purchase. In the TIS, rights to access are maintained by labour input in maintenance of the canal, attendance of WUA meetings and payment of the *panipale*. When people only have use rights to land and not ownership right, they obtain access rights to water through

the landowners. They are not in the position to claim these rights themselves independently.

Before discussing in detail the gender issues which play a role in the acquisition and maintenance of rights to the resources land and water in Rupakot, I present a case which illustrates the most significant problematic issues.

The history of Laxmi

Laxmi is a Chhetri woman, around 50 years old and a widow. She has four daughters, Parvati, 22, Sarita, 19, Sita, 16, and Gita, 13 years old. Laxmi has been the head of her household for the past few years. Her two eldest daughters are married. Her second daughter's husband lives and works in India, so she hardly sees him and she does not yet have children. Both married daughters live with their family-in-law, but Sarita comes home quite frequently because she does not have a good relationship with her mother-in-law. Laxmi married when she was 16 and since then she has been living with her family-in-law. Laxmi has two brothers-in-law. One of them lives in the village while the other left for India 28 years ago and has never returned or given any sign of life. Some 22 years ago, when she was around 25 years old, Laxmi and her husband separated from the joint family and started living in her old parents-in-law's house, because her brother-in-law had built a new house for his family. Laxmi's father-in-law lived there with his eldest son.[7] Laxmi's husband worked on the farm. He was not very intelligent, used to drink a lot and beat her up on various occasions. Their economic status was not high, though they used her husband's inherited land and 50% of the land which was to be inherited by the absent brother-in-law. All the land was still registered in her father-in-law's name. When they started living separately from the joint family, her husband tried to get the land registered in his own name. Because the relationship between the two brothers was not good, he hoped to secure the land for his family in case anything should happen to him. Her father-in-law therefore was not very fond of Laxmi's husband. He disagreed and the land remained in his name. Her husband did not object. At that time Laxmi did not yet have a son, and her father-in-law did not want the land to be inherited by Laxmi's daughters because in that case it would be lost for his own family.

After several years Laxmi's husband fell ill. He could no longer work and even became paralysed. Laxmi become solely responsible for her household and the performance of both domestic and agricultural activities. She also had to take care of her ill husband and small daughters. She asked her father-in-law for some land to be registered in her husbands' name, for she wanted to sell a part of it and to take her husband to a hospital in Kathmandu. But again her father-in-law refused, due to the fact that they had no sons and he just was not willing to support her. In the end her husband died and she was left without any land and support. She asked her brother-in-law for money to pay for her husband's funeral, because she could not

[7] This was not according to the custom. The custom is that after the separation of the joint family, parents start living with their youngest son. The son is expected to maintain them.

afford that. He paid, but after the funeral he claimed half *ropani* (0.025 ha)[8] of land she was using, to pay him back. In addition he denied her the use of the part of the absent brother's land. Without discussion he threw her off the land and started using it himself. Since then she has been using the land she is still allowed to use by her family-in-law, which is 2 *ropanis* of *khet* (lowland) and one *ropani* of *bari* (upland), which is not sufficient to support her family. Her brother-in-law and father-in-law own a considerable amount of land, especially now that her brother-in-law is also using his absent brother's land. She has asked for more land for farming in order to support herself and her household. But they do not give her any and are reluctant to support her in any way. Her sister-in-law and children have quite a good relationship with Laxmi, but they cannot help her because her brother-in-law will not allow that.

When Laxmi asked her in-laws to allow her to register the land she used, promising them not to ask for more, they also refused her request. She is unable to register the land in her name because she needs the consent of her family-in-law to register the land at the registration office. She is now forced to perform wage labour to earn some cash in order to support her family. She does seasonal labour, cutting grass, transplanting, cleaning dishes, and so on, whatever work she is able to get her hands on. As payment she receives money or rice, the amount depending on the kind of work she does. When her daughter visits her, she also works as a wage labourer to support her mother. In addition, Laxmi's two smaller daughters take over most domestic activities to enable their mother to go out to work. As a result her daughters often cannot attend school. Laxmi also engages in labour exchange, which at least ensures that her land will be cultivated. Because she does not have any male labourers in her household and her male relatives do not support her, she is forced. to hire men in order to perform "male" activities. When a ploughman has to be hired, she has to pay for his work and for the oxen, but she hardly can afford this. Sometimes she can make a deal with the labourers. She will perform some work for their families or pay with other means than cash. However, often this is not possible.

Because she has not secured ownership rights to her husband's land, another problem has occurred regarding the access and use of water for irrigation. Her land is not irrigated by a *kulo* (canal) at the moment. Most of the land is irrigated by a *mul* (a natural, rain dependent source) and two to three terraces depend on *chuhan* (drainage) coming from her brother-in-law's land. He does not want to give her that *chuhan* because he says that the *mul* provides sufficient water. If she occasionally opens the bund between the two plots to irrigate her land, her brother-in-law will close it again and tell her off. There is a canal situated nearby which irrigates her father-in-law's land. She used to have her own intake, but her father-in-law and brother-in-law said that she did not need water from the canal, because the water from the *mul* and the *chuhan* was sufficient. They let the part of the canal leading to her fields collapse, so she is not able to use that water for irrigation. Because it is her father-in-law's land and not hers, she cannot take any measures. Another problem is

[8] *Ropani* is the measure of land used in the area, approximately 482.25 sq. m. or 0.05 hectare.

that she used to have two *muls* situated in her land which she used for irrigation. One is situated in the piece of land she had to give to her brother-in-law for compensation of the funeral costs of her husband. Because the land she still uses was irrigated by that *mul*, she assumed she would still have the right to use it. But after she had given the land to her brother-in-law, he used the *mul* for the irrigation of his own fields and refused to let her use it. As a result, she does not obtain sufficient water to irrigate her fields and her yield is less.

Many villagers support her. They provide her with food, clothes, or labour. Laxmi feels bad about this, because she wants to be able to support herself. If she would be able to register the land in her name, even only a small piece, she could obtain credit on the land from the credit bank. For her brother-in-law it is not problematic that the land is still registered in his father's name, because he is the heir. Laxmi is afraid that, if her father-in-law passes away and she does not undertake any action, her brother-in-law will slowly take all the land and she will be left without any. Therefore she plans to obtain some of the land to secure her maintenance and that of her family. She wants to try to get her own right to land by registration. Then she could give the land to her daughters after her death. She knows that is a state rule. She does not want to be forced to give all the land to her brother-in-law when her father-in-law passes away. The fact that she has no son to protect her rights is a problem. If she had a son she could claim the land for his sake, or he could claim the land for himself, thereby securing her right to land as well. After her father-in-law's death she wants to approach the VDC and ask the VDC to write an application to the District Land Revenue Office in Damauli for registration of land in her name. With the ownership of the land she will also acquire the access right to water. She expects this to be a difficult and expensive process but wants to try in any case. She also wants to claim her husband's share in land of her absent brother-in-law, because she thinks she has a right to that land. According to her it is a state rule that she, as her husband's heir, can claim his share of that land when the absent brother-in-law has not returned after 20 to 25 years. However, he had left 28 years ago and she is afraid that it may be too late to claim that land; at least this is what one a villager has told her. If this would indeed be the case she would only claim the land she is using now. Moreover, she will try to force her brother-in-law to give her share of the *juini*[9] land, which is registered in her father-in-law's name.

Many villagers sympathise with her situation. They have promised her that after her father-in-law's death, they will approach her brother-in-law and ask him to give her share in her absent brother-in-law's land. At the moment they cannot do anything in favour of her situation because her father-in-law is still alive and he, as the official owner of the land, is seen as the actual user of his absent son's land. Laxmi realizes that she is lucky that so many people support her and that she would be assured of support when she initiates the process or establishing her ownership rights to the land. But at

[9] *Juini* is land that is registered separate from the rest of the land, which cannot be claimed by a son until after his father's death. Parents practice this in order to secure their future maintenance in case a son does not maintain his parents well.

the moment she is in an extremely bad situation. When I asked her what she thought about this whole situation she answered, "this is what Nepal is like, this is what Nepalese men are like, they treat us like this and we cannot do anything about it."

This case shows that the rights to land and water are closely connected. As a result the owner of the land has more ability to obtain and maintain his or her right to water. For women it is more difficult to maintain their rights, which mostly are derived from their husband's ownership rights. However, although the law gives Laxmi the right to inherit the ownership rights of her deceased husband's land, in practice this right is not granted, because of social and cultural restrictions. The state law regarding inheritance and partition, as far as it favourable for women, does not seem to have much influence on the actual practices. In addition, her father- and brother-in-law are not considerate towards her; they do not want to support her. Laxmi is an example of a de facto household head without any male descendants to secure her right to land and without support from her relatives. Because the land she uses is still seen as her father-in-law's property, villagers cannot to help her claim her right, although they recognise her mistreatment by her relatives and disapprove of this. Due to this situation her access right to land and therefore also her right to water is weak.

The case shows how the rules about the position of the woman are practiced in this case. Because women find themselves in an inferior position as compared to men, it is more difficult for them to acquire and maintain their rights. Of course, Laxmi's sad story is just one case of many, but it gives an idea of what issues may play a role in the gendered management of the resources water and land. In the next section these issues will be discussed in more detail.

Acquisition of land

The major ways to acquire rights to land are by inheritance, purchase, gift, mortgage and sharecropping, which are discussed below. The main way to obtain land is by inheritance. In Nepal inheritance is based on patrilineal descent. According to the National Code, if partition of family property takes place, the father, wife and sons get one share each. The daughter gets a share only if she stays unmarried until the age of 35. If she marries later, she has to return her share. This means that normally a woman, as a daughter, has no right to family property, and is only entitled to a share of her husband's property. If one of her parents dies, she cannot inherit the deceased parent's property as long as the parent is survived by a spouse, a son, or a son's son. If her husband dies and she has sons older than 16, they inherit all property. Unless her husband has transferred the ownership to a piece of his land to her before his death, it will totally depend on the goodwill of her sons whether she can stay with them or not. When a woman has no sons and she becomes a widow, she inherits the land from her husband. But in practice, in almost all cases families will try to avoid the situation of a widow without sons inheriting land. The reason is that if she has only daughters, they would inherit the land from their mother. This would mean that when the daughter marries, she will take the land with her to her husband's family, and in that

way the land will be lost for the patrilineal descent group. Another reason is that she would have the option to give the land as a gift, which she might do more easily because she has no direct family members to give it to. In that case the land would also be lost for her husband's family. A third reason is that she might remarry and take her property with her in the new marriage. Although according to state law women who remarry have to return such property to her deceased husband's family, people in the village are unaware of this regulation and will therefore not give land to the widows of their male relatives.

Land can also be acquired by purchase. To buy land, one needs money and control over decision making for this transaction. Sales are seen as a major decision which can only be made by a male household member, or with the consent of male relatives. In Nepal, especially in the more remote areas, women are hardly involved in income-generating jobs which means that they have no self-earned income. They therefore mostly depend on money earned and controlled by men, e.g., their husbands, sons or other male relatives. And even if they do earn money themselves by selling agricultural products, the man will often be the one to decide on the use of her income. Because women do not have control and access over money it is almost impossible for them to obtain land in this way.

Third, land can be acquired by gift, *bakas patra*. In this case land, registered or not, is given to someone by the owner, after which it is registered. This can be done if someone favours a certain family member and only wants his or her share to become that family member's property. Or, a woman who does not have any children and has acquired land from her husband after his death, can give that land to anyone she likes instead of leaving it to her deceased husband's relatives, like, e.g., his children by his second wife.

Land can also be obtained by *bandaki*, a pledge or possessory mortgage. In this case the debtor will mortgage a piece of land to the lender in exchange for a large loan. The land can be used until the debt is repaid back; the land then has to be returned to the owner. The lender can do anything with the land except selling it or giving it away. This can also be done when a household does not have sufficient land to secure the food requirements of the household members. They then often ask a (non)relative with sufficient land for land to use in exchange for a sum of money.

Another way of obtaining use rights to land is by sharecropping. The sharecroppers work on the land and irrigate the fields. Decisions on crop choice may be made by the landowner, the landowner in co-operation with the sharecroppers, or by the sharecroppers alone. The sharecroppers also arrange exchange labour, but the landowners themselves contract wage labourers. In Rupakot the yield is mostly shared on a fifty-fifty basis. According to Nepalese state law, if a sharecropper works on the land for more than 7 years continuously, he acquires an ownership right to a part of his landowner's land. To avoid this, most landowners change their sharecroppers every two to three years. This places the sharecroppers' households in an insecure position. In some cases sharecroppers have been working for the landowner for a longer than seven years, without obtaining any land from the owner. When I asked

whether they were planning on claiming any land from the landowner, they answered that they were not able to do so, although according to law they have right to the land. It would disturb the social relationship with the landowner and the community which is not advisable because the village is a quite strongly bonded community.

Registration of land

In the ward, all land is registered. Almost all land is owned by and registered in the name of a male member of the family. In 'normal' situations it is not very important to register land. But in case of a dispute, registration can be an important factor in the negotiations and claims regarding rights to land. In some cases land is registered in the name of the wife. In general this is a practical solution when the man has had no opportunity to register the land personally due to long-term absence. In other cases a husband, who has bought land, registers it in his wife's name because he wants to ensure that none of his relatives is able claim the land from him. This is mostly the case when the relationship between brothers is not ideal, so they have to make this kind of arrangements to avoid problems in the partition of land. In some cases the husband registers the land in name of his first wife, who has no children, to ensure that she has a means of living after his death in case his second wife's sons try to claim the land. And, as in the case of Laxmi, registration of land can become an important issue if a man dies and his wife wants to inherit the property. Registration gives her a stronger legal claim to ownership of land in case she has no sons to claim it for her. Moreover, a stronger claim to access to and control over irrigation water is obtained. By proving that the land is officially hers, a woman has also the ability to receive credit from a bank. In that way she will be able to secure or improve her economic and social situation.

But in practice, even if land is registered and therefore legally owned by the wife, she usually has no control or decision making power over it. The men still decide on any transfer of the land. When I asked women whether they thought that they could successfully assert their ownership rights to the land in such a situation, they said that they did not think they would have the power to claim anything. Nepalese women occupy an inferior position in their families and one form in which this is expressed is the respect they owe to their husbands. They will not claim anything from their husbands because doing so is regarded as being disrespectful.

Another problem which especially comes up in case of transfer of ownership rights in a woman's name or in case of other issues dealing with rights to land and water, is that women usually are being treated less seriously than men by certain institutions. Often land will not be registered unless a man is present to consent to the transfer. Therefore women will almost always have to bring a male family member with them when they go to the VDC or District Land Revenue Office to get their land registered. Women bring a man along to these offices partly because they think that they do not have sufficient knowledge about the procedures such as registration of land and also because they are afraid that they would make mistakes or would not notice if someone is cheating them. Most often the man who accompanies a woman

to such offices is considered to be trustworthy. Another reason why women bring men to offices is the strong social control on women's behaviour. Women often face problems if they go alone. People will often ask them whether they do not have a man present in the family who can help her. Moreover, they will think that she must be a "bad" woman because it seems that no one is willing to help her. To avoid these problems and to protect herself from this kind of prejudices a woman will ask a man to accompany her.

Rank and power in decision making

For women, access to and control over land thus is almost fully dependent on their relationship with the men in their families. It is difficult for women to acquire access and control, because they feel uneducated and feel that they do not have enough knowledge on matters concerning buying or selling land. This is partly due to the fact that men do not involve women in these processes so women are kept ignorant over these matters.

In joint families the father, as the owner of the land, makes all the decisions on the utilisation of land. He is the final decision-maker, occasionally discussing issues with sons or other male members of the family. In case a son owns the land, he is the final decision maker, although he will often discuss the decisions with the other men in his family. If his father is still alive, he always will have great influence. Sons, separated from the joint family or not, need the consent of their father, because he is the head of the family. Out of respect no decisions will be made without consulting him first. Women can have some influence on the decision making. This depends very often on the woman's age and stage in the domestic cycle. It also depends on the relationship between husband and wife. A daughter-in-law usually has very little or no influence in a joint family. She just performs her tasks and may only occasionally discuss some issues with her husband. In a nuclear family, a woman has somewhat more influence. Her husband will discuss more issues with her. As a wife who has raised her children she has a higher status and will have more influence in decision making. If she disagrees, her husband, in some cases, will take that into account and change his mind. When a husband has more than one wife, it is mostly the second wife with whom the issues will be discussed. This can be explained by the fact that men mostly marry second wives if the first wife cannot give birth to children, or have no son. This is seen as a disgrace for a woman, she becomes less respectable and loses her dignity. Her husband very often will see her as less "valuable" and therefore will not discuss many issues with her. Exceptions however do exist, depending on the relationship between husband and wife. When a woman's husband is absent more or less permanently and she is the actual manager of the farm, she still will have to leave the decision making on land transactions to her husband or discuss the issue with male relatives. If she is a widow, and the land is registered in her deceased husband's name, she will have to discuss these issues with her sons and other male relatives. Only if she owns land herself can she make decisions herself, but if a male relative is present, she will have to consult him or get his consent.

Irrigation management in the Thulotar Irrigation System

In the preceding section I have shown that women have weaker rights to land, both according to state law and the local law in Rupakot. I have also discussed how local practices influence their ability to acquire and maintain control and access rights to land. As has been shown, rights to water are closely connected with ownership rights to land and the fact that women have weaker ownership rights influences their ability to acquire and maintain rights to water. In the following paragraph I discuss in more detail the irrigation systems in Rupakot and the rules and practices concerning water management, in order to show the various additional factors which influence the access to and control over water for women in comparison with men.

Water distribution

During monsoon, after the rice seedlings have been transplanted, the water is distributed by the water distributor (*panipale*). He distributes water according to different scenarios, depending on the available amount of water. In case of sufficient water, all intakes are opened and water will flow into all the fields equally and simultaneously. If the amount of water becomes less, the system will be divided in two parts, head and tail. The head and tail parts will be irrigated on alternate days. If the water supply in the source is reduced even further, the system will be divided into 4 parts. Each will be irrigated for one day, the rotation cycle then taking four days. In all these scenarios the water distributor checks the intakes and fields two times a day, at about seven o' clock in the morning and at four o' clock in the afternoon. During daytime he is ploughing fields.[10] He starts closing and opening at the head part, down to the tail-end, so that an even amount will be distributed. When water is not available to irrigate all fields equally and sufficiently, the water distributor will stop distributing the irrigation water. During transplanting time it is not possible to distribute the water by rotation, so the water distributor will not perform his task. The farmers have to irrigate their fields themselves according to their need. In the WUA meeting before the transplanting period, the amount of water required for each household is discussed. All fields need a larger amount of water for a longer period, because the fields need to be saturated with water to be able to transplant the paddy. Until a couple of years ago, the tail end fields would receive less water and had to wait before they could transplant. This has been changed by new cultivation patterns. The farmers, and mainly the head end farmers, have started to grow maize in their fields. So when transplanting time arrives, the head part farmers first have to harvest their maize, which gives the tail end farmers the opportunity to transplant early.

The order of transplanting also depends on the availability of oxen, ploughmen and labourers. Households having their own oxen, men to plough or their own

[10] The *water distributor* is a Bhujel, lower caste, and does not own any *khet*, just some *bari*. That is why his family, consisting of a son and daughter-in-law, perform wage labour and sharecrop various fields to earn an income. He ploughs the fields of a large number of households in the area.

ploughmen, and having enough labour or money to hire wage labourers, face fewer difficulties. The availability of these resources depends on kinship and other relations; people share their oxen and work for each other during this time. For households lacking these resources, particularly for women living alone without support from relatives, this can cause problems. They have to hire all labour, pay a lot of money and book in advance to arrange everything.

During the transplanting period, or if the *panipale* does not distribute the water due to scarcity of water, the farmers irrigate their fields themselves. Irrigation means opening one's own intake, closing others' so more water will flow into one's own field, and the checking of the amount of water in the field. Guarding the intake is another irrigation activity. Both men and women are involved in irrigating the fields, but the extent of their involvement differs. In households where men are permanently at home they irrigate the fields most of the times, since irrigation is predominantly regarded a male task. But in practice women also irrigate. When they are working in the field and feel that the field needs water they will open the intake and irrigate. Women also often accompany their husbands to help with guarding the intake or checking the water in the field. In households where the men are temporarily absent, women irrigate during the day while their husbands are working, and the husbands irrigate at night if necessary. If the husband is more permanently absent, other men, if available, take over the irrigation activities. This can be sons, but it may also be the father-in-law or even brother-in-law. This is usually the case in joint families, but even if the family is separated, often the father- or brother-in-law will perform these activities. If no men are available and/or the relatives do not live close by, women perform all irrigation activities.

This situation where no men are available in the family makes it problematic for women to get sufficient water and to maintain their rights to irrigation water. Before the water distributor was appointed and the farmers themselves distributed the water, there were many more water disputes and women in particular encountered many difficulties. They had no opportunity to irrigate at night, were harassed and intimidated and sometimes even attacked by men. Ultimately women headed households were forced to appoint sharecroppers who took over the responsibility for irrigation in order to secure their use rights to water. At present women still face similar difficulties. During daytime women are involved in household activities and cannot spare the necessary time to guard their fields. Often, after they have opened their intake and return later to check the water level, they will find their intake closed again. Men's time schedule is less full, so they can more easily guard their fields and intakes. It is not possible for women to go out and irrigate at night. According to local norms and values, women are not allowed to walk alone after dark; they can be accused of having affairs, or of stealing water. It can also be dangerous because of drunken men passing the field at night. Some women will partly solve this problem by asking other women or male relatives to join them or, in case of male relatives, to irrigate for them. But they are then dependent on their relatives or relations with other people. If those relations are not good, they will not be able to solve this problem.

When the water distributor took over most irrigation activities during the rainy period, the conditions for daytime irrigation for women improved. But the problems with water distribution at night still remain. For although it is a rule that when the water distributor is distributing water no one is allowed to touch his or her intake, stealing water at night occurs frequently. Households with a man present do not encounter a big problem, because he will be able to guard his field during the night. He also can more easily accuse someone of stealing his water and take action against it. But women without male support encounter greater difficulties. They cannot guard their field at night and thus are unable to find out who is stealing their water. The only thing they can do is report it to the water distributor and the WUC. They then depend on the WUC to prevent water stealing. So although rules exist to secure the acquisition of water, and a committee exists to ensure that the rules will be followed, if the committee "cannot find" a suspect, nothing more can be done. The water user will have to solve the problem with the offender in private. In such cases a woman without support from male relatives or neighbours is more disadvantaged because she has no real power to secure her rights herself.

If problems occur in the division of water by the water distributor, both men and women will try to resolve them by complaining to him and asking for more water. In most cases both women and men do not find any difficulties in solving problems with the water distributor. Women also do have problems with approaching the water distributor in attempting to secure their water rights. Officially the complaints should go through the WUC, but no cases have occurred in which this has actually happened, because families do not want to disturb social relationships within the community. Therefore in practice the WUC is hardly involved in small water disputes.

The practice may be illustrated with a short case: A Brahman widow whose only son lives in India reported that someone was stealing her water. The water distributor and members of the WUC guarded her field only for one night. They did not find a suspect and then said they could not do more. An additional complication in this case was that the woman suspected that the son of her 'sister' (the second wife of her husband), who used the field next to her, was stealing the water. This made it even more difficult for her to accuse him openly, as he was her relative. The family relations were not good, and to prevent the situation from becoming worse she would not tell anyone, or confront him with her suspicion. In addition the land was still registered in her deceased husband's name, so she had even less opportunity to complain because her son was not present to claim his right. Usually when water stealing between relatives occurs, it is not reported to the WUC, because of the desire to try to keep the peace in the family. It will be sorted out in private. But in this situation, where the woman is so dependent on her relatives she will not find a way to solve this problem in private.

Maintenance

According to the regulations of the WUA, one of the obligations a farmer has to fulfil to obtain water from the system is to contribute to the maintenance of the irrigation system. At least one person from each household has to join activities in the

maintenance work. These activities take place every year, usually just before the rainy season starts. If a farmer does not fulfil his obligations he will be fined.

Maintenance activities include cleaning the canal, carrying, putting mud on the canal walls, and repairing the cemented layer. The extent to which men and women are involved in maintenance activities depends on the household situation. In households, both joint and nuclear, where a man is present, he will normally perform these activities. The reason given is that men are physically stronger than women and are therefore more capable of performing the work. But when men are temporarily or permanently absent, woman do perform these labour obligations for their household. They usually do easier tasks, such as putting stones into the canal and cleaning the weeds in the canal. In Rupakot, they do not prepare food for the workers, as is done in other regions in Nepal (see Zwarteveen, Neupane and Pradhan 1995). The maintenance work starts after breakfast and in the afternoon the workers will go home to have a late lunch. Women find the work very time consuming. Because all their time is taken up with household activities, it is often these households who do not participate in the maintenance activities and pay the fine instead. However, quite often fines are waived for poor households which do not have male members and are unable to find others to contribute their labour for maintenance. Women told me that in principle they would like to perform maintenance activities because they would gain some knowledge and experience. They would also feel more involved, and would also have the chance to meet and talk with many other people. The maintenance work thus is also seen as a social occasion. This is all the more attractive since women are usually busy with daily household activities, and have little leisure time to interact with other people. The women who actually were involved in maintenance said that they liked to go for the same reasons but they also said that they found it very time consuming.

It also seems that women are excused more easily than men if they cannot participate, and that participation in maintenance is a less strict condition for receiving water from the system. On the one hand this gives them the advantage of not having to spend extra time on these activities. But not having participated in maintenance can also become problematic. In disputes over water rights, this can be held against them. That is why most women do perform the activities anyway. As one woman stated, "I own land in the system area, I pay the water contractor, go to all the meetings and perform the maintenance activities so they cannot take away my rights to water".

The administrative and management structure of the WUA

The WUA consists of a Water Users Committee (WUC), which functions as the overall managing committee. All water users, officially the heads of the households, are members of the Association. This means that officially most women are excluded from formal membership of the association because they are not regarded as household heads. Only four women are registered as members, they are accepted as household heads because their husbands are permanently absent.

The WUC consists of nine members, of whom just one is a woman. Only high caste people are currently members, although before 1995, when the last change in

members took place, a lower caste person also had a seat on the committee. Two annual meetings with all the water users of the system are held, and, further, the committee should have regular meetings.

The written rules or regulations made by the WUC state that every household using water from the system has to pay the water contractor a certain amount of paddy for his work. The amount of paddy depends on the size of the land and the type of soil, which are seen to indicates the amount of water required for irrigation. The amount of paddy was set when the water contractor was appointed and has recently been increased for the first time since his appointment. The approximate amount of paddy paid by each household is one to two *pathi.*[11] From every household one adult, male or female, has to perform maintenance work activities once a year, just before the rainy season. People are also supposed to attend the meetings, when they are called. Again one adult person from every household has to attend. Normally people simply perform their tasks or pay the fine when they are unable to perform their tasks or attend meetings. If people do not follow these rules, they are to be fined and may even have their access to the water restricted if they continue to disobey. In practice, though, such punishments have hardly occurred, and the rules on fining are not followed strictly. Fining is merely used by the WUC as a means of pressure on households to fulfil their obligations. To avoid paying the fine, some people say that they did not attend a meeting or maintenance work because they did not hear the *kotwal*, the village herald, who goes around the ward to inform every person of coming activities. One case was reported in which a household did not give the water contractor his share of paddy. This household was a low caste family without land of its own. They sharecrop a Brahman family's field and are supposed to pay the water contractor but the household head refused to pay. The water contractor did not report this to the WUC, because it was a poor household which would probably not sharecrop the field next year anyway.

Meetings

The WUA usually meets twice a year. According to the regulations one adult person from every household should attend the meetings, in principle the head of the household. The meetings take place just before the transplanting time and every other 15 days if there are any problems. Attending meetings is seen as a man's job, even more than doing maintenance work. In a joint family, usually the oldest man of the family goes to the meeting as the household head. If he is too old to attend the meeting one of his sons will go in his place. The extent to which women attend WUA meetings depends on their household situation. If there is a man in the household, he will go. A woman might attend meetings if her husband is absent and her father-in-law is not able to, for example, due to old age. In many cases, especially in male dominated households, the topics on the WUA agenda will not be discussed with the other members of the household. If the woman asks for information, she may get some, but in many cases the man will refuse to tell her

[11] A *pathi* is a volumetric measure of grain, about 3.7 kg.

anything. "It is my business", one man stated, "why should she interfere". He discusses the matters only with his sons. Even when a man is absent in a household, another male relative will usually go to the meeting for that household, and, if necessary, inform the woman on what has been discussed.

If no man is present and no male relative is available, women will attend the meeting. But even when women have managed the farm during their husbands' absence and are involved in all activities and in attending meetings, the husband will again go to the meetings after his return. Social norms and values make it difficult for women to attend meetings while her husband or another man is present. The man is seen as the household head and decision maker. If the woman would go to the meeting, this would show that he is not capable of managing everything. The woman, on the other hand, would be seen as being more clever than her husband. People do not like that and would also not welcome her to a meeting. In Rupakot I encountered one exception, a Nepali (untouchable caste) household. The husband works at home and also performs some wage labour. According to his wife, he often goes to the WUA meetings and also participates in the maintenance work, but sometimes when he is working he tells her to go. So she attends quite a lot of meetings and sometimes participates in the maintenance work. The main reason why his wife attends meetings is probably that her husband's wage labour is their main source of income which is more important for them than his attending meetings. But she herself is interested to do so, not just because it is necessary but also because during maintenance activities all people come together and interact. If someone asks her why her husband does not attend the meeting, she will say "I came, is that not sufficient?" She does not find it difficult to express her thoughts in the meetings, neither does she feel mistreated as a lower caste person.

The same exception to this occurs during transplanting time. During this period women attend the meetings more often than men. Men can earn twice the wage of a woman as paid labourers in the field. So if work is available at that time, the men will go to work and the women will attend the meeting.

Women do not have much influence on the decision making in the meetings. But when the topics on the WUA agenda are discussed at home, a women will tell her husband if she has any problem with the decisions being made and he may then bring up the topic during the meeting. In that way she has some influence on what is being discussed and decided. On the other hand, when women do attend the meetings, they do not have any influence on the decisions made or on the topics discussed. Women attend meetings mainly to fulfil their obligations and to obtain information but they do not participate actively in the discussions. The male dominance makes women feel uneasy. It is not regarded as proper for woman to talk openly so they find it difficult to interfere. They feel illiterate, not welcome and afraid of talking in public. It is mainly for these reasons that women attend only a few meetings. Another reason is that meetings are held far away from their homes. Because their household activities take up much time and most meetings of the association are also quite time consuming, they simply cannot find the time to attend the meetings. Another way for women to obtain information is by talking with

other women or men who give them the information they need. In that way women obtain a lot of information via informal ways.

But widows or first wives living separately feel more capable of attending meetings. Women who have become the managers of the farm and the main decision-makers due to their husband's absence feel more confident in talking in public and they therefore feel that they have influence in the decision making in the meetings; they also feel more directly involved in the activities being discussed. If women cannot find the time or for other reasons do not attend the meetings, they usually pay the fine. But they often also go to the WUC to apologize for not attending, in which case they do not have to pay a fine. They are easily excused. Men who do not show up, on the other hand, will have to pay the fine and cannot get away with an excuse. This shows that for women the implications or consequences of not attending meetings are less grave than for men.

The female member in the WUC

When the WUA was registered, a position for one female member in the WUC was established. According to the District Administration Office regulations, the WUC could not be registered otherwise. Officially the female member was to represent the female headed households whose household heads could not attend the meetings themselves, but whose opinions should be taken into account. However, the female member was elected for another reason. According to the regulations the female member had to be a registered Nepalese citizen. The WUC therefore chose a local teacher to become a member, because as a teacher she was registered as citizen and also had a better education than most other women. However, she cannot find the time to attend the meetings. The meetings are held on weekdays when she has to teach the whole day. Moreover, she also has her duties as a daughter-in-law and a mother of two children. In practice, therefore, she hardly has any influence on the decisions made in the meetings and cannot represent the interests of female headed households. Moreover, her father-in-law is also a member of the committee (which may also have been be a factor that influenced her election). So there is no real need for her to go, because he is going as member of their household anyway. Another reason making it difficult for her to attend meetings is that the members of the committee are called for the meetings. She thus only can attend when the other members call her. This, however, only rarely occurs. This shows that, although rules exist to support female influence in decision making in institutions to improve the gender balance, in practice no successful effort has been made to get that result. Men still dominate the decision making and women are not involved in the discussions.

Other means of irrigation, rules and practices

About 65 of the 138 households in the ward use water from the Thulotar Irrigation System, while the remaining households own land in other parts of the area and irrigate their fields in different ways. Some of the land is situated close to rivers and is irrigated

by river water. In these systems, shortage of water is rare because the river supplies sufficient water during rice transplanting time and irrigation time. Therefore problems and disputes over water are very rare. The problem with these systems, however, is that canals and ditches can be destroyed when the rivers come out of their beds. This means that sometimes much maintenance work has to be performed. These fields are situated quite far from the houses, so more time is needed to reach these fields. The water users nevertheless accept these burdens because these fields are fertile and water scarcity does not occur.

Other fields can be irrigated by different sources. There are four main sources used for irrigation in the area.

1.) A "*kuwa*" is a natural spring which usually provides water throughout the year. *Kuwas* are located either in privately owned or in common land. A canal will be built from the source which can serve one or several fields. This water is also used for household purposes, for drinking purposes and for irrigating the vegetable garden. The water is usually only used for irrigation by the owner of the land in which the *kuwa* is situated and by his family members living nearby. This is because the source is situated on their property, and because the amount of water is not sufficient for irrigation of a larger area. However a larger number of households can use the water for drinking water and other household purposes. According to an old Hindu rule, the owner should allow other persons besides family members to use the water for drinking. People are afraid that the gods will become angry if they see people not being able to obtain drinking water because of the restrictions imposed by other people. This is why they do not refuse drinking water to anyone.[12] In one case all the households near a spring contributed money to construct a layer of concrete around the source so it could more easily be used for household purposes. They thereby obtained use rights to the water for drinking.

2.) A '*mul*' is a small or large natural spring which depend on rainfall and only have water in the rainy season. According to the Hindu rule everyone should be able to use the water from such a source. In Rupakot, the landowners having land around the land where the *mul* is situated built an irrigation canal which goes through their land. The owner of the land in which the *mul* is situated has prior use right. Normally the owner of the land nearest to the *mul* irrigates first. The owner blocks the canal so no water can be used by the other farmers until he is finished. The farmers who own the neighbouring land are mostly dependent on run-off and drainage water coming from this field and on the water that leaks through the blockage in the canal. The farmer with land closest to the source of the spring will again block the canal to be able to irrigate all the leakage water into his/her field and the rest of the farmers similarly block the canal in their portion of the land. This means that most of the times the tail end farmers get very little water. This causes extra trouble during transplanting time

[12] This is not always the case. According to the owner of the plot of land with a natural spring, other households are situated too far away to be able to use the water and have other sources near their houses. On this old Hindu rule, see also Bishnu Upreti in this volume.

because they have to wait with transplanting until sufficient water is available, which in turn will affect their harvest yield.

3.) A "*kholsa*" is a small stream, formed only in the rainy season, mostly originating from a *mul* and also dependent on rainfall. The owners of land situated nearby the source built a canal from the source serving one or several fields. Also in this case the owner of the field nearest to the *kholsa* has the prior irrigation right, followed by the neighbouring fields. This distribution system again can result in a water shortage for the tail end fields in case of insufficient rainfall.[13]

4.) "*Chuhan*" is 'drainage' water originating from a field which has its own canal inlet. Fields which do not have an intake and cannot acquire sufficient water for irrigation can get such 'drainage' water. This right is based on an agreement between farmers. Such agreements are based on a general social obligation of the owners whose fields have an independent inlet. Farmers without an inlet have no other possibility of obtaining irrigation water. The farmer who has or gets the right to use the drainage water, makes a small intake in the boundary of the other field, so that the water can flow into his field. During transplantation time the owner of the canal-irrigated field has to give the *chuhan* field extra water. Also the fields which are connected with his field but normally do not obtain any drainage water from his field, can ask for water during transplanting time. The landowner then is obliged to let them have it. But after transplanting time this right is no longer valid. In this system the *chuhan* irrigator is totally dependent on the landowner from whose field he obtains the water. If the landowner does not irrigate his/her field, the *chuhan* irrigator can not irrigate his land, and has no right to complain about this.

Drainage irrigation is not under the jurisdiction of the WUA or the water distributor. Also when the *chuhan* fields are located in the TIS area, the farmers have no right to complain at the WUC. (In the Thulotar Irrigation System eight households depend on drainage water for irrigation). The right to drainage water is based on an agreement between the land owners only. The *panipale* in his distribution of the irrigation water does not take into account the fact that another field depends on the water and only distributes water sufficient for one plot. The fields depending on *chuhan* in the Thulotar Irrigation System area, which are situated in the tail part of the canal, are of the nature that ground water, which leaks from the canal, rises into them. Therefore they do not encounter more problems regarding water shortage during transplanting time. If this part of the canal would be cemented, however, this extra source of water would not be available anymore, causing more problems. In the other cases the farmers depending on drainage water have problems transplanting in time, because they have to wait for the other landowner before they can deliver water to their own fields.

For acquiring drainage water, family relations play an important role. In one case, a landowner wanted to sell his land and emigrate. The household that depended on this field for their *chuhan* was more or less 'forced' to buy the land. Fortunately,

[13] In both cases of the *mul* and *kholsa* this is the normal practice. In one case however, mentioned below, the water users set up another kind of rotation schedule.

the land was owned by a cousin. Thanks to the family relation he sold it to them and they could thus secure their water right. They were afraid that if a non-relative would have bought the land they would have had difficulties in obtaining sufficient water for their field.

In other cases women have found a solution by successfully negotiating with their co-water users. A Brahman woman and her sister-in-law, both living in separate households but neighbouring houses use the same *kholsa* to irrigate their fields. Their husbands live and work in India and come home only for a few weeks in a year. A canal has been built from the *kholsa* to the fields which they use together with six other households. At first no routine had been planned for the water distribution. The farmers irrigated according to their needs. But when this led to frequent disputes and water stealing the farmers agreed on a rotation schedule. After transplanting time they would come together to discuss the amount of water needed for each field and to fix the irrigation schedule, which included both day and night turns. This worked quite well. However this woman and her sister-in-law still had problems with irrigating at night. Because of this they went to the other farmers and told them that they had problems with the schedule and did not obtain an equal amount of water in relation to the other users. The other farmers recognised the problem and decided to change the schedule. The women were given turns only during the daytime but the amount of water they got was equal to the shares which the other farmers received. The two women thus negotiated their access rights with the other farmers who were very co-operative without help from their husbands.

Conclusion

The research in Rupakot has shown that the acquisition and maintenance of different aspects of rights to the natural resources land and water are gendered (c.f. Deutsch-Lynch 1991, Zwarteveen 1994, Koppen 1998). Due to the traditional patrilineal inheritance law, men have ownership rights to land, from which rights to water predominantly are derived and maintained (c.f. Koppen 1998, Pradhan 1994). In addition women are restricted in the performance and obligations regarding the actual irrigation and maintenance activities due to social norms and values which define the traditional roles of men and women (c.f. Zwarteveen 1994, Zwarteveen, Neupane and Pradhan 1995). Women also have unequal rank and power in the decision making over the utilisation of the resources. This seems to apply for the public as well as the private spheres. Women are less involved in discussions and negotiations within the household and family and are restricted with respect to attending meetings and in approaching institutions (c.f. Agarwal 1988, Zwarteveen 1995).

Certain aspects of rights to water are derived and maintained by investing labour or money in maintenance activities and fulfilling other obligations regarding irrigation management (c.f. F. and K. von Benda-Beckmann and Spiertz 1997). By the acquisition and maintenance of these rights, farmers obtain access to and control

over water which are of importance for agricultural production. Due to the fact that women in general are placed in a less favourable position than men regarding access to and control over land and therefore water and because of the other factors mentioned, it becomes more problematic for them, as heads of the household, to maintain production at the level necessary for the sustainability of their economic position and social security of their household. As has been shown, the extent to which these factors play a role depends on several additional factors which differ for individual women: The household composition, male out-migration and caste membership can influence the actual access to and control over land and water. In addition, kinship and neighbourhood relations, the domestic cycle, age and the individual status of women within the community also play a significant role. Another, physical-geographic, factor is the location of the household within the ward, whether it is situated near or far from the irrigation system.

If we compare the small systems with the Thulotar Irrigation System we see that none of these small systems has a WUC or a water distributor to control the distribution of water. Farmers irrigate the fields and distribute water themselves. In some of these cases, when sufficient water is not available, there is competition between the different farmers in order to obtain sufficient water. In these systems there are also no clear rules for maintenance. But farmers said that if they did not perform any maintenance activities, the other water users would scold them and they would be restricted from irrigating their fields. In these systems people are significantly dependent on land ownership for the acquisition and maintenance of their water rights. Acquisition and maintenance of water rights predominantly depend on where one's land is situated in relation to the water source and who owns the land and has the prior use right. In many cases relations with relatives or non-relatives who are dependent on the same source are of more significance than in the Thulotar Irrigation System to obtain and maintain rights to irrigation water. Women do not own land and obtain use rights through the male family members. If men, who are the holders of those rights, are absent more permanently, it is difficult for women to defend and secure their rights. If their relations with the other farmers are good, they will have fewer problems. In these systems women have fewer opportunities to irrigate their fields properly because they are not able to irrigate their fields at night and lack the time to guard their fields during daytime. And because there are no water distributors in these smaller systems, they have to depend on male relatives or neighbours, who have more time and are not restricted by social norms, to irrigate the fields for them and guard their intakes. If relatives do not co-operate, women will find themselves disadvantaged. Women, while irrigating their fields, are often intimidated by men. Some women feel no constraints in protecting their rights to irrigate by telling them off, but other women do not feel like fighting. "I am a woman, so why should I fight, I do not like fights." Women do fight with each other much more easily; they do not find any constraints then. But fighting with men is seen as not appropriate, so if they will have to confront men most women will not fight, but just avoid it.

The results of this research support Agarwal's (1994) argument that the position of women regarding access to and control over land and water could be improved by securing land ownership rights for women. By increasing their ability to become more involved with the local managing institutions and thereby in the decision making processes over the utilisation of land and water, women could also gain more respect in society. This might eventually open a way not only to economic but also to social and political empowerment (K. von Benda-Beckmann et al. 1997). In this way women might be able to challenge and change existing power relationships, in both private and public spheres, that place them in subordinate positions, in their favour. This, in the end, will improve women's position.

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Gender, Land and Irrigation Management in Rajapur[1]

Shuku Pun

Introduction

In Nepal, 50 percent of the female population are actively involved in economic activities of which 90 percent are engaged in agriculture or land management (National Planning Commission (NPC) 1992). Available national data show that Nepalese women work longer hours in agriculture and consume less food and clothes as compared to their male counterparts. Women contribute 50 percent of their total labour performance in the household economy whereas only 44 percent is contributed by men (Shrestha 1994: 26). The Sixth Five Year Plan of Nepal (1980-85) for the first time officially recognized the important role of women in agriculture (NPC, Sixth Five Year Plan). Nepalese women have to work in the household as well as agriculture fields but their contribution to the household economy is not considered to be important by many people. Moreover, there are only a few studies available in Nepal highlighting the roles and contributions made by women in land and irrigation management. Some of the literature that is available dealing with this issue is not based upon anthropological (field) study but is rather prepared on the basis of desk- study. In view of the above mentioned context, this paper seeks to highlight the socio-economic status of woman of different communities living in Rajapur area and their role in land and irrigation management. This paper also deals with the customary practices relating to land and water rights; the position of women of different communities in terms of control over household and natural resources; and the reasons for not involving women in irrigation management and the consequences thereof.

Nepal, predominantly an agrarian country and the second richest country of the world in water resources, has been able to irrigate merely 38 percent of its total cultivable land (Malla and Khadka 1996: 93). Currently, farmer managed irrigation systems (FMISs) service over 70 percent of the irrigated land (R. and U. Pradhan

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[1] This paper is a revised version of the paper read at the workshop " Water, Land and Law: Legal Anthropological Perspectives", Kathmandu, March 18-20, 1998. Fieldwork on which this paper is based was carried out as part of a larger Mountain Resources Management Group project in Rajapur, funded by the Ford Foundation. I would like to thank Keebet von Benda-Beckmann for critical comments on earlier versions of this paper.

1996). The state's involvement in the water sector prior to 1951 was confined mainly to irrigation development to increase the revenue. The government did some construction work, provided financial support to expand the area and looked after the maintenance work of FMISs. The state rehabilitated and extended existing FMISs with the help of international aid after 1981 (R. Pradhan and U. Pradhan 1996: 63).

Different Acts, rules and policies have been promulgated for ensuring proper use of water such as the Canal, Electricity and Related Water Resources Act, 1967, the Irrigation Act of 1961, the Water Resources Act of 1992, the Irrigation Policy of 1992, etc. However, how far these laws and policies have been able to attain their objectives is an issue for further research, as to date there is no data or report available in this regard.

The Eighth Five Year Plan (1992-97) for the first time recognizing women's rights declared the government's commitment to equal participation of men and women in irrigation development and management. But the existing practices of the FMISs in Rajapur, in their construction and organization, may not help the government's policy of equal right and equal participation. However, the situation in this regard may be different in other parts of the country. In Rajapur, women are only involved indirectly in irrigation work like preparing food and mobilizing the required materials for the construction works. There is greater participation of women in agricultural activities but minimum participation in irrigation work compared to male members of the society.

Rajapur, an alluvial land area situated in Bardiya district in the Mid-Western Development Region of Nepal, is surrounded by the Karnali River to the north and the west, the Geruwa River to the east, and India to the south. The total area of Rajapur is 16,000 ha. with an aggregate irrigated area of 14,000 ha. The total population of the area is 67,027 comprising of 7,636 households. Several indigenous ethnic groups, mainly Tharu, and, recent migrants of hill communities such as Brahmin, Chhetri, Thakuri, Gurung, Magar, Damai, Kami, Badi and other ethnic groups of Indian origin inhabit the area. Although the Tharus are the traditional inhabitants and the largest community of this area, they are socially, economically, educationally and politically backward compared to other communities in Rajapur.

The existing FMISs of Rajapur area are almost one century old. There are six main canal systems in Rajapur, namely, Budhi Kulo, Khairi-Chandanpur, Tapara, Gola, Patabhar and Manau. The Karnali and Geruwa (a branch of the Karnali) rivers are the main sources of water for these irrigation systems. The biggest and oldest irrigation system, Budhi Kulo, was constructed between 1899 and 1902 AD under the leadership of a Tharu *zimidar* (big landowners)[2] named Birbal Chaudhary. The Budhi Kulo intake at Okhariya is about 25 km. from Rajapur and the farmers were required to stay there for two to six months for the construction work. Women were not involved in the canal construction work, because a long absence from home would have created practical problems. After completing Budhi Kulo, the other

[2] It is not clear whether the term '*zimidar*' as used here means a big landowner as the term is currently used or a revenue collector of a village in the Terai (*jimidar*) who may have also been a big landowner, especially as holder of *birta* tenure, see Glossary [Editors' note].

main canals were constructed by the concerned landlords in their *maujas* (villages). The landlords called all the farmers to contribute free labour and mobilized them for branch canal construction.

According to the local tradition, the canal diggers were not given wages; rather some money was given for a communal feast, called *Sekuwa-Pakuwa* in the local language. The landlords paid Rs.75 to the diggers for Sekuwa-Pakuwa for every five days of work. Later, the *zimidari*[3] system was abolished in 1959 and lands were divided into smaller plots and the dominance of *zimidars* in land and irrigation management was reduced to a considerable extent. The new landholders began to form farmers' irrigation organizations in each system for the management of the concerned system. The local people think that irrigation work is solely the domain of men. The women from the farmers' houses were engaged in the landlord's household work and in crop production. The farmers' organization did not utilize women's labour for branch canal construction and maintenance. Women are not involved in irrigation management because it demands hard work which, the local society members believe, women cannot undertake. However, women are involved in irrigation work during emergency period such as when the canal is damaged by big floods. For example, the irrigators found the canals massively damaged by flood in 1983 AD, requiring huge labour force for repair. So some of the FMISs, for example, Bhimapur mobilized men as well as women at the village level to reconstruct the damaged canals.

Tharu culture

As mentioned earlier, Rajapur has been inhabited by people from different communities such as people from the hills, Badis, people of Indian origin and Tharus. It is important to highlight here, for the purpose of this study, the existing culture of the Tharu community (i.e., dominant community of this area in terms of population) and their relationship with the people from other communities.

Prior to the construction of the East West Highway Rajapur Bazaar was one of the most popular trading centres among the people of Banke, Bardiya, Kailali, Doti, Dadeldhura, Humla, Jumla and Surkhet districts. The market area of Rajapur was mainly inhabited by people of Indian origin involved in trade and business. The abundant land in and around the forest area was legally occupied by people of the hill community. With a few exceptions almost all the *zimidars* were from hill communities. Beginning towards the end of the last century, these *zimidars* brought Tharus from Dang district to cultivate their land as *kamaiyas* (a kind of servant hired on a yearly basis for agricultural purposes), servants, sharecroppers and *raitis* (tenants who had no ownership rights over the cultivated land but were bound to pay the land tax to the government through the *zimidars*). For this reason, the social status of common Tharu people in this area was and is considered to be "inferior" while compared to people from other communities. The Tharus were and are called servants, sharecropper, and "*raitis*" whereas a landlord is called "the master" or farmer (*kisan*).

[3] *Zimidari* is often also spelt as *jimidari*, see Glossary [Editors' note].

In terms of fixed property holding the Tharu community can be distinguished into different groups, e.g., landholders, sharecroppers and landless. The majority of the Tharu people living in Rajapur area are landless. According to the traditional practice, some of the Tharus keep migrating from one place to another in search of work. This may be one of the reasons that the Tharus do not plant fruit trees or construct cemented houses. It is also their belief that their God will be angry with them if they live in cemented houses (Gautam 1987: 4). However, due to the shortage of house construction materials and unavailability of new agricultural land most of the Tharus have stopped moving from one place to another.

The average age of marriage for Tharu boys is 13-14 years and 15-16 years for the girls. It is quite acceptable for a Tharu man to marry a woman who is older than he is. Similarly, the practice of marrying a widow or divorcee, with or without children, is also prevalent. Many Tharu parents prefer to get their sons married to older girls so as to get a helping hand for the family. As a consequence, wives of many Tharu men are older than their husbands.

Tharus are relatively liberal in comparison to people from the hill communities as far as marrying a widow or a divorcee with or without children is concerned. In the Tharu society, the relatives of a widow or in-laws may arrange her (re-)marriage with a person who is ready to look after her and her children as well. The rationale behind such liberal practices is also the possibility of involving the women and/or her children in income generating activities.

The practice of polygamy in the Tharu community, though it is illegal, is deeply rooted, and having two or three wives is considered to be normal. Some big landholder Tharus have more than five wives living in the same house. However, if the husband cannot "maintain" all the wives properly then they may elope with other men. In such a case, the husband may claim compensation (*jari*) from the person with whom his wife has eloped. Tharu women are not well aware of the legal provisions relating to polygamy. Even if someone makes them aware about their legal rights, they do not file a case with the authorities concerned. Polygamists are fined Rupees 1000 by the local Tharu society, especially by the *badghar* (i.e., a traditional institution for village development and dispute settlement at village level) which, however, goes to the community and not the wives. For this reason also, the elder wives prefer to remain silent.

In the Tharu community, there is a custom of exchange marriage, i.e., marrying off one's daughter for the purpose of getting a girl for the marriage of his/her son or vice-versa. For the purpose of exchange marriage, some younger sisters may be married at an early age so that their elder brothers may marry. Some elder daughters are kept unmarried until their younger brothers attain a marriageable age and are married. In selecting a bride, priority is given to the working capacity of a girl rather than the consent of the bridegroom and the bride. Even big landlords and middle class Tharu families easily accept a girl belonging to a poor family or a *kamaiya* as a bride for their son as they need additional manpower for work. Similarly a rich farmer may marry his daughter to a *kamaiya* who can manage his land and irrigation work.

Land management

The land management practice differs from one community to another. The practices of land management followed by different communities are as follows:

Tharu land management

The Tharus are involved in land management in three ways, namely, cultivation of own land, as sharecroppers, and as *kamaiyas* or servants. Tharu landholders have been living in Rajapur more or less permanently and traditional practice of migration and re-migration has been reduced to a great extent. The big Tharu landholders, who possess more than 7 *bighas*[4] of land, do not become 'absentee' landholders in contrast to big landlords from other communities. They live mostly in extended families, some of them even having around 100 members in a family. In extended families, several units of the same kinship groups live together. Due to the large number of household members, they cultivate their land themselves. Some Tharu big landholders hire *kamaiyas*.

Most of the sharecroppers in Rajapur belong to the Tharu community. They work for big landowners from the Tharu community as well as from other communities. Some sharecroppers are small landholders and some are landless farmers. In the sharecropping system, agricultural investments other than labour as well as agriculture production is shared equally by the landowner and the sharecroppers, but all the cultivation related work has to be done by the sharecroppers. The sharecroppers have to provide services for many days as *begari* (unpaid labour) for their landowner like collecting wood, cleaning the house, preparing kitchen garden, as well as irrigation maintenance related work.

Kamaiyas, as mentioned above, are agricultural labourers hired by individual farmers on a yearly basis and 99.9% of the *kamaiyas* belong to the Tharu community (INSEC 1992: 113). It is estimated that about 31% *kamaiyas* are landless, 26% *kamaiyas* have occupied government land called *ailani* land (i.e., legally not registered in any individual's name) for housing and kitchen gardens (Report of the Commission on Landless People 1995). In Rajapur, crop production related work is normally done with the help of *kamaiyas*. The role of *kamaiya* is considered vital to crop production in this area. Despite hiring *kamaiyas* from the Tharu community, many landlords hire servants such as *aguwa* (leaders among the hired *kamaiyas*) and *kothari* (in-charge of the master's farmhouse) to help them (the masters) in land management and crop production.

Thus, the Tharus, whether landlords or landless, all play a crucial role in land management as landholders, sharecroppers or *kamaiyas*. Therefore, along with the availability of sufficient and perennial irrigation water, the hard working Tharus are the most important factor for crop production in Rajapur area.

[4] One *bigha* is equivalent to 0.67 hectare.

Land management of hill communities and Badi

The term 'hill communities' refers to those people who have migrated to the Terai from the hill areas of Nepal. The term excludes Tharus, Muslims or ethnic groups of Indian origin and includes castes and ethnic groups such as Brahmin, Chhetri, Gurung, Magar, Damai, Kami, etc. Most of the hill communities living in Rajapur own some land. The big landholders, i.e., those owning above 7 *bigha* (4.69 ha) of land, hire *kamaiya*s and do not cultivate the land themselves.

Middle class landholders, who hold 2 to 5 *bigha* of land, cannot afford agricultural machinery such as tractors, threshers, etc. but they are able to hire *kamaiya*s. Most of their agriculture related work is done by *kamaiya*s. Very few hill people cultivate their lands themselves. Some small landholders, owning less than 2 *bigha* of land, give their land in sharecropping.

Unlike the Tharus, the people from the hill communities do not follow agriculture as their main occupation. They move out of the Rajapur in search of employment, leaving all agriculture related burdens to their women. Even a relatively poor hill community man does not want to be a *kamaiya* because of the low status accorded to *kamaiya*s in the society. Hence, in Rajapur, hill people's involvement in land management is much less than that of the Tharus.

Another well-known community in Rajapur area are the Badi. They are found in all the 11 Village Development Committees (VDCs) of this area. At present 27 Badi families are living in the Rajapur Bazaar. Traditionally, the main occupation of the Badis is making musical instruments, fishing and weaving fishing nets. However, at present, in contrast to their traditional occupation Badi women work more often as commercial sex workers. More than 50 percent of the Badi families own land. The landholding size among the Badi's ranges from half to five *bigha*s. The Badis are not familiar with cultivation practices and the reasons for not cultivating their land by themselves are as follows:

1. The Badis think that working on soil is a difficult and less productive task than sex business.
2. They love a luxurious life, so they do not want to work on soil and mud throughout the year.
3. They think agriculture is not the proper occupation for their community.
4. It is their traditional belief that the productivity of land would decrease if they stepped on agricultural field.

For the reasons mentioned above, sharecroppers generally from the Tharu community cultivate all the lands of Badi landholders. Usually the sharecroppers also extend *begari* (free labour services) for the master's household related work. However, during the field study it was noted that most of the Badi landholders were not satisfied with the sharecroppers as the latter do not want to come to the Badi landowner's house to work or extend *begari* services, because the Badis are considered an untouchable caste. Badi landholders usually sell their share of crops before they are brought to their homes and buy the necessary grains for daily consumption from the market on a

daily basis. This is because they are not well acquainted with crop managing practices such as cleaning, storing, milling and managing the grains.

The role of gender in farm activities

All of the farm activities have a certain division of labour among the family members. The criterion for male-female division of labour is based on local customs and traditions rather than in terms of differences in their physiological or mental capabilities. The slender build has given women the title of a weaker sex. But that has not precluded them from being carriers of burdens or from doing heavy agricultural labour and other strenuous and protracted physical labour (Shumugasundram 1993: 90-95). The farm activities may be studied in three different sub-headings, i.e., animal husbandry, crop production and decision making in crop production, which are given below.

Animal husbandry

Animal rearing is important not only for acquiring milk, meat and cash but also for bio-fertilizers and crop production. In general, both husband and wife are involved in animal husbandry. However, gender division of labour is seen in animal rearing too. The male members of the family rear big animals such as cows and buffaloes. But women rear small livestock such as chicken, pigs, goats, etc. For big animals, male members of the house do the necessary work such as feeding, tidying and milking the animals, which women usually do not do. However, women cut grass and clean the manure of big animals which the male members do not do.

Crop production

The big burden of land management cannot be carried out by men or women alone. Both husband and wife must contribute labour for effective crop production. Thus, throughout the year men and women jointly do most of the work in the field and that happens in all the cultivators' families whether they are *kamaiyas*, sharecroppers or landlords. However, agricultural and related tasks are divided according to gender. For example, ploughing, irrigating, threshing and land preparation related tasks are solely carried out by men. Men plough and level the land; women uproot the paddy seedlings and make small bundles for transplanting. Men have to carry the bundles of uprooted paddy seedlings to the field, which are then transplanted by the women. Harvesting paddy, bundling, loading and piling are done by both men and women. Men thresh and grind the produced grain in the yard. In cases of extreme necessity some female exchange labourers are used in sensitive stages of crop production such as transplanting and harvesting. Maize and wheat are well-cultivated crops in Rajapur. In the cultivation of these crops, female labourers are more involved than men. Women thresh, winnow and store the grain. In every step of crop production of these crops female labourers are more in demand than male labourers. In the paddy transplanting period, women have to do relatively harder work than men. Usually the women leave

their house and small children early in the morning. They work for the whole day under the scorching sun or rain and have to go home once to breast-feed their children. They take up this task while others rest. Hard work under whatever condition ruins their physical shape, face, fingers and legs. Many women, with their sunburnt face, look more matured than their real age, which is a reflection of their hard life.

In Rajapur, women are used much more intensively in irrigated crop production work than their male counterparts because it is estimated on the basis of my field work that men work only for about 6-8 hours where as women work for 12-14 hours a day in the Rajapur area. The reasons are as follows:

1. Male wage labourers are used in agriculture for very selective and heavy work like ploughing, which women are not allowed to do, digging and levelling the field, bullock-cart driving, threshing and grinding with the help of draught animals or machines. Women labourers carry out the rest of the work.
2. Women in Rajapur commonly practice a labour exchange system for all types of agricultural work, in which they go to work on the land of a friend or a relative who does the same in return. There is no such labour exchange system for men.
3. Female labourers are more in demand than male labourers in sensitive stages of crop production such as paddy transplantation, weeding, winnowing and storing the grain, because they are more efficient in uprooting crops, weeding and transplanting the paddy than men. Men are completely absent in these stages of crop production.

Hired labour

*Kamaiya*s are hired by the landlords on a yearly basis. The contract negotiation between *kamaiya* and their masters is held during the month of *Magh* (January-February) and this process is called *khujuni-bujuni* in the local Tharu parlance. From the day of *khujuni-bujuni*, *kamaiya*s and their wives (*bukrahi*) start working in their master's house. The wives of *kamaiya*s work not only in the field with their husbands but also have to look after the household chores in their master's house such as cleaning, cooking, washing, etc. As mentioned above, *kamaiya*s are hired by their masters for agricultural purposes that include irrigation work, animal rearing, grass collection, etc. However, *kamaiya*s are also used by their masters to collect wood, whether legally or illegally, from Nepalese or Indian forests, to work in road construction under the Rajapur Irrigation Rehabilitation Project, etc.

During the cultivation period, *kamaiya*'s wives are required to work much harder as they have to get up around 3-4 a.m. in the morning to prepare breakfast for their family members so that they can reach the master's land to work along with their husband by 6 a.m. After working for about 2-3 hours they usually return to prepare lunch for their family and feed the cattle after which they are required to go back to the field. During the lunch break, while others take a rest, the wives of *kamaiya*s have to take care of the dirty utensils and breast-feed their children. In other periods, *kamaiya*s' wives are 'used' by their masters to clean their houses and utensils from 6 a.m. till the evening. Nevertheless, despite their hard working hours, the wives of *kamaiya*s enjoy fishing whenever they have leisure time.

The role of *kamaiyas* in land management may differ according to the category of the land holdings. For a Tharu family, a *kamaiya* is hired to fulfil the partial requirement of labour for agriculture related activities because most of the Tharu landholders work on their land along with their *kamaiyas*. However, hill landholders leave all agricultural related works to their *kamaiyas*. Therefore, *kamaiyas* are much more important for the people from the hill community than the Tharus. For the reasons mentioned above, the *kamaiyas* are much more important than landholders in land management in Rajapur area.

Decision making in crop production

The position of men and women in decision making regarding crop production varies across different ethnic communities. Among the Tharus and the Parbatiya Brahmin, Thakuri and Chhetri castes the decisions regarding use of land, choice of seeds, application of fertilizer, preparation of land for growing crops, hiring of labourers for transplanting of paddy are usually taken by the male members. All decisions for crop production, grain selling and household management are taken by the male members. Even for the land of the households headed by women, her male relatives such as brother, father, brother-in law take the decisions regarding crop production and related matters.

But the decision making process for crop production among the Gurung, Magar and Badi communities is quite different from that of Tharu, Thakuri, Brahmin and Chhetri families. In Gurung and Magar families, the decision regarding crop production is taken by female in consultation with the male members if they are available at home. The male members of the Badi families are not consulted by the female for the required investment in agriculture and selling the produced grains. Among the Badis, the women are the earning members of their households. Therefore, they possess the land ownership rights of the lands of their families but sharecroppers cultivate their lands. However, the majority of Badi women are not directly involved in agricultural activities, rather they are much more concerned with their profession as commercial sex workers.

Thus except in Gurung, Magar and Badi communities women have virtually no say or no effective influence regarding decision making about crop production in Rajapur, even though their contribution in crop production is more important than that of the male members of their family.

Land rights

Inheritance and ownership

Even after the restoration of democracy in Nepal, and the promulgation of the Constitution of the Kingdom of Nepal (1990 AD), the basic discriminatory features of the Nepalese laws are still in effect, for example, the gender discrimination over

inheritance rights mentioned in the Muluki Ain (National Code) of 1963. According to the Muluki Ain only the male children legally and customarily inherit all the ancestral properties. Therefore, men automatically inherit the ownership of land under the existing legal provisions. The daughters can only inherit parental property after their parent's death, provided that there is no son born to their parents. If there is a son born to her parents, the daughters can retain ownership only on those properties that are obtained from her relatives and/or parents as gifts. However, according to the existing legal provision, an unmarried daughter who has attained the age of 35 has equal property rights along with her brothers in her natal house. It makes the unmarried woman lead a dependant life until she is 35 years of age. However, if such a woman gets married after acquiring the property, it has to be returned to her brothers or a male relative if a brother doesn't exist.

Women in Nepal may avail of the ownership rights to land in the following three ways. Firstly, daughters get the land-ownership rights from their natal house provided that no son is born in the family. Secondly, some landowners in practice distribute their land among their daughters and sons equally, even though it is not mandatory under the existing legal provisions. Thirdly, the promulgation of the Land Related Act of 1964 was a most interesting and unintended contribution to women's land rights. After the promulgation of the Act, a large number of landholders registered their land in the names of their close relatives, including female family members such as wife, daughter, daughter-in-law and mother, to save their land which exceeded the prescribed land ceiling of18.76 hectares for a family.

However, the land ownership rights of women could not last long due to the following two main reasons:

1. Even those women who were able to get land ownership right from their natal house could not manage the land continuously because of their dependence on the male members of their family. And often they had to give up their land to others by selling or transferring the ownership, under the pressure or influence of the male members. Some women transferred their land ownership right to their male members of the household, i.e., husband, son(s), grandson(s) either after marriage or in old age.
2. After the promulgation of the Land Related Act of 1964, many women had to accept the re-registration of their land in the name of a male member of their households (Shrestha 1994: 26). And in any case, after the female owner dies, her sons will inherit her property, not her daughters.

To date, there is no way women can transfer their land ownership right from female to female, in the way male to male property is transferred on the basis of inheritance rights. Except in some rare cases, female family members are not involved in the decision making about land transactions but are merely informed of the decisions. Therefore, land ownership rights of women, if they have them at all, cannot be continued for long and cannot passed on to other women. It has created a serious gender imbalance in control over resources.

Land use rights

Land ownership rights and land use right are inter-linked. Generally, the right to use land is influenced by land ownership right. For example, land ownership rights are transferred by the male members of the households without consulting the women members. Likewise in taking decisions regarding the kind of crops to be planted, fertilizer and seeds to be used, or hiring of wage labourers, etc., women are hardly consulted. Moreover, decisions about selling crops and other dispositions are solely taken by the male members of the concerned households.

Land use rights of women are to a large extent dependent upon the willingness of the male members to accord them such rights. For this reason, women's economic status should not be judged by the economic condition of her family. Due to the lack of land use rights women feel relatively resource less and powerless compared to their male counterparts. Thus, a common phenomenon, the dominance of male members in land use rights in the households of Rajapur has made the women powerless and dependent on the male members of the family.

Women's control over household resources

Tharu women other than the wives of kamaiyas and sharecroppers

The majority of Tharu families live in joint families and their main properties include their houses and lands. In joint families the eldest male, who is the head of the household and has the basic responsibility of controlling the household's income and expenditure, supervises all household activities. He manages agricultural input, hires *kamaiyas*, and decides on matters of crop production, household goods, medical treatment, education of the children, marriage arrangement and social customs. But as we shall see below, the wife of the head in practice supervises the wives of the *kamaiyas*, called *bukrahi.*

All family members get one pair of clothes twice or thrice a year. The family head, depending on the family's financial status, buys the clothes for the family members on different occasions, mainly on occasions such as completion of paddy transplanting (August), festivals like Dashain or Tihar (October) and after harvesting paddy and wheat (January and May). The family head chooses the quality and colour of clothes for both male and female household members. The household members have to accept silently the clothes provided by the head whether they like it or not. He also provides cosmetic goods to the female family members one or two times a year. Women who do not wish to take the cosmetics are given cash instead. However, many Tharu women do not consider the cosmetics given to them as being adequate. This is why even some women of rich joint families sell jungle fruits and vegetables in the local market to fulfil their desire for cosmetic goods.

The head also makes decisions concerning the enrolment of the children in school. Most joint families do not send the girls to school. In the rare case in which a girl is sent to school, she normally does not succeed in her examinations due to the overburden

of household work, so she is soon withdrawn from the school. Hence, almost all the Tharu women have no education except a few who are but just literate.

The position of Tharu women within their household is similar to that of a child. Women have to eat and wear the things provided by the head of the family. The family heads, usually males, fix both the time and type of work to be performed by the female members of the family. However, in some cases the wives of the family head may influence the decision of a male head. The more work the women do the more is demanded from them. In many cases the male heads are not well acquainted with the physical problems of female members of their households. Pregnant women are not taken proper care of in terms of food and safety. Thus, due to lack of proper care during sensitive stages of pregnancy and delivery, many women have to suffer throughout their life.

Though the Tharu women work harder than their male counterparts whether within the house or in the fields, they are not given equal share while sharing the fruits of their labour. The position of a household head shifts from male to male, i.e., father to son but the burden of overloaded household work (not convertible or assessed in terms of money) is handed from female to female in the family, i.e., from mother-in-law to daughter-in-law.

Hill women

The position of women among the hill communities of Rajapur is also influenced by their social traditions, and, like Tharu women, they have virtually no control over the resources of their household. However, the hill community women (Thakuri, Brahmin and Chhetri), who are comparatively better educated than the women of other communities, have more capacity than the Tharu women to bargain with the male members of their household. They get necessary goods from the male of the household.

In Nepal girls work more than boys do, sometimes more than twice as much as boys do, in all age groups. Their work burden increases with age (Acharya 1996: 37) but they have no control over their household resources. And this is the reality of the women in Rajapur too, but Badi women are an exception to this fact.

Badi women

The status of Badi women is quite different from the women of other communities. Among the Badis, all the family members depend upon the income of female members who make their earnings working as commercial sex workers. The men in Badi community are secondary contributors to the family's economy. The role of male members of Badi households and the Badi community is limited to supporting the sex business of their mothers and sisters.

All Badi families, especially those that are involved in sex-business, wish for birth of a girl child rather than a male child so that they can continue with their profession. All the income and expenditure of Badi households are controlled by women. Even the land is registered in the name of women. Fathers and brothers

have to request their mother and sisters for money even to buy a pack of tobacco or a bottle of alcohol.

Badi women are quite capable of dealing with outsiders. Even during elections of the local or national level representatives, the Badi women play a great role in deciding to whom their communal vote should go. In 1996, Badi women successfully negotiated with the local leaders holding positions in the Rajapur Town Development Committee to repair the road passing along their houses. If a conflict or dispute arises, the Badi women deal with the police and administration to solve the problem themselves. As the men in the Badi community are heavily dependent on women (as the women are the resource controllers of their respective house) there is hardly any role for the men in the social activities.

Relationship between the wives of the masters, and those of *kamaiyas* and sharecroppers

Masters' wives vis-à-vis kamaiyas' wives

A *kamaiya*'s wife is known as a *bukrahi*. Formally, a *bukrahi* is not employed along with her *kamaiya* husband but in practice she has to work along with her husband for his master. The main responsibility of the *bukrahi* is to work along with her husband throughout the year. She has to reach her master's house before he wakes up. She is required to clean the house and homestead and wash utensils. Another very important task of a *bukrahi* is to clean the animals' manure because men never do such works. The *bukrahi* is not required to do domestic work during paddy transplantation period because she is overloaded with work during that period. However, she has to participate in every stage of crop production and plays a crucial role in transplanting the paddy, weeding, cutting, piling, winnowing and storing the grains in the master's house.

The wives of *kamaiyas* are also not consulted before taking a decision regarding cultivation of the land, if they have any. The male members take all the household decisions. During the grain shortage period, women contribute to the family's income by selling jungle fruits or working as wage labourers provided that she can manage time from her husband's master's work. *Kamaiyas*' wives are not consulted during *khujuni-bujuni* (negotiation for employment) between the master and the *kamaiya*. The *kamaiya*'s unmarried daughters are sent to the masters' house to clean the house, make beds, take care of grains and the sons are sent to look after the cattle of the master virtually without any remuneration.

Tharus celebrate a number of festivals every year. On every festival, the master's wife prepares food and invites the *bukrahi* and her husband for dinner or lunch. During the festivals, the *kamaiya* may be absent from his daily duties, but his wife is expected not to do so because additional work is required during such periods. However, she is allowed up to 15 days leave in case of delivery. In general it is seen that the master deals with the task of his *kamaiya* and his wife concerning agricultural activities whereas the master's wife deals with the service of the *bukrahi* for household purposes.

The result is that the *bukrahi* has to contribute more time than her husband does for his master. Thus the *bukrahis*, of which 99.9 % are Tharus, have to work even harder than the other Tharu women.

Masters' wives vis-à-vis sharecroppers' wives

Sharecropping is a very difficult task. The sharecroppers have to provide unpaid labour (*begari*) for the landowner from time to time like repairing and cleaning the house, kitchen gardening, fencing, transportation of grains, etc. If the sharecropper lives near the master's house, the role of sharecropper's wife becomes similar to that of *bukrahi* in the landowner's house. She cleans the master's house completely twice a year, i.e., at Dashain and Falgun Purnima festivals and does the necessary maintenance work. The sharecroppers and their wives should come for *begari* whenever they are required. But this kind of *begari* system does not apply to a sharecropper who belongs to the hill community. However, the sharecroppers from hill communities must work for the maintenance of irrigation dam and canal.

The wives of sharecroppers are also not consulted before a decision regarding cultivation of their land and also for making the agreement about the sharecropping with the landlord. All household related decisions are taken by the male members. Similar to the *kamaiyas*' practice poor, sharecroppers also send their young unmarried daughters to the landowner's house to take care of household work without receiving any remuneration in return.

The master's wife plays an important role in the family but she is not required to perform physical work as *bukrahi* or sharecropper's wives. However, she has to be involved in domestic work of directing the *bukrahi* and sharecropper's wives. But in the peak season of crop production, the master's wife does not get any help from *bukrahi* and sharecropper's wife in the household related works and she is required to do every thing by herself.

Irrigation management

Organizational structure

The Budhi Kulo irrigation system is the largest FMIS in Rajapur. There are three tiers of farmers' organization in Budhi Kulo, the main, the branch and the *mauja* (village) level. The other systems have only two tiers, i.e., the branch and village level. The main canal organization is formed under the leadership of the *mul kulopani chaudhary* (MKPC); the *kulopani chaudharies* (KPCs) of the branch canals are ex-officio members of the main canal organization. The position of MKPC has been created only in the Budhi Kulo system. The other office-bearers are the Vice-MKPC, the *chaukidar* (watchman), the *nandaruwa* (stickman), *guruwa* (priest), the *chiraki* (assistant priest), and the *lohar* (blacksmith). The tenure of all functionaries is for a period of one year. The MKPC's work is to maintain the main canal intake of Budhi Kulo.

The major tasks of the main canal organization include managing the main intake diversion dam and approach channels, mobilizing resources for the main intake canal system and formulating rules and regulations for the main intake. However, the MKPC is also responsible for mobilizing the labour (*desawar*) for the construction of a branch canal if a request is forwarded by the concerned villagers.

The Budhi Kulo branch canal systems have their own branch canal irrigation organizations. Every branch canal organization has the following functionaries *kulopani chaudhary* (KPC), and vice-KPC, *badghars* (the chairperson of the village level irrigation organization), watchman, priest, assistant-priest and stickman, to manage the branch canal irrigation system. The main tasks of the KPC and the vice-KPC are manage the branch canal intake, to lead the branch canal farmers in the maintenance of the branch canal, intake and main intake of Budhi Kulo, and to frame rules and regulations for the branch canal.

The *badghar,* the priest, the watchman and the blacksmith are all office-bearers of the village organization. The *badghars* have all the responsibilities of irrigation as well as of village level development and conflict management. The local people believe that worshipping Water Goddess will make sufficient amounts of water available in the canal. The priest is required to perform the worship ritual (*puja*) in the canal.

The village level organization's main tasks are operation and maintenance of the village level canal system, mobilization of labourers in the branch canal as well as for the maintenance of the main canal and resolution of disputes within the village.

There were no women members in any of the organizational tiers of the FMISs in Rajapur until 1997. In 1998, the Badalpur branch canal's general body meeting decided to make it mandatory to appoint one female member from all 14 villages under its command area. But this is an exceptional case. In the process of forming all three levels of organizations, the government's irrigation policy, as stated in the Irrigation Policy of 1992, which calls for the representation of at least 20% women in the executive of every water users organization, has been disregarded.

Decision making processes

Every *Magh* (January-February), the farmers organize their general body meeting, called *khujuni-bujuni*, in their village. This meeting of the farmers is mainly held to decide whether or not to re-appoint the same *badghar* and other office-bearers of the concerned irrigation system. This meeting also fixes the rate of fines, penalties and water tax, and remuneration of village level irrigation functionaries, and prepares the calendar of operation for the year. In the meeting, the *badghar* presents the statement of income and expenditure of the organization. He and other office-bearers may share their opinions and new ideas with other farmers.

Similarly, the KPC and other office-bearers of the branch canals are appointed during the *khujuni-bujuni*. All the village level *badghars* are ex-officio members of the branch canal. The village *badghars* appoint the KPC for the branch level irrigation system. The other village office-bearers are also appointed during the *khujuni-bujuni* by the farmers of the concerned villages. But the MKPC of the Budhi Kulo is a

hereditary position since the time of the present MKPC's great grandfather. The tenure of all other office bearers (except the MKPC) is one year.

Only males, usually the head of households, participate in the annual village meeting. Women from female-headed households do not participate. Neither are they asked to attend meetings nor to take up any position. And to date, women in Rajapur have not raised their voice for their participation in irrigation management in *khujuni-bujuni*.

The traditional irrigation organizations have now been politicised. For example, instead of following traditional practices of unanimous decisions in *khujuni-bujuni*, the KPCs of Gola and Daulatpur (a branch of the Budhi Kulo) irrigation systems are being elected by voting since 1997.

Operation and maintenance

The Karnali River is the source of water for all the irrigation systems in Rajapur. All the intakes or off-take dams are of temporary nature and made of soil, leaves and branches (*jhalapata*) and /or gabion boxes. Therefore, the task of operation and maintenance of the intakes is required two times every year, apart from the emergency work, usually in the summer and winter seasons. The operation and maintenance work of the intake and canals is carried out with traditional technology and the use of local resources such as leaves and branches, sticks, boulders, and soil. The maintenance work includes repairing the intake, cleaning the canal and emergency flood protection works.

Sometimes, when the operation and maintenance work requires massive labour mobilization, especially during the peak season of crop production, compulsory labour contribution (*gharjhara*) is called from all men of working age from each of the beneficiary household. Compulsory labour is mobilized at both village and branch canal level.

Women are not allowed to participate in the operation and maintenance work of the main intake, irrespective of whether or not the household has male members. The women headed households are required to send a male labourer, e.g., a *kamaiya* or sharecropper or wage labourer, or pay annual water fee, called *pankar*.[5] However, at the village level some *badghars* mobilize women when the maintenance work does not need bullock-carts. For example, Fattepur village under the Daulatpur branch canal has used women from female headed households for the last five years and the drainage water users from Koili village mobilized women from each household as a *janni begari* (women labour contributors) only in 1998.

Water rights and obligations

In order to secure rights to use water from the irrigation canal, the user must have land in the command area and should fulfil his irrigation management related obligations.

[5] See Adhikari and Pradhan, this volume, for a discussion of *pankar* and fine among the Tharus of Dang.

Water rights are linked with land ownership rights. Water rights cannot be detached from land ownership. However, to secure water use rights the user has to contribute either labour or money and strictly follow irrigation rules and regulations. In Rajapur, male-headed households secure water rights by participating in construction and maintenance works. On the other hand, female-headed households secure water rights by paying water fees. The rate of water fees may vary from Rupees 900 to 2,000 per *bigha* of land depending on the irrigation system. However, the female-headed households also get equal water use rights. On average, all the villages have two to three female-headed households.

There are clearly defined rules and regulations that call for equal obligations for all the users of the concerned irrigation system. According to the rules of the irrigation systems, farmers who have not contributed labour for the maintenance work may get water for short-term use by paying a fine (*khara*). There are mainly two types of fines, i.e., for a male labour (Rs. 60 a day) and for a bullock-cart (Rs. 200 a day). The rate of fines also differs for regular work and emergency work. No farmer may be excused for remaining absent even by prior information. Even for a short period absence from the work site, the farmers have to pay a fine according to the duration of absence. If the farmer does not pay his fine in time, a group of farmers may visit the wrongdoer's house and take away his belongings such as pigs, goats and chicken as a fine. Women are not involved in collecting fines even from women headed households.

Water allocation and distribution

The branch canals have been diverting as much water as required up to their command areas because there is sufficient water in the intake throughout the year. However, due to the temporary nature of the intakes, there is no fixed quantity of water for allocation between different irrigation systems. The *mauja* level farmers have to secure water according to their capacity or requirement. Sometimes there is tension in the village, especially when the better off farmers (big landholders) try to minimize their irrigation obligations or when one farmer tries to steal water during the turn of other farmers.

Reasons for not involving women in irrigation management

The participation of women in household and farm activities is very high in Rajapur but their participation in the operation and maintenance of the irrigation systems is comparatively lower in Rajapur than in other parts of the country for the following reasons:

1. The main intakes of all the canals are located near forests, very far from the residence areas of the farmers. The forests are very dense and full of dangerous animals such as tigers, elephants and leopards. The farmers have to stay at least one month a year near the main intake for its maintenance. This is one of the reasons that women were not involved in the maintenance works of the main intakes from the last century. Moreover, women are not allowed to stay out of

their houses for such a long time by their family heads, usually males. This traditional practice continues even today.

2. The task of channelling water from the source to the irrigation canals is especially difficult in Rajapur in comparison to other parts of the country. The water has to be diverted from a big river, Karnali, and requires a physically strong labour force. Women are not considered physically fit to undertake such a work. Sometimes, the irrigators or men have to cross the river to work for the maintenance of the concerned dam and dive to put heavy boulders on the riverbed, which is extremely difficult for women.
3. In Rajapur, bullock-carts are needed frequently for transferring boulders, leaves and branches of trees and soil during the operation and maintenance of the irrigation systems. Such type of loading and driving the carts by women is not acceptable to the local society. Women headed households are asked to pay Rs. 200 per day for not being able to send the bullock carts. Social norms and customs also bar women from performing some of these tasks such as attending certain social and religious rituals related to irrigation.
4. Agriculture is the only occupation and source of income for the majority of the Tharus. Moreover, because they do not prefer other jobs, a large number of men are available in Rajapur as *kamaiyas*, wage labourers or sharecroppers. Therefore, women's participation is not required in irrigation work.
5. The traditional norms and values related to *kulopani* (canals and water) are very strong. The maintenance work is allocated with the help of a stick (*naan*). Some of the areas allocated for diggers are very difficult to work upon. It is believed that groups which include women would not be able to complete assigned work in time, which could disturb labour mobilization or other diggers and slow down the whole construction process.
6. Although some *kulopani chaudharies* and *badghars* are ready to allow women, especially to those who are unable to pay the annual water fee, to participate in irrigation canal maintenance work, they fear that other households will also be encouraged to send women for the irrigation related work and involvement of a large number of women may prolong the work and also affect the quality of work. Therefore, they think it is better to avoid women's participation in irrigation related works as far as possible.

The role and participation of women in the irrigation organization have not even been considered due to the lack of social recognition and lack of education and the assumption that the women are unsuitable and ineffective for positions in irrigation organization.

Consequences of non-involvement of women in irrigation management

The lack of equal participation of men and women in irrigation management has hampered employment opportunities, household economy and gender equality in the society. Some of the consequences of their lack of equal participation are mentioned below:

1. The exclusion of women from the management of irrigation system leaves the women headed households only two options for cultivating their land if they want to avoid the heavy rate of water fees of up till Rs. 2000 per *bigha*. Either they have to hire a *kamaiya* or give their land in sharecropping. Hiring a *kamaiya* means the landlady is required to give him remuneration and a house (*bukra*). And also, she is required to arrange the necessary agricultural tools, including plough and buffaloes, and inputs such as seeds and fertilizer, which they find difficult to manage. Therefore, the female heads of households in general, opt for sharecropping. But giving their land in sharecropping makes them jobless. It has a negative impact on labour mobilization because the sharecroppers are overloaded with work whereas female heads of poorer households do not participate in irrigated agriculture.
2. Female-headed households are economically vulnerable because they have to pay a high amount of water fees every year. Most of such households pay water fees by borrowing money from local traders and money lenders at high interest rates of 36%, which puts more stress on their already marginalized economy.
3. Due to non-participation of women in irrigation work, male students have to leave school for the irrigation work whereas there is sufficient available female labour in the household. This kind of problem is faced especially by middle class landholders who own 2-5 *bigha* of land and who do not or are not able to hire a *kamaiya* due to large size of their extended family and the lack of necessary resources to pay a *kamaiya*.
4. Male family members cannot leave the agricultural work to female family members even if they have attractive jobs out of Rajapur area due to the irrigation rules and norms.
5. The existing practice of non-involvement of women in irrigation related work indirectly hampers other social and community development work such as community house building and road construction. For example, female labour contribution in other developmental work is not accepted, as it is in other parts of the country, because the society in Rajapur applies the rules of irrigation labour mobilization for other community works.

Conclusion

This paper has examined the gender division of labour in land and water management activities in Rajapur where people's dependence on agriculture for livelihood is comparatively higher than other parts of Nepal. The prevailing practice of gender oriented labour distribution in agricultural activities has resulted in vast social and economic disparities between the men and women. Similarly this has resulted in less productive land management practices and large-scale exploitation of *kamaiyas* and sharecroppers at the master's hand. In Rajapur, most of the agriculture related activities are carried out with the help of *kamaiyas*. However, the role of all women, whether from landowners', sharecroppers', or *kamaiyas*' families in agriculture and household

works is considerable. The wives of Tharu landowners work much harder than their male counterparts in the household as well as in the field, but the position of Tharu women in decision making is very weak. Therefore, they do not have equal opportunities as men do to share the fruits of their labour.

Tharu sharecroppers are required, on top of their responsibilities to work for agriculture and canal maintenance, to extend free labour contribution for their master's household purposes. And sharecroppers' wives, similar to the other Tharu landowner women, have to work hard in their own house and in the field. In addition to that they have to work in their masters' houses due to the *begari* system, because most of the *begari* work, such as cleaning the masters' house twice a year, managing the kitchen garden, washing clothes and cleaning kitchen utensils, requires women's labour. However, the sharecroppers of the hill communities work only in agriculture and canal maintenance but not in *begari*. Due to this additional work the workload of sharecroppers' wives is heavier than that of the landowners' wives. But their position in decision making is negligible. For example, a sharecropper never consults his wife in the process of negotiation for sharecropping with the landlord.

The responsibility of *kamaiyas*' wives is much harder than that of women of other communities in Rajapur. They have to work along with their husband throughout the year in the field, in the masters' house and in their own huts. The landlords employ *kamaiyas* taking into consideration the working capabilities of the *kamaiyas*' wives. In some festivals *kamaiyas* may absent from the daily work for one reason or the other but their wives are never permitted do so. The *kamaiyas* wives are never asked for their willingness to work or not, neither by her husband nor by the master, during the negotiation between the masters and *kamaiyas*.

In conclusion, the Tharu women have been playing an important role in agriculture production but the landowners' wives contribute less labour than sharecroppers and *kamaiyas*' wives. Similarly the sharecroppers' wives are required to do less than the *kamaiyas*' wives.

The women of the hill communities are also considered to be inferior to the male members in their households. However, in comparison to the Tharu women, they are in a better position to bargain for their requirements from their male counterparts. In Gurung and Magar communities women's position is almost equal to the male members of their society. They are always consulted in decision making by the male members in all household matters. Many of the males of these communities work out of the area leaving all the responsibilities to the women members. In such households women are the ultimate decision makers.

Usually the women of rich hill community families do not work in field but they take part in the management of the grains which are brought home. In the Badi community the role of women is superior in comparison to their male counterparts. However, their main source of income is 'sex service' and not agriculture. Therefore, the Badi women do not take part in cultivation related activities.

The legal and traditional inheritance system arranges distribution of family land among the male family members (fathers, husbands and sons). It also links the land use right with the land ownership pattern. Therefore, both the land ownership and use rights are controlled by the male members of the family.

The history of irrigation systems shows that there has been no direct involvement of women in construction, operation and maintenance of the irrigation systems and they are not given any position in the irrigation organization. Therefore, the existing farmer organizations of Rajapur do not help the government to implement its irrigation policy due to the absence of women participation in irrigation organizations. However, there is a positive development in that women are made members of the executive committee by the Badalpur FMIS from 1997 and it may be followed by other systems as well in the future.

This study concludes that in Rajapur water rights for irrigation is not possible without the possession of land. This rule prevents the sharecroppers and *kamaiyas* from obtaining water rights whereas their labour is always demanded for the operation and maintenance of the canals. Women are the disadvantaged gender whether they are members of a master's household or of *kamaiyas'* or sharecroppers' households. The division of labour based on gender is deeply rooted in the society. The lack of obligation on the part of the women in irrigation management has created a situation under which more than one half of the local population are ignored in irrigation management. It has resulted in less efficient management of the irrigation systems and low production in agriculture.

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Studying Dispute Process Relating to Water Rights: The Roles and Claims of Different Actors in Bhimapur Farmer Managed Irrigation System[1]

Shantam Singh Khadka

Introduction

Since the past 100 years local farmers have been managing Bhimapur, one of the nine irrigation subsystems under the Budhi Kulo system, in Rajapur area. The intakes built by the farmers to channel water in the canal were frequently swept away by floods, each time creating an environment for the irrigation managers to negotiate and renegotiate with users from other irrigation systems and farmers to obtain land for channelling water in the canal. In the process, the irrigation system was integrated and also separated many times from other irrigation systems. And also, some other irrigation systems were assimilated permanently. In all situations such activities restructured the water rights between the traditional users.

Flood damage compels irrigators to reconstruct their infrastructure. This often involves selection of a new intake site, which frequently causes grievances and protest. The aggrieved persons may protest and claim due compensation for reconstruction and rejection of this claim often leads to a dispute. In some cases the aggrieved persons may prefer to remain silent, but in other cases, due to external reasons, for example, an assurance received from a politically powerful person, the protest may develop into a dispute if the claims are not entertained. Thus, the social dynamism within the community plays a great role in the emergence or suppression of a dispute. But to date there are only a few studies which underline the importance of these social processes in studying irrigation related disputes in Nepal. In this paper, in a bid to fill-up this study gap, three separate but connected disputes related irrigation that cover a period of 35 years are presented.

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[1] This paper is a revised version of the paper presented at the workshop, "Land, water and law: Legal Anthropological Perspectives", Kathmandu, March 18-20. This article is a part of the field study towards my Ph.D. Degree at Erasmus University, Rotterdam, the. Netherlands. I wish to extend my heartfelt thanks to all whose names are, explicitly or implicitly mentioned in this article, for their valuable suggestions and information. Further I extend my sincere thanks to the Ford Foundation for providing necessary financial support and Keebet von Benda-Beckmann for her guidance to carry out the study. And also, I extend thanks to the staffs from FREEDEAL and Mountain Resources Management Group for their cooperation in carrying out the study.

As will be discussed later, legal pluralism allows the parties of a dispute in the process of disputing, to select one institution instead of others for the settlement of the dispute, which they think to be more beneficial than others, i.e., they are engaged in "forum shopping". On the other hand, the local elite may also come forward, though not invited, to "shop" the dispute for its settlement with a view to gain political advantage. Formal institutions, i.e., legally authorized bodies to hear a case, are not always successful in resolving disputes. Their decision regarding settlement of a dispute may end the dispute for them but the disputing parties may feel differently about the decision. The same dispute may be fought in another informal association, for example Rajapur Irrigation Rehabilitation Project (RIRP), which may impose its decision upon the disputing parties and resolve the dispute. Why and how the parties have to abide by a decision of such an informal institution, rather than following the decision of a formal institution like a Village Development Committee (VDC) are the wider questions relating to the wider social processes. Without studying these social processes one cannot understand a dispute properly.

The local farmers feel that irrigation management should be kept out of local politics but in reality the local politics and politicians have considerable impact in irrigation management in general and irrigation related dispute management in particular. On the other hand, irrigation related matters, being sensitive issues to the local populace, could also affect local politics and politicians.

In this paper, an attempt is made to analyse the roles and claims of different actors involved in the disputing process, the reasons behind their action and the ultimate results thereof. The author has discussed the roles of *badghars* (leader of irrigation systems in Rajapur), water users associations, administrators, police, local and elite politicians, Central Farmers Committee (CFC), Project Management Committee (PMC), Project office, engineers, Village Development Committees (VDCs), and users from different hamlets within the same system as well as users from different irrigation systems in the process of claiming and obtaining or providing water rights to a particular irrigation system. The basic aim of this paper is to highlight issues related to the actors' roles and claims pertaining to conflict and conflict management process and the ultimate result thereof for an irrigation system's water rights. This paper deals mainly with the Bhimapur farmer managed irrigation system (FMIS) and the impact of the intervention from outside from time to time.

The Rajapur area, a cluster of eleven Village Development Committees, like an island, is surrounded by the Karnali River from all sides and the whole area is popularly known by the name of one of the VDCs, called Rajapur. Rajapur falls under the political boundary of Bardiya district and is situated about 35 km. west of the district headquarter Gularia.

The Budhi Kulo, along with other five major FMISs, namely Patabhar, Gola, Manau, Tapra and Khairi Chandanpur, has a gross command area of a little more than fifteen thousand hectare which is said to be the biggest FMIS in the Asia region. The Bhimapur Irrigation System, one of the sub-systems under Budhi Kulo FMIS, has a total command area of 1180 ha. (excluding Muraiya branch's 180 ha.). The total

number of beneficiaries in terms of households is 293. This system's command area includes the political boundaries of most parts of Bhimapur VDC and wards no. 1, 3, 4, 5, 6 and 7 of Rajapur VDC. In terms of villages the Bhimapur Irrigation System's beneficiaries comprise the farmers from Prayagpur, Uttar (north)-Tedia, Dakhin (south)-Tedia, Anantapur, Rajapur, Kusahi, Ghumna, Belasa, Rampur, Laljipur, Lahure Tole (mostly migrants), Bhimapur, Shantipur (mostly migrants), Indaipur and Muraiya villages (*maujas*). However, the system's main intake is situated in Sendra village of the Daulatpur VDC. Thus, an issue relating to the Bhimapur irrigation system could be a matter of concern for Bhimapur, Rajapur and Daulatpur because it passes through all the three VDCs.

Though there are farmers from various communities the Tharu community share a major contribution in the management of the existing irrigation systems in the Rajapur area. Irrigation related work is basically the domain of men in the Rajapur area. Rajapur women generally do not take part in irrigation. They are considered physically incapable of doing so. Also, it is considered inappropriate. But as we shall see in Case no. 3 (Bhimapur vs. Sendra), in case of emergency they do play a role.

Case 1: The dispute between Bhimapur and Prayagpur

Emergence of the dispute

Bhimapur canal was constructed under the leadership of the then *zimidar* of Tedia and Bhimapur villages, Hom Narayan Upadhyay in 1931.[2] At that time the canal was narrow and its intake was at Basanta village. Some elderly people in this area say that the employees of the concerned *zimidar* managed the canal. In 1961, there was a heavy flood in the Budhi Kulo, which swept away the Bhimapur intake along with the intakes of other irrigation systems. The Bhimapur people, looking for a better place for the canal's intake, decided to construct the intake upstream from the previous one, near Sendra village which falls within the political boundary of the Daulatpur VDC.[3] According to the new plan, the canal was supposed to be constructed across the Prayagpur village land beyond Sendra village for the sake of channelling water towards Rajapur and Bhimapur villages. At that time, Prayagpur people were irrigating their land through a small sub-branch canal under the Daulatpur Irrigation System. However, the water was not sufficient. Moreover, the sub-branch canal's intake was also destroyed by the flood, which created a situation for the Prayagpur people to look for a better option to irrigate their land.

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[2] The *zimidar* used to hold two kinds of land, first, the land on which they have/had ownership, i.e., *numberi land* and, second, such lands which were owned by the government but given to them for cultivation arrangements, i.e., *zimidari* land. They used to be lynchpin between the government and the cultivators to collect royalty of such lands. This system was abolished in Nepal in 1959. However, the *zimidars* used to posses big areas of land and were naturally much more concerned about irrigation management than other landholders. (*Zimidar* is usually spelt as *jimidar*, a revenue collector at the village level (*mauja*) in the Terai, see Glossary [Editors' note].

[3] Daulatpur VDC was known as Daulatpur Village Panchayat until 1990.

At the same time, the *zimidar* of Tedia and Bhimapur went to request the Prayagpur's *zimidar* (who was the widow of the late *zimidar*) to provide land for the construction of the Bhimapur canal. The *zimidar* of Prayagpur laid two conditions for providing the land to the water users of Bhimapur: (1) the land of Prayagpur's people also has to be included among the users of the Bhimapur canal; and (2) the canal's embankment must be made strong enough so as not to allow leakage of water to the land of Prayagpur people and it must be repaired every year (see Map 1).

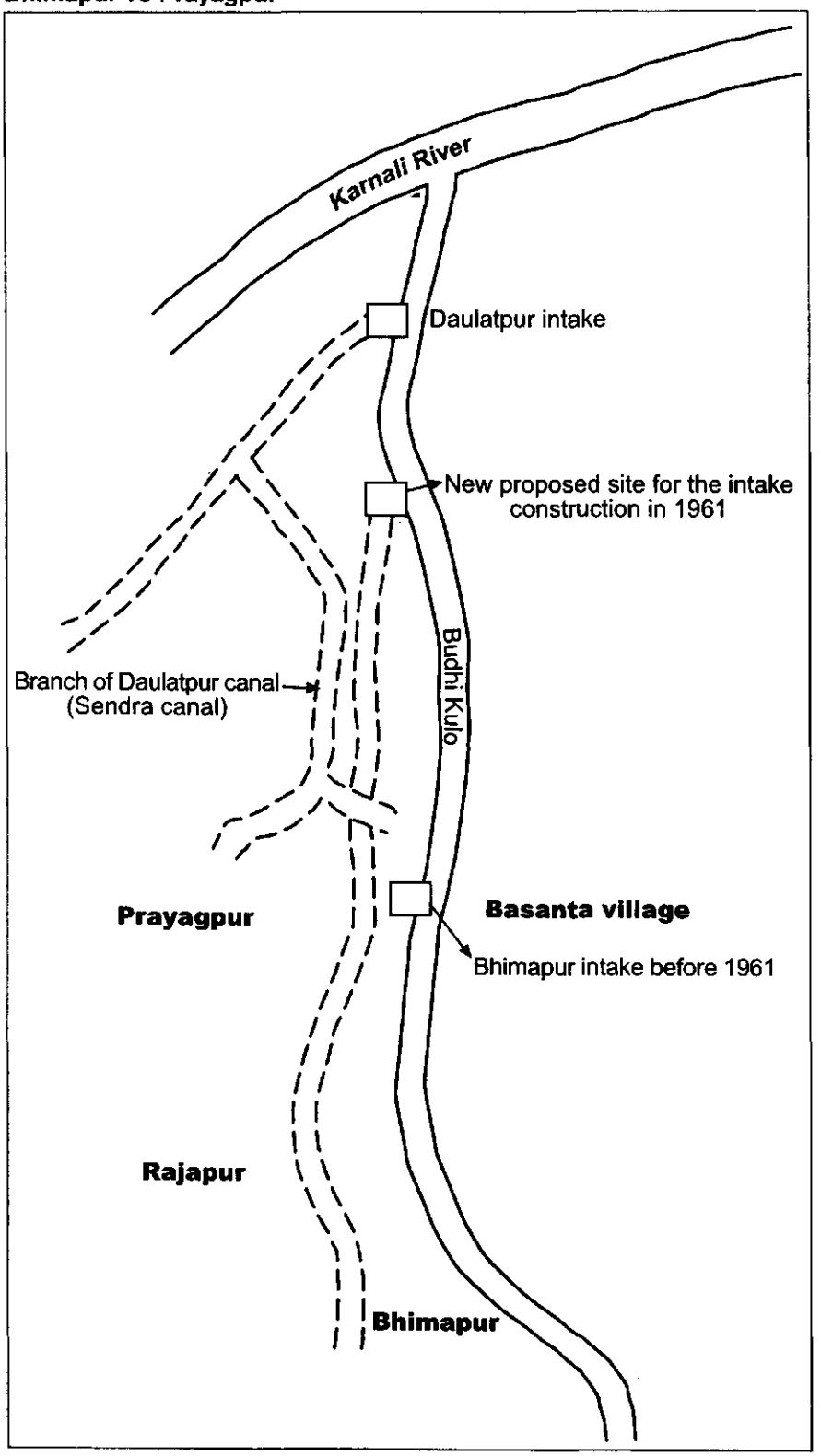
No land without water rights versus access to water is a natural right

The local farmers of Tedia and Bhimapur rejected the conditions put forward by the *zimidar* of Prayagpur. The reasons for rejection, as the then KPC of Bhimapur canal, Lohar Man Tharu (an employee of the *zimidar* of Bhimapur) explained, were that the inclusion of Prayagpur land in the command area might have many adverse consequences. First, being the head end users, Prayagpur people will be in a more beneficial position than the traditional users of Bhimapur and other villages. Second, if a dispute would arise, the Bhimapur people could not fight against Prayagpur's *zimidar* as the latter is politically and economically more powerful than the former. Third, Prayagpur land is upland and its inclusion in the command area required the construction of embankments higher than actually required for Bhimapur land, which meant a lot of extra labour for the canal construction. However, Bhimapur people started the canal construction, claiming a) that the land on which they were going to construct the canal was "public" land (*ailani-jagga*), i.e., owned by the government, and "not private," i.e., not registered in the name of any individual, and b) that access to water must be free for all. In other words, they claimed it to be a natural right of the Bhimapur people and therefore the *zimidar* and the people of Prayagpur had no legal right to prohibit the construction works. But the *zimidar* of the Prayagpur village objected to the canal construction stating that there was no need for another canal because there already existed one. Moreover, the new canal passed through the land of the Prayagpur *zimidar*, occupying a big area without any water rights to the *zimidar* so she was not ready to give her land for the canal construction. The *zimidar's* men along with other Prayagpur farmers filled up the canal dug by the Bhimapur farmers. The Bhimapur farmers were very angry over such an action.

At this juncture, the widow *zimidar* of Prayagpur, and her two sons who were below the age of ten years, requested her husband's brother to arrange for irrigation facilities to her land in Prayagpur. The brother-in-law, the Mayor of the Rajapur *Village Panchayat* at that time, took his sister- in-law's side in the conflict.

During the whole process, for reasons unknown, the *zimidar* of Bhimapur and Tedia villages remained aloof from the conflict which was lead by the widow *zimidar* of Prayagpur and was at first supported by her brother-in-law. But later, possibly realizing the conflicting interests of his supporters from Tedia, Rajapur and other villages on one side and his sister-in-law's on the other, the brother-in-law invited one of his relatives from Baitadi district to look after his sister-in-law's farm and agricultural activities. On the other hand, thinking of possible unpleasant outcomes, the then Mayor

MAP 1
Bhimapur vs Prayagpur



of Bhimapur also decided not to come out openly in the dispute, but he helped the Bhimapur farmers from "behind the curtain". Thus, the dispute virtually became an issue between the Bhimapur farmers led by the then Bhimapur KPC,[4] Loharman Tharu and the *zimidar* of Prayagpur led by one of her relatives Tara Chand Thakuri, who was brought to Rajapur from Baitadi district. A few days after the canal was filled up by the men of Prayagpur *zimidar*, the Bhimapur farmers tried to open the canal but were compelled to run away because of bullet firing by Tarachand.

Petitions for help to resolve the dispute

After the failure of negotiations to resolve the dispute, the Bhimapur farmers filed a petition with the District *Panchayat* (local government) for the resolution of the dispute and the required financial assistance for the construction of the canal. The District *Panchayat* did not take any action in this regard. The Bhimapur farmers also filed a petition with the Zonal Commissioner's office in Nepalgunj, stating that the villagers from twelve villages were deprived of their irrigation facilities by the *zimidar* of Prayagpur and her relative Tara Chand Thakuri and that the local Village *Panchayat* and District *Panchayat* were unable to resolve the dispute. As a consequence of the conflict reported above, the Bhimapur farmers along with the users of Bhimapur canal from other villages, could not irrigate their land for two years and were running from one organization to another for the settlement of their dispute without any success.

However, in 1963, when King Mahendra Bir Bikram Shah Dev was on a visit to Gularia district, the farmers from Bhimapur submitted a petition requesting the king for help to open the canal. The petition was referred to the Zonal Commissioner. The Zonal Commissioner then initiated legal action and summoned Mr. Tara Chand to his office, who contended that it would be unfair to channel water through a widow's land without giving her water rights. The Zonal Commissioner then sent an assistant Zonal Commissioner to visit the disputed site. The Assistant Zonal Commissioner following his visit to the site ordered that the canal be made jointly, i.e., to provide water to the Prayagpur farmers too.

Consequences of the dispute

This dispute was virtually between the Tharu farmers of Bhimapur and the *zimidar* of Prayagpur from a hill community who indeed was economically and politically more powerful than the Tharus. While replying to a question about the defeat of Bhimapur in the case, Lohar Man Tharu, the then KPC of the Bhimapur irrigation system who took the leadership in the dispute on behalf of Bhimapur, said that they wanted to protect their position as a separate system rather than assimilate with another system operated by socially, economically and politically more advantageous people. He further commented, "Why would the Zonal Commissioner hear the voice of the Tharus against the interest of the powerful opponents?" The same comment is made

[4] KPC - *Kulo pani chaudhari* (leader of irrigation system).

by R. and U. Pradhan (1997: 8), who state that "the powerless have far more difficulty in mobilizing law and legal institutions, whether state institutions or other, to defend their interest than for the powerful".

Notes and comments

This case raises many issues such as how a flood can compel the irrigators to move the location of their intake upstream or down stream, where they may have to face protest from the local landlords and irrigators of another FMIS, which also may require them to fight a case or enter into a negotiation. The act of dam or canal construction in Sendra Village by Bhimapur farmers, despite strong opposition from the farmers and the *zimidar* of Prayagpur, indicates that people feel that access to water is their natural right (a right perceived by intuition) and they must be allowed to get it. Many actors, such as the *zimidars* of Bhimapur and Tedia, the Mayor of Bhimapur, etc., did not get involved in the dispute foreseeing an unpleasant outcome since the opponent in the case was strong. Whether it is a traditional water right or not, if one makes a new canal through some one's land then such a person must have the right to water, if this is really needed. This was true on the part of Prayagpur's *zimidar* and farmers. During the *Panchayat* regime, i.e., from 1959-1989, the *panchas*, such as the Mayor of the Rajapur Village Panchayat had a special kind of political protection, not in law but in practice, and the administrative and quasi-judicial bodies hesitated to take decisions against such *panchas*. In this case also the poor Bhimapur farmers had to run from one organization to another for justice. It was to no avail until the king, following the petition submitted, personally asked the Zonal Commissioner to settle the case. This case is also a vivid example of the centralization of administration during the *Panchayat* regime. In order for their plea to be heard, the Bhimapur farmers had to 'reach up' to the king. The ultimate decision was not in favour of the Bhimapur farmers, as they were legally entitled to construct irrigation dam or canal through anyone's private land without any interference even from the landowner. The only thing the latter can do is to seek compensation in term of money or equivalent land used for the dam or canal.[5] This incident reveals that the laws are not always implemented in practice.

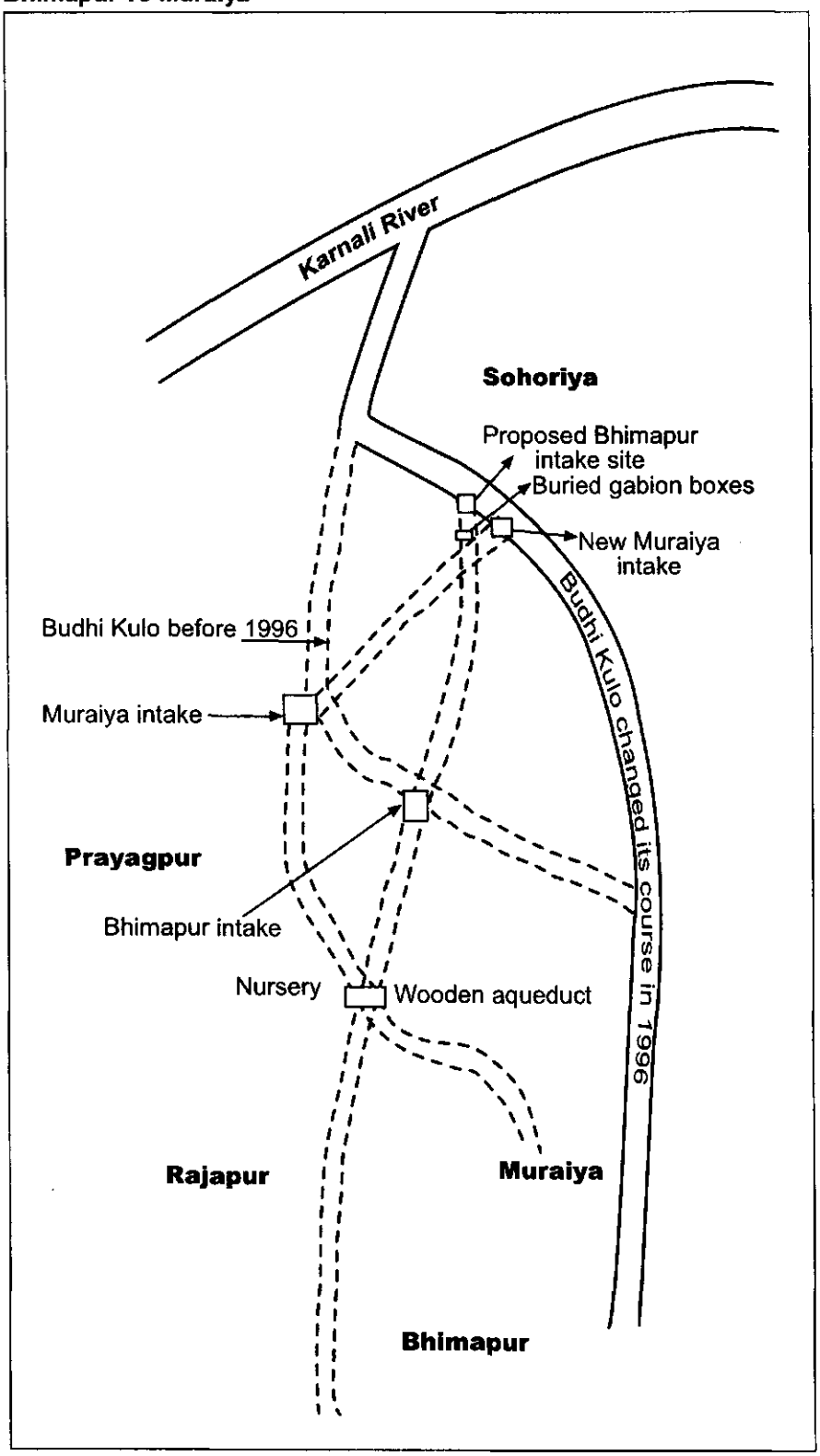
Case 2: The dispute between Bhimapur and Muraiya

Emergence of the dispute

The flood of August 1996 in Budhi Kulo made it change its course to the eastern side and cut some agricultural land of Sohoriya village (see Map 2). The diversion of the Budhi Kulo from the western to the eastern side near Sendra village rendered both the intakes of Bhimapur and Muraiya useless, and the users could not get water through their canals. The repair required a lot of construction work for which the irrigators

[5] National Code, Chapter on Land Reclamation, no. 1 and 2.

MAP 2
Bhimapur vs Muraiya



had to ask plenty of gabion wire and bags from the RIRP office. However, the Muraiya farmers, having their intake upstream, which has drainage water from Daulatpur and Sendra land, could channel some water as a temporary measure into their canal by just working for three days. On the other hand, after a few days of confusion, Bhimapur farmers decided to construct their intake upstream from the Muraiya intake and started working on it. The changes resulting from either ecological forces or man made have a bearing on the original claims of the irrigators and these become potential sources of conflict (cf. Shukla et al. 1997: 146-159; see also F. von Benda-Beckmann et al. 1996: 83).

While digging the canal about 200-300 meters from the intake, Bhimapur people found some old gabion boxes buried under 3-4 feet of soil near the intake of Muraiya, which they cut off. Muraiya people objected to this act of cutting, reasoning that this would weaken their canal's bank and would also create danger of soil erosion from Budhi Kulo. In fact, the Muraiya farmers did not like the construction of Bhimapur intake upstream from their own because the Bhimapur's intake was made in Basanta before 1961 and later shifted to Sendra about 300 m. downstream on the southern side of their own intake. Thinking of the big size and abundant water requirement of the Bhimapur canal, the Muraiya people were afraid that the construction of Bhimapur canal upstream from the Muraiya intake would reduce the water of the Muraiya canal. For this reason, Muraiya people asked the Bhimapur people to stop digging, which in fact was stopped. However, the conflicts between the people of the same community raised hostility and the constant threat of it had to give way to discussions, negotiations and settlement of the matter in dispute.[6]

Negotiation efforts

The Muraiya farmers asked the Chairman of Bhimapur for a meeting with them at the dam site in Sendra to settle the dispute. However, on the scheduled date, the Bhimapur Chairman sent a message stating the inability of the landlords under the Bhimapur irrigation system to attend the meeting as most of them were not present in the village, and suggesting that the meeting could be held on a later date.

The Muraiya farmers, especially the Vice-Chairman of the Irrigation Management Committee, made another attempt to settle the dispute. He personally asked the Mayor of Daulatpur VDC to settle the dispute without causing damage to the Muraiya canal. The Mayor, possibly taking into consideration the legal provision regarding the task of the VDC to negotiate a compromise between disputing parties in an irrigation related dispute, and also thinking of the possible danger of Budhi Kulo entering into the canals under dispute and the damage that may be caused to Sendra villagers' land, which falls within the political boundary of Daulatpur VDC, agreed to mediate in the settlement of the dispute. The Sendra people's intention was to allow the managers of Bhimapur to construct one intake if they wanted to move upstream from their village but they had no objection if the Bhimapur and Muraiya farmers were to make two

[6] See P. H. Gulliver 1969: 25.

separate intakes downstream from their village in the Budhi Kulo. The Mayor scheduled a meeting for September 1996 and asked the farmers from both irrigation systems to send their representatives.

The office of the Mayor through this act was made similar to those of "shopping forums". Forum shopping refers to a situation that can be described as follows: when fields of jurisdiction of different institutions overlap, disputants can choose between these institutions (Vel 1992: 48). "The disputants base their choice on what they hope the outcome of the dispute will be, however, vague and ill founded this may be" (K. Benda-Beckmann 1984). On the other hand the informal institutions (which are legally not authorized to hear the case) may "shop" for disputes to settle with a view to gain political advantage. Here the mayor wanted to shop the case for the sake of protecting the interest of his voters/villagers. But his effort did not succeed because the Muraiya farmers did not turn up for the meeting, thinking that the settlement in Daulatpur VDC would possibly not be sustainable. Moreover, their interests conflicted with those of Sendra farmers regarding the constructing of one joint intake of the Bhimapur and Muraiya canals.

Complaints and efforts for transformation of the dispute

In September 1996, the KPC of Bhimapur Irrigation System, Tara Chand Thakuri, filed a complaint with the Rajapur VDC requesting the VDC to help open the intake or channel water into the Bhimapur canal through the intake for irrigation purposes. In the complaint, Chand stated that the former KPC and the present KPC of the Muraiya Irrigation System have "stopped" the water of Bhimapur canal which irrigates field in twelve villages. He further added that in 1981 the Bhimapur farmers paid 17,000 Rupees to buy land for the construction of the dam of Muraiya canal, when they had integrated the intakes of both the systems, and thereby they obtained ownership over the Muraiya canal. Hence the Muraiya farmers have no right to prohibit them from channelling water through that land. The Bhimapur KPC, therefore, demanded that either the Muraiya farmers allow them to channel water through the land or they repay Rs.17,000 spent on buying the land.

The KPC forwarded the copies of the complaint to the RIRP and the Local Administration Office (i.e., a branch of the District Administration Office). But the Local Administrator refused to register the case, stating that hearing an irrigation related dispute didn't fall within his jurisdiction, which meant his office is not legally authorized to hear the case. The KPC of the Bhimapur then wrote another application and sought help from the Local Administration Office to open the canal and maintain peace and security in the society. The Local Administrator accepted the application because the issue of peace and security was mentioned which fell within his jurisdiction, but considering the merits of the case, he did not register the application in the official register. Nevertheless, the KPC was assured that the administrator would attend the meeting if the Rajapur VDC convened a meeting of the disputing parties for the settlement of the dispute.

Four days after filing the complaints as mentioned above, the KPC again filed another complaint against the Chairman of the Muraiya Irrigation System with the Rajapur VDC and sent the copies of the complaint to the project and the Local Administration Office. In the application, he complained against the Chairman of Muraiya for not paying water fees (*pankar)* for the use of water from the Bhimapur canal to irrigate his land in Uttar Tedia village for the past four years. He asked the VDC office to help him collect Rs. 2,000 (i.e., at the rate of Rs. 1000 per *bigha* per year) as per the rule of the irrigation system, from the Muraiya Chairman.[7] The VDC office invited the Chairman of Muraiya canal to come to the VDC Office to settle the dispute. The invitation was rejected and the case remained unresolved. However, in an interview with the researcher, the Muraiya Chairman said that indeed the land in question, except one or two *katha*, was not being cultivated because of a brick factory on the land and there still remained many ditches which made it uncultivable and therefore did not require irrigation facilities. He further added that the complaint was filed to create pressure on him so that he would remain silent in the dispute relating to the destruction of the gabion boxes.

On the other hand, the farmers of the Muraiya also had filed a complaint on the same day that the Bhimapur KPC had filed his first application with the Rajapur VDC about the opening of the Bhimapur canal or repayment of Rs. 17,000 by Muraiya farmers to the Bhimapur Irrigation System. The applicants from the Muraiya side contended in their application to the VDC that the Bhimapur farmers had weakened the embankment by cutting soil from the eastern side of the Muraiya canal and by making the new intake and canal at the site where the Muraiya canal existed earlier. They also contended that Bhimapur people had encroached on the traditional intake of the Muraiya Irrigation System and shortened the distance of the intakes beyond what was traditionally accepted to be maintained between these two systems. There should be at least 400 m. distance between intakes. While constructing their canal, Bhimapur farmers had cut five gabion boxes fixed by Muraiya farmers to strengthen the embankment of the Muraiya canal and in this way Bhimapur farmers were involved in a conspiracy to eliminate the existence of the Muraiya canal. The Muraiya farmers demanded that the VDC Office send its officials immediately to the site for observation and make the necessary arrangements, so that an important activity like irrigation would not be disturbed.

The Muraiya application neither included the Chairman of the Muraiya Irrigation System amongst the applicants, nor was the KPC of Bhimapur made an opponent. The Muraiya farmers stated that their interest could be protected even without involving the aforesaid people's names. The Chairman of the Muraiya Irrigation System, though his name was not mentioned, was actively involved in the whole process. The applicant's list included seven person's names, viz., the Vice-Chairman and KPC of Muraiya Irrigation System, the Chairman of Ward no. 3 of Muraiya village, and four other persons who were the respective *badghars*. The opponents, enlisted in the

[7] One *bigha* is equivalent to 0.67 ha.; 20 *katha* make *a bigha*, one *katha* is equivalent to 3380 sq. feet of land.

application were Chairman, the stick-man (*nan-daruwa*), the Vice-Chairman, and the Secretary of Bhimapur canal and the Mayor of the Rajapur VDC. It is surprising to note that the KPC of Bhimapur Irrigation System was not made an opponent, whereas the Mayor of Rajapur VDC was, in the application filed with the Rajapur VDC by Muraiya farmers.

The Chairman of the Muraiya Irrigation System in an interview explained the reason why the Mayor of the Rajapur VDC, i.e., the son of the Prayagpur *zimidar*, mentioned in Case no.1, was made an opponent and not the Bhimapur KPC, by saying that the Mayor owns more than 50% of the total land in Prayagpur village being irrigated by Bhimapur canal, whereas the Bhimapur KPC is his maternal uncle and lives with him. Moreover, last year also, Muraiya farmers had filed an application with the VDC office regarding the Bhimapur-Muraiya conflict but as the Mayor did not initiate any action they made him an opponent in this case. But some other informants (the Nepali Congress Party Chairman of Rajapur area and the Chairman of Bhimapur FMIS) thought that possibly the Chairman of the Muraiya Irrigation System worked behind the curtain to include the Mayor of Rajapur VDC as an opponent in the Muraiya's application because they belong to the same political party and are "competitors". For example, in a meeting of the Nepali Congress Party, which was convened to select a candidate in the election for the post of Mayor of Rajapur VDC, the Chairman of Muraiya Irrigation System strongly offered himself as a candidate for the post and asked the party to give him the "party ticket". But the party decided to give the ticket to the present mayor on the ground that he was one of the traditional inhabitants and was a stronger candidate compared to the Chairman of the Muraiya Irrigation System who migrated from Dang district only ten years back. This factor possibly worked and the Muraiya Chairman convinced 'his men' to include the name of the Mayor of Rajapur VDC as one of the opponents in the Muraiya farmers' application.

Negotiation, forum shopping and shopping forums

Since the efforts to settle the dispute by process of self-negotiation of the disputing parties and the effort of the Daulatpur VDC Mayor to mediate in the dispute failed, another effort of shopping the conflict was done by the Mul Kulo Pani Chaudhari (MKPC) of the Budhi Kulo Irrigation System. His effort to settle the dispute was based on the traditional practice because all the disputes between the irrigation systems under Budhi Kulo system used to be settled by the MKPC in the past. He was concerned about his diminishing role, especially in relation to dispute settlement, in the Budhi Kulo Irrigation System due to many reasons, such as that people hardly thought of the contributions made by his forefathers (past MKPCs) who initiated the construction of Budhi Kulo. He was not the Chairman of the Central Farmers Committee which holds a key position in the management of the irrigation systems in Rajapur area. And after the implementation of the RIRP, the project office extended various kinds of services which used to be extended by the MKPC in the past. Moreover, the VDC Act gave

the concerned VDC the right to hear irrigation related disputes. However, the institution of MKPC still provided an option for the disputants who were the beneficiaries of the Budhi Kulo or its branches, to take their disputes to the MKPC. The MKPC personally met with both the disputing parties several times and sought to bring about a compromise between them, but all his efforts were in vain.

Following the complaints made to the Project Office as well as the Local Administration and Police Offices, all advised the disputing parties to take their disputes to the Rajapur VDC because most of the disputants belonged to the Rajapur VDC, which was legally authorized to hear such cases. It needs to be noted here, however, that both the disputing parties had already filed complaints with the Rajapur VDC.

Attempts by the Rajapur VDC and the Mayor to settle the dispute

The Rajapur VDC invited to its office both the disputing parties, officials from the project office, the Local Administrator, the Police Inspector and local political leaders to have a discussion about the dispute. On the scheduled date those invited were present at the VDC office. But sensing that the situation might get out of control and violent, the VDC officials and the Local Administrator decided to convene the meeting in camera where only the representatives of the disputing parties were allowed to participate. On behalf of the Muraiya farmers the Chairman of the system and the applicants participated whereas the KPC and the defendants, as stated in the complaint filed by Muraiya, participated on behalf of Bhimapur farmers in the closed session. The first issue was to decide who would chair the session because the Mayor of the Rajapur VDC, though he was present, was one of the opponents in the complaint filed by the Muraiya farmers. A well known principle of natural justice which is well practiced in the judicial processes in Nepal is, "No one can be a judge for his own cause." The mayor thus could not be the chairman of the meeting.

It was unanimously decided that the Deputy Mayor, Mr. Ram Shankar Tharu, of the Rajapur VDC would chair the session. One of the political activists, the Chairman of Nepali Congress Party of the Rajapur area, commented later, that it was a trick on the part of the Muraiya farmers to exclude the VDC Mayor, who was one of the beneficiaries of the opponent irrigation system, and create a situation where one of the beneficiaries of the Muraiya Irrigation System could preside over the hearing. During the ensuring discussion, the disputing parties could not come to a compromise. At one point the KPC of Bhimapur lost his temper and man-handled the Chairman of the Muraiya Irrigation System. On the other hand the beneficiaries from Bhimapur side, who were waiting outside the meeting hall, started banging on the doors of the hall. The situation went out of control and became very tense. The KPC was arrested by the police but was released the same day. The Chairman of the Muraiya Irrigation System blamed the Mayor of the Rajapur VDC for the occurrence of such an unpleasant behaviour on the part of the Bhimapur KPC as the latter was "his man" and lives with him. The meeting could not yield any result.

The Rajapur VDC mayor had a strong interest in trying to reach a compromise.[8] Though he considered himself to be equally close to all the disputants as they were his voters, the Muraiya farmers believed he was biased towards Bhimapur irrigators (see above). Moreover, the mayor was legally bound to attempt to bring about a compromise. It was for this reason that he mediated in the case filed by the KPC of Bhimapur against the then and present KPCs of the Muraiya Irrigation System in which the Bhimapur KPC demanded Rs.17,000 which was paid by Bhimapur farmers to buy the land in 1981. The compromise in this case was also considered to be important to give way for another compromise in relation to the case filed by Muraiya farmers, so the disputing parties agreed for a settlement on the dispute. A compromise document was signed by both the parties in the presence of the mayor, stating that the money asked for was spent at that time to buy the land for the construction of the joint intake of Bhimapur and Muraiya canals so there is no need to give or take the money.

Because the first meeting organized by the Rajapur VDC to bring about a compromise about the complaint filed by the Muraiya farmers between the disputing parties failed, due to manhandling by the Bhimapur KPC and his arrest by the police, another meeting was convened seven days later.[9] In this meeting the same representatives participated and the Bhimapur representatives tried to negotiate for the integration of the intakes because that would provide them with extra manpower from the Muraiya side and also provide a safer location for their canal against the danger of flood from Budhi Kulo.

In the next round of meetings in the Rajapur VDC office, the Bhimpur farmers put forward the idea of integrating Bhimpur and Muraiya intakes and operating the system jointly. But the Muraiya farmers rejected the idea of joining their intake with that of Bhimapur canal on three grounds. First, there would be a possible complication in operation of the joint irrigation system because in Bhimapur the water fee was collected on the basis of landholding size, i.e., one labour for every six *bigha* of land, but in Muraiya it was done on household basis, i.e., one labour from each household. Second, the past experience during 1981-83 when they had integrated their systems' intakes revealed that the integration of the intakes was not fruitful. The third reason for not agreeing to join the intakes on the part of the Muraiya farmers was that the managers of the Muraiya Irrigation System wanted, in the current situation, to send their own representative to the CFC which they considered beneficial for various reasons. If they joined their system with Bhimapur then they would be considered to be represented by the existing Bhimapur's representative in the CFC.

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[8] In Gulliver's view (1969: 33) a person who is equally related to both parties or expected to favor equally both parties of a dispute, may be said to be in a "structurally intermediate position", and such a person, in general, tries to maintain neutrality and acts as a mediator to bring about a compromise between the disputing parties. Such a person becomes a strong advocate of compromise and peaceful settlement because he knows that whichever side he may array himself with, he will be severely criticized by the other (see also Barton 1967: 163-71).

[9] See also MRMG report, March 1997: 12.

Settlement/compromise of the dispute

Because the representatives of the Muraiya Irrigation System strongly protested against the idea of integrating intakes of the irrigation systems for reasons mentioned above, the Rajapur VDC officials along with the Bhimapur farmers had no other alternative except to seek a compromise so as to maintain separate intakes of the disputing parties and an agreement was reached. Therefore, the disputing parties signed an agreement stating that their irrigation systems along with their intakes would be maintained separately and no one would do anything to disturb the other's system. The compromise document was signed by the representatives of the disputing parties in the presence of the Deputy Mayor of the Rajapur VDC. This was a moral victory for Muraiya farmers but the problem for Bhimapur farmers, i.e., to get a proper site for the construction of their intake and canal to channel the water into their traditional canal remained unresolved. Indeed, "there was no clearly defined end point of the disputing process."[10]

The role of the Rajapur Irrigation Rehabilitation Project Office

From the very beginning of the dispute both parties visited the Project Office on several occasions and, in writing as well as orally, they requested the Project Office to help them resolve the dispute. The Office, however, advised them to take their case to the concerned VDC. Because the compromise reached in the Rajapur VDC was not very useful to the Bhimapur farmers, they again referred the matter to the Project Office and sought its help for the construction of their intake and canal. On the other hand, after the compromise reached in the Rajapur VDC office, the managers of the Muraiya Irrigation System also requested the Project Office to provide them with the necessary jute bags and gabion wire for the construction of their intake. But the Project Officials referred the dispute to the PMC. Indeed, there was no possibility of implementing the compromise reached in the Rajapur VDC meeting because it was very difficult for Muraiya farmers to construct a separate intake without the jute bags and gabion wire.[11]

Because the compromise reached at Rajapur VDC was not in favour of the Bhimapur Irrigation System, its managers took their dispute to the Project Office. The Project Office, on issues relating to disputes among different irrigation systems, was guided by the Central Farmers Committee which comprises eleven executive committee members, e.g., KPCs and Chairmen of the respective irrigation systems.[12] The Chairman of the Bhimapur Irrigation System represented that system in the CFC. This was one of the reasons why the managers of the Bhimapur Irrigation System referred their dispute to the Project Office. On the other side, it is easier for the Project

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[10] Benda-Beckmann 1985, see also K. Benda-Beckmann 1984, Barton 1967, Gulliver 1969, and Brouwer 1992.

[11] This example illustrates the observation made by Keebet von Benda-Beckmann (1985: 89) that "for the court a dispute ends with the judgment, but not for the disputants."

[12] Out of the fifteen irrigation systems including the branch canals of the Budhi Kulo Irrigation System only ten systems have their representatives in the CFC.

Office to handle the dispute through the PMC, which is headed by the project manager and other members, including the eleven members of the CFC and two engineers, one from the Project Office and the other from the District Irrigation Office. The dispute was referred to the PMC. The PMC convened a meeting on January 28, 1997 and the project manager informed the representatives from both the disputing parties that due to technical and economic reasons one joint intake for Bhimapur and Muraiya canals had been proposed in the project design and that the construction work would be carried out in the following year (MRMG, March 1997: 12). Therefore the project manager requested both the disputing parties to construct a joint intake as a temporary measure for one year; and a permanent structure would be constructed by the project in the following year. Bhimapur accepted the proposal but the representatives from the Muraiya Irrigation System did not.

On March 10, 1997, the Bhimapur farmers again requested the Project Office to resolve the dispute and to provide the necessary jute bags and gabion wire for making the intake. The issue was again referred to the PMC which decided on March 12, 1997 to form a seven member committee to look into the issue. The committee comprised of the Chairman of the CFC, a CFC advisor, one engineer from the project office and the KPCs from Badalpur, Budhi Kulo, Tapara and Khairi Chandanpur, all member of the PMC. Following a visit to the site, the committee submitted its report to the PMC. However, during the committee members' visit, the managers and many farmers of both systems were present and it was ascertained that the project design map had proposed only one joint intake for the Bhimapur and Muraiya Irrigation Systems. The engineers were shown the proposed site for the construction of the joint intake, about 300 meters north (upstream) from the site where the Muraiya intake existed prior to the flood of 1996.

Following the report of the committee, the PMC decided on March 14, 1997 to construct a joint intake for both systems for the coming monsoon irrigation, with the project giving high priority to construct a cemented intake in the coming days. The cost for the construction of the temporary intake for the monsoon crop was to be shared between the Bhimapur and Muraiya farmers based on land holding size and water would be shared by the irrigation systems on the same basis. Thus, the Muraiya farmers were to contribute 25% and the Bhimapur farmers 75% of the total cost in terms of money and manpower and they would receive irrigation water in the same proportion.

The Bhimapur farmers were happy with the decision, but the Muraiya farmers were not ready to accept it and asked the PMC to provide jute bags separately for the construction of a separate Muraiya intake. The chairman of the PMC again stated that the plan was to integrate both systems and that the present arrangement was a temporary measure only for a period of one year. He further added that making two separate intakes would require a lot of jute bags which the Project Office "can not" provide. At this juncture, the Muraiya people, considering the magnitude of the work and non-cooperation of the project officials in the construction of a separate intake, accepted the decision of making a joint intake. An agreement was signed between four farmers

on behalf of the Muraiya and eight farmers on behalf of Bhimapur with the project officials, KPCs, CFC and PMC members as witnesses. To implement the agreement, the project office provided the necessary bags and gabion wire and the farmers from Bhimapur and Muraiya decided to construct their joint intake about 850 m. north from the old intake of Muraiya Irrigation System. Their decision to dig the canal was made taking into consideration the site shown by the project engineers. The canal digging fell within their part whereas the intake construction was the job of RIRP as per the project design.

Consequence of the dispute

In the local election of 1997, the Chairman of the Muraiya Irrigation System was once again one of the claimants for the Nepali Congress (NC) Party ticket for the post of Mayor of Rajapur VDC, but the ticket was again given to the then Rajapur Mayor. Being a Nepali Congress activist, the Chairman of the Muraiya Irrigation System was expected to fully extend his cooperation to the Nepali Congress candidate but he did not do so. As a result, the Nepali Congress candidate, the previous mayor, lost the election to the Rastriya Prajatantra Party (RPP). Therefore the NC Party wrote a letter asking him to explain why he had not helped the NC candidate but instead assisted the opponents from the RPP.

Different opinions are put forward by different people as to why the NC Chairman acted in this manner. The Chairman of the NC Rajapur unit said that the Chairman of the Muraiya Irrigation System and the Ex-Mayor were competitors within the NC Party and that might have been one of the reasons why the Muraiya Chairman did not help the ex-mayor in the VDC election. However, the Chairman could not say for sure that the dispute, especially the man-handling of the Muraiya Chairman by the Bhimapur KPC and the KPC's relationship with the then Mayor of the Rajapur VDC, could have induced non cooperation by the Muraiya Chairman to the NC candidate. The victorious Rajapur VDC Mayor who belonged to RPP and the Chairman of Bhimapur Irrigation System (a RPP activist) said that there might be some other reasons too. But it may be argued that the Bhimapur-Muraiya irrigation related conflict was one of the basic reasons for non-cooperation by the Chairman of Muraiya Irrigation System in the local election. However, the Muraiya Chairman said that the irrigation related dispute was definitely the main reason for non co-operation by Muraiya farmers to the NC party mayor candidate because they considered the ex-mayor to be closer to their opponent than to them because he was one of the users of the Bhimapur Irrigation System.

Notes and comments

The integration of two systems in effect meant that the smaller system of the Muraiya farmers lost its independent status as it had to abide by the decisions of the majority. The case shows that there is a variety of institutions dealing with water disputes, with different norms and different sanctioning power. The VDCs do not have the right to

make decisions on disputes relating to irrigation, hence their efforts are futile if the disputing parties do not agree to reach an agreement. In some occasions, such a dispute may also be resolved, though temporarily, by a development organization's threat to terminate the facilities accorded.

This case is also an example of the fact that the intervention of a (government) project office in a conflict between different farmer managed irrigation systems can restructure water rights relations between the stakeholders, because as noted earlier, the Bhimapur and Muraiya Irrigation Systems came to the conclusion that they must integrate their systems and share the investment (labour) and fruit (water) on the basis of their land holding size.[13]

This case also shows that the decision or a compromise reached in a formal organization such as a VDC like Rajapur may not be implemented in the same manner it was meant to be. In this case, other social factors prevented the decision from being implemented.

Case 3: The dispute between Sendra and Bhimapur/Muraiya

Background

As per traditional practices, in 1998 too, the Bhimapur and Muraiya farmers started cleaning up their canals from the joint intake which was built jointly the year before (see Case no. 2). The water had been divided between Bhimapur and Muraiya canals at a point about 850 meters south from the joint intake. On March 10, 1998, three days after the Bhimapur and Muraiya farmers worked jointly in the canal south from the present intake, the farmers from Sendra village (Daulatpur VDC), without giving any prior notice and reason thereof to the concerned parties, filled up the canal at the distribution point, especially stopping the water flowing into the Bhimapur canal. The Sendra farmers, in a mass meeting which was attended by former and present Badghars, explained the reasons for their protest against the present water allocation site. The reasons were as follows:

1. Sendra farmers feared that the joint intake of Bhimapur and Muraiya had been constructed at a point which makes it vulnerable to flood and may affect their land and village. Hence better protection measures needed to be taken, but Bhimapur and Sendra farmers had failed to adopt such measures.
2. In their view, at the place of water distribution between Bhimapur and Muraiya canals, there was a fragile ditch like place which deepened with the flow of the water and also increased the current in the canal. This is dangerous for the Sendra farmers' canal, land and their nursery because of soil erosion. (Sendra canal is a branch of the Daulatpur Irrigation System which is being used to irrigate 40 *bighas* of land of 28 families from Sendra village.) At present, they explained, their land (other than the 40 *bigha*), canal and nursery are

[13] See also Pradhan, Haq and Pradhan 1997: 129.

being destroyed so it was urgent that the water flow from the present distribution point be stopped.

3. The Bhimapur and Muraiya canal passes through an already existing road from Badalpur to Sendra (east-west), and because of the soil erosion caused by the canal the road had been damaged at two places, making it inconvenient for the Sendra farmers and passers-by (see Map 3).

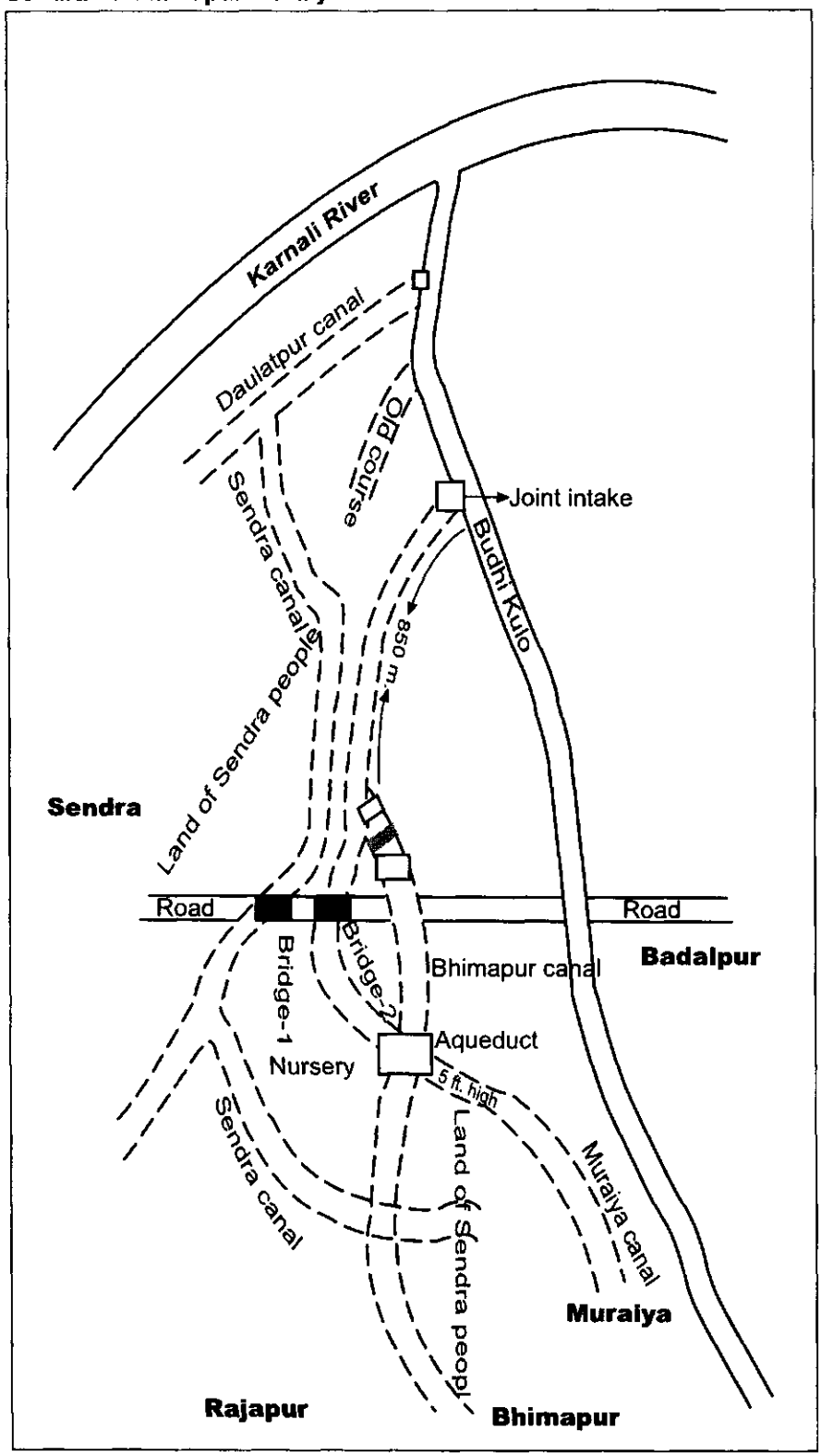
The Sendra farmers proposed that either the distribution point be constructed at the site about 400 m. upstream from the present distribution point or one kilometre downstream from the intake, i.e., near the aqueduct and nursery of the Muraiya and Bhimapur Irrigation Systems respectively. Making water division box upstream of the existing one would mean that either Bhimapur or Muraiya canal would have to constructed very close to the Budhi Kulo and would be in danger of being flooded every year. None of the irrigation systems wanted to act in this manner. Moving the division box downstream was acceptable to the Bhimapur people but not to the Muraiya farmers because the Muraiya canal, from a point about one kilometre from the intake, was about five feet above the level of the Bhimapur canal where a wooden aqueduct exists and they were afraid that this would not allow the water to be channelled properly in their higher canal. This was what happened during 1981-1983 when they had integrated the intakes and jointly operated their irrigation systems (See Case no. 2).

The emergence of the dispute

During the process of settlement of the dispute between Bhimapur and Muraiya (Case no. 2), the farmers from Sendra were also invited to attend the meeting. In the discussion, Sendra farmers did not want to allow the Bhimapur and Muraiya farmers to do anything that may lead to the danger of soil erosion of their canal, land, road and village. But the Sendra farmers had not protested in the joint meeting in which the farmers of Bhimapur and Muraiya had agreed to construct the joint intake at a site 850 m. upstream from the previous damaged intake site of Bhimapur and distribute the water between two canals about 50 m. downstream of the old Bhimapur intake. The meeting was also attended by the project officials.

In 1997, after the agreement had been reached between Bhimapur and Muraiya in the presence of some farmers from Sendra, local elections for the officials of VDC, municipality and District Development Committee (DDC) were held in Nepal. In a bid to attract more voters in his favour, the NC candidate for the post of mayor assured the Sendra villagers that if he won the election he would help them protect their canal, land and path from possible soil erosion even at the cost of Bhimapur and Muraiya canal and intake. As a consequence of his promise, he won the election. Moreover, the Nepali Congress candidate for Ward Chairman of Sendra village, i.e., ward no. 4 of Daulatpur VDC, also won the election. He had a good rapport with the VDC Mayor. In the previous election, both the Ward Chairman and Mayor belonged to the United Marxist Leninist (UML) party. The political assurance received by the Sendra farmers was the reason which transformed their injurious experiences

MAP 3
Sendra vs Bhimapur/Muraiya



ultimately into a dispute.[14] For example, prior to the local election, the Sendra farmers had allowed the Bhimapur and Muraiya farmers to construct the water distribution box at a site which was objectionable to them. The changes in the political constellation made it possible that a grievance developed into an open conflict.[15]

Shopping forums, forum shopping and filing the complaint

On the evening of March 10, 1998 the Mayor of Rajapur VDC and the Nepali Congress Chief of the Rajapur area visited the Chairman of the Bhimapur FMIS and talked about the dispute. The Chairman of Bhimapur stated his intention to take the issue to the Project Office but the visitors advised him that legally the concerned VDC (in this case, the Daulatpur VDC) was authorized to "hear" the case. Therefore, it was better to take the case to Daulatpur VDC and if the VDC would give in writing that it could not help in this regard then they could take the case to the Rajapur VDC or to another institution. The Chairman of Bhimapur, one of the members of the CFC, possibly thinking that it would be more comfortable for him to deal with the dispute in the CFC, wanted to take the case to the Project Office which generally refers such disputes to the CFC/PMC. However, he complied with the advice given by the local elite and his KPC filed a complaint with the Daulatpur VDC on 13th March 1998.

When the application was filed with the VDC, the Mayor was not there so the Deputy Mayor ordered his officials to invite the disputing parties for the settlement of the dispute but no action was initiated for a long time.

On 10th May, the Bhimapur Chairman invited the project officials and the *badghars* to the dam site in Sendra village. Actually, he wanted to assure his farmers that he was "not dormant" but doing his best to open the filled up canal. The Divisional Engineer and an other engineer from the Project Office were also present at the site.

The Bhimapur Chairman had a special request with the project engineers. He wanted them to show him and his farmers the Project designed map and make them understand where exactly the cemented dam and water division box for Bhimapur and Muraiya canals would be constructed by the project office. Surprisingly, the engineers checking their map, showed a place near the old Bhimapur intake before Budhi Kulo changed its course in 1996 from where Bhimapur farmers would have had to dig about one hundred meters to channel the water into their canal. However, last year the project engineers (though not the same engineers) had shown the site about 300 m. upstream from the old intake. As the site shown by the engineers earlier was not good for channelling water into the canal, the Bhimapur and Muraiya farmers had decided to construct the canal further upstream, about 850 m. distance from

[14] A significant portion of any dispute exists only in the minds of the disputants which can emerge later due to different social processes. In other words many injurious experiences are forgotten by the aggrieved persons whereas many other injurious experiences, due to social processes, are transformed into grievances and grievances may become disputes (see Felstiner et al. 1980-81: 74).

[15] Felstiner and others have rightly observed, "although the emergence and transformation of disputes is personal and individualized, it has important political dimension too" (Felstiner et al. 1980-81: 84).

the present water distribution point. The mistake occurred because of the misrepresentation made by the engineers as they had indicated the wrong site. The farmers had to dig the canal involving more than 1500 man-days. The *badghars*, once the engineers left the site, were very angry with the engineers who had misrepresented the construction site.

Confrontation, women's participation and adopted strategies

Confrontation and strategies of the Sendra farmers

A meeting was called on May 18, 1998, at 11 a.m. at the Bhimapur dam site in Sendra by the Bhimapur farmers as requested by the Daulatpur VDC Mayor to the Bhimapur KPC, to settle the dispute. All the irrigation managers and about 150 farmers from the Bhimapur and Muraiya irrigation systems along with the Mayor of Rajapur VDC, one project engineer and the Chairman of the CFC were present at the site and were waiting for the Daulatpur VDC Mayor and Sendra farmers, but they did not turn up till 2 p.m. The Rajapur VDC Mayor, who seemed to be present there to "protect" the interest of his voters, showing the filled-up canal said that this was unjust. The Sendra farmers had filled up the canal and they were not even ready to discuss the issue. After three hours of waiting, the angry Bhimapur and Muraiya farmers started digging out the filled-up canal but eight young farmers from Sendra village arrived on the site and started quarrelling with the diggers. From the Sendra side the Chairman of ward no. 4 of Daulatpur and the Assistant *badghar* aggressively participated in the quarrelling whereas from Bhimapur/Muraiya side the KPC, the chairman and a few hill community people (*Paharis*) especially the *badghar* of Shantipur actively participated. But the angry *badghar* of Shantipur along with a few other Tharu farmers opened up the canal and successfully channelled the water into the Bhimapur canal. During the discussion the CFC Chairman strongly supported Bhimapur farmers saying that it was a mistake on the part of the Sendra farmers to 'stop' the irrigation water of Bhimapur farmers without serving any prior notice. He added that the Sendra farmers had no legal right to do so under any of the existing Nepalese laws. However, he also assured the Sendra farmers that all their "problems" could be solved with the help of the PMC and he would extend his support in this regard. His statement also pleased the Chairman of the Bhimapur FMIS, who was a member of the CFC, from whom the CFC chairman was expecting a favour in the coming CFC election to continue in the same position.

During the discussion, Bhimapur and Muraiya farmers raised issues such as: The Sendra farmers had no legal right to stop the irrigation water of the Bhimapur farmers. The land on which the water division box had been constructed was public and not private. Last year when the division box was made, Sendra farmers by remaining silent gave their tacit approval, hence it had now become a traditional right of Bhimapur farmers to get water through the division box. Moreover, since the meeting was called at the request of the Daulatpur VDC mayor why did he and the Badghar of Sendra not come to discuss the issue?

On the other hand, the Sendra farmers asked the CFC chairman to come along with them to see the damage done by the Bhimapur/Muraiya canal to their canal. After visiting the site, the CFC chairman commented that the damage was not very serious so the Sendra farmers should not have taken such a 'drastic' step like closing the Bhimapur canal. The Sendra farmers were much more concerned about the possible future danger to their canal, land and village that may be caused by Bhimapur and Muraiya canal and wanted assurances from the latter for the repair of any damages. The Sendra farmers contended that they had never rejected the water rights of the Bhimapur/Muraiya farmers, and they expected others too to respect their own water and land rights. The Bhimapur farmers should not act so as to destroy the canal and land of the Sendra farmers. Regarding the non-participation of the Sendra's *badghar* and the Mayor of Daulatpur VDC, the Sendra farmers said that they did not know anything about them. They (the Sendra farmers) had come because they were the aggrieved people.

Women's participation: "Irrigation related issues are more important than goods at home"

Bhimapur and Muraiya farmers opened up the canal and the quarrelling between Bhimapur, Muraiya and Sendra farmers continued. In the meantime a group of about 70 women was seen coming from Sendra village to the site where the quarrelling was going on. Though women's participation in irrigation management is rare in Rajapur area, in the present case women were coming to participate in an irrigation-related dispute. Seeing this unusual happening, many of the Bhimapur and Muraiya farmers felt uncomfortable to get actively engaged in the hot discussion. The women had come there not to stop any possible violence but to participate in the dispute. The Bhimapur and Muraiya farmers did not want to quarrel or fight with the women. However, they continued the discussion in a low voice. The women first listened and later said that they had come to hear the kind of justice that was to be given to the Sendra farmers. After a while the women went to the disputed site and again filled the canal. The Bhimapur and Muraiya farmers kept watching the women filling up the canal and did nothing.

The Chairman of the CFC went to the women and smilingly asked why they were there leaving their houses unguarded and advised them to go back otherwise their valuables at home could be stolen. The women replied strongly that much more important issue is going to be decided here than the valuables in their houses. At this moment it seemed no one knew how to deal with the situation. After a while, however, the CFC Chairman said that the Sendra farmers' interest should also be protected and Bhimapur and Muraiya farmers must extend *begari* (free labour contribution) for the repair of the Sendra canal. However, the Sendra farmers also asked for the construction of the Sendra to Daulatpur road and to put in a hume-pipe so that the Bhimapur canal would not damage the road. The Mayor of Rajapur VDC promised the Sendra farmers that he would arrange for a hume-pipe from the Rajapur VDC office which would take a few days time and asked them to have patience. However, the Sendra farmers

took a firm stand that unless and until the damaged Sendra canal was repaired and the bridge constructed they would not allow the Bhimapur canal to be opened.

Strategy adopted by the Muraiya farmers

On the issue of providing *begari* services for the repair of the Sendra canal, the Bhimapur irrigation managers, i.e., the K.P.C., the Chairman, the Vice-Chairman and the *badghars*, discussed and accepted the proposal but the Chairman of the Muraiya Irrigation System said that Muraiya farmers would provide only one day *begari* and nothing more. But one day's *begari* seemed inadequate for the required work to the Bhimapur and Sendra farmers. The Chairman of the CFC and the Mayor of Rajapur VDC requested the Muraiya Chairman to accept the *begari* proposal and open the canal the same day. But the Muraiya Chairman did not accept the proposal for many reasons. First of all, it was the water of Bhimapur canal that was stopped and not theirs and because Muraiya farmers were still getting water they were not in a hurry to take any decision which may create "liability for" them in the future. Second, the Muraiya farmers were not very happy about the "coerced" integration of their system with Bhimapur (Case no.2) and they were still ready to separate their system provided the Bhimapur farmers made a separate intake of their own. However, they were not very sure that the Bhimapur farmers would opt to make another intake leaving the joint intake for Muraiya farmers. If the Bhimapur farmers opted for that alternative, then the Muraiya farmers would have virtually no representation in the CFC/PMC, for which the managers of the Muraiya system had been trying for a long time (see above). But on the other hand, Bhimapur farmers contended that, since the dam and the canal up to the water distribution point was a joint one and if Muraiya farmers, giving the reason that there may not be a limit of working days, refused to work for b*egari* they could not accept that the Bhimapur farmers do all the labour works required in the Sendra canal. This meeting also could not yield any result and the canal remained closed.

However, the CFC chairman invited both the disputing parties to a meeting at his office in Nayagaon village the next day. The CFC meeting agenda for the day also included election/nomination of the CFC officials.

The Nayagaon meeting

The Nayagaon meeting, at the CFC office on May 21, was attended by the *badghar* and assistant *badghar* from the Sendra side and by the Chairman, KPC, Vice-Chairman and about 10 *badghars* from the Bhimapur Irrigation System. The CFC Chairman read out the agreement reached between Bhimapur and Muraiya farmers following the dispute in 1997, (Case no.2) which clearly mentioned that all the repair of the canal would be done on 75% and 25% ratio as per the share of water between Bhimapur and Muraiya irrigation systems respectively. He explained that since the agreement stated 25% of the resources should be contributed by Muraiya farmers then how could they say that they could extend only one day *begari* for the repair of the Sendra canal?

On behalf of Muraiya, the Vice-Chairman said that if that was a contract in writing then they agreed to extend the *begari* as required on their part. But regarding the issue of renovation of the Badalpur Sendra road and making a 'cause-way' by fixing a hume pipe for channelling the water in the Bhimapur canal the Chairman of the system said that they could not provide the hume-pipe but if Sendra farmers would provide it they could do the necessary manual work. Then the participants of Sendra said that they could not accept any decision without the promise from Bhimapur and Muraiya farmers to construct the road and the bridge. They also informed that they were not present to sign an agreement on behalf of the Sendra farmers. Rather they had come to set a date for a meeting. The CFC Chairman requested both parties to come to another round of meetings the following day in the Project Office at Rajapur where the problem of the hume pipe could also be solved.

The CFC had another meeting agenda for the same day, i.e., nomination or election of the CFC officials, which could not be discussed at the Nayagaon meeting because of the absence of four CFC members.

The role of the local politicians

The next day, the Nepali Congress Party Chairman of Rajapur area visited the Mayor of Daulatpur VDC who belongs to the same Party, and requested him to solve the dispute as soon as possible. The Chairman is respected as one of the senior politicians by the Mayor and calls him elder brother. The Daulatpur VDC Mayor could not over look the request of his senior colleague because he plays an instrumental role in the area for the selection of the Nepali Congress Party candidates for elections. The Mayor assured him that the dispute would be settled within 2-3 days. In an interview, the Nepali Congress Rajapur area Chairman said that his request to the mayor was not politically motivated. Rather it was put forward as one of the beneficiaries of the Bhimapur irrigation system because about 8 ha. his of land was irrigated by the Bhimapur canal. However, there is a probability, as mentioned above, that the political linkage played a vital role to motivate the Mayor of the Daulatpur VDC to initiate necessary steps in this regard.

The Rajapur meeting and the compromise

About one hundred farmers along with the Chairman, KPC and the *badghars* of the Bhimapur Irrigation System were present at the Project Office in Rajapur on May 22, 1998 for the resolution of the conflict. All the CFC officials were also present. The Bhimapur KPC ,Tarachand, had come with a copy of the Muluki Ain (National Code) and was showing it to different people, especially sections 2 and 3 of the Chapter on Land Cultivation which clearly protects the traditional water rights of the irrigators. He was very much concerned for an early settlement of the dispute so that the water may be availed of for the already delayed preparation of paddy bedding.

Around three hours later than the prescribed time, about ten Sendra farmers along with their *badghar*, assistant *badghar* and the Mayor of Daulatpur VDC arrived at the

Project Office. The Project engineers were invited to the meeting site, which was in a mango garden adjoining the Project Office complex. The Mayor of Daulatpur VDC invited the Chairman and the KPC of the Bhimapur side, the Vice-Chairman and the KPC of Muraiya and the *badghar* and the Assistant *badghar* of Sendra to the front row and initiated the discussion. During the discussion they framed the facts of the dispute, which were as follows: (1) Why did not the Bhimapur farmers pay Rs. 700 for occupying a Sendra villager's land and destroying his crops for the construction of the Bhimapur dam and canal in 1996? Indeed, it was a public land allocated by the Daulatpur VDC to a Sendra landless farmer and the compensation was for destruction of his crops. (2) The possibility, if any, to change the water distribution site. And, the Bhimapur and Muraiya farmers must extend *begari* services to repair the Sendra canal every year from the joint intake to the water distribution point. Further, they also must construct the bridge on Sendra-Badalpur road.

The issue regarding the non-payment of Rs. 700 to the Sendra farmer, the son of the Watchman of Bhimapur Irrigation System who lives in ward no 4 of Daulatpur VDC, was raised by the Daulatpur Mayor as he was a resident of the Daulatpur VDC and naturally his interest was supposed to be protected by the mayor of the concerned VDC. The Bhimapur farmers said that they had indeed destroyed his crops, but due to the dispute between them and Muraiya (Case no.2) the canal construction could not be completed and they were confused with the dispute. Nevertheless, the Bhimapur KPC agreed to pay the amount the following day.

Regarding the second issue, the construction of a water distribution point at a site near the aqueduct which was asked for by the Sendra farmers, was not acceptable to the Muraiya farmers so they preferred to continue with the existing water distribution box. Bhimapur farmers implicitly supported the Muraiya farmers by saying that if the water distribution box was made at the aqueduct site that would create more problems because the area was full of soil and would create soil erosion, water leakage and silt problems to the surrounding land of the Sendra farmers. Indeed during 1981, when the water distribution box of Bhimapur and Muraiya was made there, Bhimapur farmers, though many in number, suffered water shortage because the Muraiya farmers, being head end users, usually diverted water to their canal leaving the Bhimapur canal dry. Thus, Bhimapur and Muraiya farmers wanted to continue with the present water distribution box. The Sendra farmers asked them to give in writing that they would do all the necessary repairing of the Sendra canal between the dam and the water distribution point whenever it was destroyed by the joint dam and canal. The Bhimapur and Muraiya farmers accepted the condition of the Sendra farmers. But, the Bhimapur farmers rejected the bridge construction, saying that they had neither the hume pipe nor the wood to construct the bridge. They also added that the road and bridge are used by everyone then why should only the Bhimapur and Muraiya farmers be compelled to construct it? The Sendra farmers once again refused to accept any agreement with Bhimapur and Muraiya farmers without solving the issue of construction of the road and bridge.

Sensing that the dispute may remain unresolved, the CFC Chairman shouted at the Daulatpur VDC Mayor, who belongs to the same political party and is a good friend, saying that he must be ashamed as a Mayor of his VDC for not being able to provide Rs. 3,000 to buy a hume pipe or wood for the construction of the bridge. The mayor, seeing all the blame falling on him, agreed to provide the necessary wood for the bridge construction, instead of fixing or providing hume pipe, and asked the Bhimapur, Muraiya and Sendra farmers to extend the necessary labour contribution. This was acceptable to the farmers of all three villages and an agreement was prepared and signed by the representatives of the disputing parties.

Regarding the other agenda, i.e., election/selection of the CFC officials, a separate closed session of the CFC officials was held which unanimously decided that the same set of officials could continue for another term.

Execution of the agreement

The very next day, Rs. 700 was given by the Bhimapur KPC to the person whose crops were destroyed in 1996. On the same day, despite the protest by a few Sendra farmers, Bhimapur farmers opened up the canal on the ground that their paddy beds were drying up without water and that they would repair the Sendra canal the next day. The objection of the Sendra farmers, as they explained, was that the Sendra canal was yet to be repaired and the bridge was still to be constructed. The Bhimapur farmers opened the canal saying that the Mayor of Daulatpur VDC must provide the necessary wood then only can they construct the bridge. However, the Sendra canal's repair was carried on the next day for which Muraiya farmers mobilized 55 labourers (35%) and Bhimapur 137 labourers (65%).

Thus, the intervention of the politicians settled the dispute but there still exist a serious question as to whether the politicians are capable of fulfilling their promises to provide wood for the bridge construction. But whether the dispute has really been settled and whether the settlement will sustain and be dependable is yet to be observed.

Conclusion

The cases discussed in this paper, especially the first case between Bhimapur and Prayagpur, indicate that in a highly centralized political system the disputants may have to reach the head of the nation or government for the settlement of a minor case, if only to mobilize the concerned agency to initiate the necessary legal action in cases where their opponent is politically and economically powerful. The poor Tharus do not believe that the concerned administrators will follow the existing law and dare to further their interest against a politically and economically powerful opponent. The first case also shows that the administrators hardly took care of the existing legal provisions to settle the water related disputes. The conclusion of the first case also shows that the legal right-of-way for an irrigation canal is not always protected as we

noted that the legal rights of the Bhimapur farmers in relation to the construction of a irrigation canal was not protected by a decision of a quasi-judicial body.

Integration of one irrigation system with an other could mean assimilation of the smaller system in the bigger one as in the second case between Bhimapur and Muraiya. Therefore, the users of a smaller system like to uphold their traditionally managed irrigation system rather than be assimilated with an other irrigation system. However, in the first case the users of the smaller system, though only a few in number but powerful in terms of socio-economic and political status, wanted to be assimilated with the bigger system with a view to utilize the labour of the latter. Thus, integration of irrigation systems does not always results in loss of identity of the users of the smaller system. It may also result in providing an opportunity to the users of the smaller system, if they are powerful in the local area, to be leaders of the integrated system. Thus, power structure plays a significant role on the impact of integration of irrigation systems.

The second case between Bhimapur and Muraiya shows that a dispute relating to irrigation issues may not be resolved by a concerned VDC according to the existing legal provisions and that even if an agreement is reached, it may not be executed in practice. And the legal decision or an agreement reached in the VDC can become useless. However, the government's project office can intervene so as to have an immediate impact. The disputing parties, sensing the immediate adverse consequence of not getting irrigation facilities for some time, have no other option except to 'bow-down' to the intervention of the government's project office. Thus, traditional water rights cannot be well protected according to the expectation of the users if they do not have the capacity to manage natural disasters like flood and require assistance from external sources. In such a situation they are required to accommodate others in their system and thus to restructure the status of water rights of the traditional users.

The second and third cases are also good examples for depicting the ambiguity in law concerning the authority of a VDC to hear an irrigation related dispute if the command area falls in more than one VDCs. The ambiguity in law can provide room for "forum shopping" to the disputants. On the other hand the local elite and politicians with a view to gain political advantage, may "shop" for irrigation related disputes or they get involved in disputes one way or the other. This can be noted in all the three cases. The second and third case also indicates that the local politicians can greatly affect the water rights of the irrigators through their intervention in dispute processing. On the other hand, it is very likely that the local politics could also be greatly affected by a dispute relating to irrigation management and sharing of water between two irrigation systems.

Many academicians have pointed to the fact that settlements of disputes are not necessarily permanent and note that they may resurface again.[16] Such a settlement, which is accepted by one of the disputing parties, either under compulsion, as in the

[16] See Silliman 1981-82, K. von Benda-Beckmann 1985, Barton 1967, Gulliver 1969, and Brouwer 1992.

first case, or under pressure, as in the second case, or misrepresentation by government officials or local politicians, as in the third case (e.g., about the construction of the cause-way), may not be sustainable and have greater chances of resurfacing in the future. Such a settlement of disputes may not bring dependable and durable peace (cf. Barton 1967). One may but only fear that this may be the fate of the integrated systems mentioned above.

Getting the right quality of water at the right time is very important to the irrigators. Therefore water problems require immediate action but delaying the dispute settlement processes could also be invoked by one of the disputing parties to corner the opponent until they accept their conditions. This kind of strategy can be noticed on the part of Sendra farmers in Case no. 3. A dispute relating to water rights between irrigation systems is fought not by one or two persons but by groups of persons and that too with the help of local politicians. Normally, women are not involved in irrigation management, but they could be given high priority in periods of crisis such as in the third case.

Disputes are not always incidental, rather may be strategically managed to suit the self interests of the actors involved. The Sendra farmers had strategically managed the third dispute to elicit a result in their favour. For example, the Mayor of Daulatpur VDC who naturally supports the Sendra villagers because they are his voters called the meeting but the Mayor and the Sendra farmers did not turn up at the meeting. Further, the farmers of Sendra showed themselves indifferent to their *badghar* and Mayor who were actually supposed to take the lead in the negotiation process to settle the dispute. And at last, Sendra women intervened in the dispute by filling-up the canal again. All the strategic moves of the Sendra farmers were to compel the Bhimapur and Muraiya farmers to accept their terms and conditions which ultimately materialized in the Rajapur meeting. On the other hand, the managers of the Muraiya Irrigation System had their own strategy to promote the interest of their own system, i.e., the disintegration of the Bhimapur and Muraiya canals and to have their own representative in the CFC.

To properly understand a dispute, it is important to study disputes from their historical perspective as well as the social dynamism and its impact in the disputes. To conclude, it is not possible to understand a dispute properly by studying just a single or an isolated case because a dispute may be a part of a case which may have begun many years earlier and may continue to affect social relations in the society for some time. Thus a case becomes an arena in which various structural principles are brought into play through the operations or transactions of the principal actors (cf. Nader and Todd 1998). Studying disputes from a historical perspective also helps us to understand the stress areas in the society and the developments and shifts in the balance of power between the individuals involved.

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Community Level Water Use Negotiation: Implications for Water Resource Management[1]

Bishnu Raj Upreti

Introduction

Conflicts over use and management of water are common in Nepal, both at the national and the local levels, despite the vast water resources drained from the Himalayas. Theses conflicts are managed at various levels with different strategies and mechanisms. In this paper I discuss community level water use negotiation processes. Community level water use negotiation processes are guided mainly by socio-political, cultural and legal aspects of society. For the past few decades, water resources management (WRM) has been an important issue for donors, governmental organisations (GO) and non-governmental organisations (NGO) in Nepal. WRM for the purpose of this research includes the acquisition, distribution, utilisation and conservation of water as well as the legitimate ways of controlling it at the community level. Water use conflicts are one of the important elements of WRM. These days there is a growing debate on how to come to an efficient, productive and equitable use of water resources (Upreti 1998) and learn from past experiences for a better future. However, progress in this direction is not satisfactory. Conflicts over water use are widening, co-ordination among GOs, NGOs and donors is still weak, and local initiatives and efforts are not getting sufficient attention. Scarcity, competition and improper exploitation are the basic characteristics of WRM in Nepal.

Conflict over water use is a common characteristic in Nepal (Pradhan and Pradhan, 1997, Pradhan et al. 1997) where rural people have been involved in water use negotiations processes since time immemorial. They have their own mechanisms and procedures to deal with water use negotiation. These water use negotiation practices are still powerful in rural WRM. However, such local level water use negotiation

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processes and people's initiatives are getting only little attention in Nepal. Very few efforts have been made to explore on how local people learn and develop coping strategies over water use negotiation. The influence of local feudal elites such as mukhiyas (former revenue collectors on upland) is still enormous in the community level conflict resolution process. These local power structures and customary practices, though often unjust, are decisive in water use negotiation process.

It has become increasingly clear that conflicts are integral part of water management. The diverse interests of actors involved in water management cause conflicts. It is essential to explore how people resolve conflicts in local communities to contribute to the improvement of the contemporary water management. Water use conflicts and negotiations in Nepal are dominated by legal process, though there is a strong role of indigenous institutions. Little work, however, has been accomplished on how local people respond to water related conflicts in changing circumstances and what support they need to resolve such conflicts.

The purpose of this paper is to examine how water users deal with water use conflicts and how they learn to negotiate for effective use of available water resource. This paper attempts to analyse how water use negotiation practice is accomplished at the community level. To explore this process, a case study was conducted in Dolakha district in central Nepal, during June-September, 1997.[2] This paper attempts to illustrate the role of local people and intervention of external organisations in the negotiation processes, their strategies and procedures. Power relationships, the role of women, and customary and local norms are also discussed.

Approaching conflict management

In this section I illustrate the conceptual basis for the analysis of water use conflicts and negotiation processes in practice based on legal anthropological and social learning perspectives. A perspective is a guide to tell about where to look for what a researcher wants to observe. Perspectives shape the way of understanding. A legal anthropological perspective[3] leads researchers to study the key issues: norms, power structure and discrepancies between rules and behaviour. It focuses more on understanding the social practices in the frame of multiplicity of legal institutional arrangements and normative repertoires in society (Spiertz 2000). The social learning perspective helps to analyse the implications of conflict and negotiation process for future improvement.

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[2] The research methodology consisted of semi-structured and key informant interviews, focus group discussions, participant observation and transact. Respondents were represented from water users; non user villagers, VDC, NGOs and GOs.

[3] The contribution of legal anthropological perspective in the study of conflicts is illustrated by Benda- Beckmann et al. (1997: 222) as: "Adopting a legal anthropological perspective means giving primary attention to description and analysis of the current legal situation and trying to understand the significance of that legal situation for the actual forms and practice which water rights and water management assumes. It means asking about the interrelation between law and social practice, rather than engaging in conventional doctrinal legal science."

For the purpose of this paper, the term 'negotiation' is explained as "a conflict resolution procedure in which conflicting parties are the decision makers, and the settlement of conflict is one to which both parties agree" (Nader and Todd 1978). Mediation, on the other hand, is defined as "an intervention into a conflict situation for negotiation process of an acceptable, neutral third party who has no final decision making authority, but who will assist contending parties to negotiate on acceptable settlement of conflict" (Pruitt and Carnevale, 1993). Negotiation is a process that deals with a conflict situation and functions on mutual dependency of the negotiating parties. Negotiation includes any instance in which two or more people are communicating with each other for the purpose of influencing the other's decision. Negotiation takes place between parties (individuals, groups or organisations) to resolve the incompatible goals. Hence, negotiation deals with diverse interests in conflicts (Pruitt and Carnevalle 1993). Negotiation can lead to a win-win situation, win-lose situation and lose-lose situation for the different parties involved. Negotiation brings conflict situations into light. People have different and often conflicting interests and objectives. Therefore, negotiation is part of social processes and one kind of problem solving strategy (Gulliver 1979: iii). The purpose of negotiation is to discover mutually acceptable outcomes in disputing through means of persuasion or inducement. Gulliver (1979: xv) explains that patterns of interactive behaviour in negotiation are essential despite marked differences in interests, ideas, values, rules and assumptions among negotiators of different societies. He argues that a fuller understanding of negotiation process will be achieved when they are considered in their full socio-cultural context (1979: 170). He, therefore, focuses his attention on the process of negotiation, recognising that a conflict and its negotiation occur in broad cultural contexts and social institutions. He compares joint decision making by seeking common patterns that characterise interactive behaviour with adjudication or unilateral decision making (using third party judges to adjudicate disputes).

Negotiation can be categorised into two distinct forms, i.e., distributive and integrative (Wertheim 1997). The characteristics of distributive negotiation are to focus more on resource distribution. The attitude of negotiating parties is firm with attention to their own interests and a far reaching consequence may be a loss-loss situation (Rafia 1991, Kremenyuk 1991). The characteristics of integrative negotiation are to create resources (win-win situation) where negotiating parties are open for alternatives and give attention to the interests of others too through participatory problem solving. The collection of water in the collection tank at night, in the case discussed here, is an example of creation of resource for win-win negotiation. It leads to a collective decision and commitments by the negotiating parties to achieve an optimal collective solution (Moscovici and Doise 1994). Practically, negotiation is a problem solving approach in which conflicting parties meet face to face to reach a mutually acceptable agreement of the issues. In alternative dispute management approach, negotiations generally focus on the best alternative to negotiated agreement, interest (issue, position and criteria), and process

(create a condition for effective problem solving). According to Pruitt and Carnevale (1993), negotiations are often the best way of dealing with social conflicts as they are the main routes to a win-win situation. They explain that existing power relationships play an important role in the negotiation process. Actor specific characteristics like position, function, and personality highly determine power relations in negotiation.

In the study of disputing process Nader and Todd (1978) distinguish between three phases or stages: grievance[4], conflict[5], and dispute[6]. However, in this paper all these three stages are covered by the general term 'conflict'. Conflicts are part of everyday life in all societies (Caplan 1995). Accordingly, conflict is a central and dynamic concept in Nepalese society. The word conflict usually carries negative connotations and generally is interpreted as irrational, pathological and socially dysfunctional. But conflict can also be a constructive process to establish group boundaries, strengthen group consensus and sense of self-identity, and contribute towards social integration, community building and economic and social change (Doughorty and Pfaltzgraff 1990). Conflict is not only a sporadic event, but more importantly it is a social process and has great influence in shaping and changing social relations. Warner and Jones (1998) argue that conflicts promote adaptation by a society to a new political, economic and physical environment. New technologies, policies and procedures, privatisation of public services, commercialisation of natural resources, power exercise, etc. greatly affect conflict. Therefore, it is not appropriate and even not possible to avoid or suppress conflicts in practical life. Conflicts are influenced by values of conflicting parties (both values described and actually perceived), degree of incompatibility of goals, genesis of conflict, power structures, and so on. The alternate approach to conflict analysis focuses on the mode of behaviour of people, the organisation of their social life in the frame of social structures, functions, process, and their relationships.

Analytically, conflicts can be broadly categorised into psychological approaches and sociological approaches.[7] In the psychological approach, psychologists, biologists, game theorists, and decision making theorists take the behaviour of individuals as a point of departure to analyse conflicts. They analyse conflicts from the knowledge of individuals to draw inferences. Sociologists, anthropologists, geographers, organisation and communication theorists, political scientists, international relation analysts and system theorists on the other hand examine conflict at the level of groups, collectivities, social institutions, social classes, political movements, religious and ethnic entities, coalitions and cultural systems. This analysis focus on knowledge of collective

[4] Grievance is a pre-conflict stage: The circumstance or condition which one person or group perceives to be unjust, and the grounds for resentment or complaints. This condition potentially erupts into conflict.

[5] Conflict refers to antagonism caused by a clash of cultural, political, social or economic interests between individuals and groups.

[6] Dispute results from escalation of the conflict by making matter public and opting for confrontation.

[7] The details about psychological and sociological approaches of conflict analysis are presented by Dougherty and Pfaltzgraff (1990: 189).

behaviour and is known as sociological approach (Dougherty and Pfaltzgraff 1990: 189). In this paper I use a sociological approach and an interpretative model[8] of conflict study to analyse water use conflicts.

The common conflict management strategies are consensus, compromise, accommodation, withdrawal, and coercion (Warner and Jones 1998). In all these strategies people look for different possibilities and choices to resolve their conflicts, a process which is known as 'forum shopping'.[9] Approaching the police, the courts, the district administration office, VDCs, NGOs, and local institutions are some examples of forum shopping. Similarly, various organisations involved in conflict management shop for forums (conflicts) in order to increase their prestige and power. There are several strategies to resolve resources use conflicts, which are briefly presented as follows:

- *Consensus*: In this strategy synergy of collaborative negotiations is used to widen the basis for decision making, thereby avoiding trade-offs altogether. It is more than a simple agreement. This was the principle guiding factor in the negotiation process discussed here.
- *Compromise*: Compromise is a more common strategy in conflict management if there is less possibility of reaching a consensus. In this strategy at least one of the parties perceives that it has relinquished something.
- *Accommodation*: It values a continuing relationship between conflicting parties above the attainment of its own goals. In this case the conflicting parties elected to 'accommodate' the interests of other parties, withholding some of their claims. The accommodating party perceives itself to have gained by securing good relations, accompanied by 'good will' and the option to achieve some greater goal at a future date. Self actualisation plays a great role in this strategy.
- *Withdrawal*: This option is suited to those parties whose desire to avoid confrontation outweighs the goals they are trying to achieve. The power of withdrawal can be used as a threat to force reluctant and sometimes more powerful parties to negotiate in a more consensual fashion. However, disadvantaged groups may also withdraw out of a feeling of helplessness. This strategy is based on check and balance and social harmony. But often this strategy is used by the weaker party to surrender their claim.
- *Coercion/force*: This conflict management strategy is chosen when one party has the means and inclination to win regardless of the consequences for the other party. Not all conflicting parties will be able to use the same force. It largely depends upon the power that one party holds relative to another. In some cases, recourse to the legal system is a form of 'force' in that one party can use their superior resources to 'buy' better advice or raise the stakes (for example, by taking a lost case to an appeal court). Social differentiation and power inequality are the enhancing factors in the choice of this strategy.

[8] 'Interpretative model is an empirical model that describes how people behave; how they perceive uncertainties, accumulate evidence, and update perceptions; how they learn and adapt their behaviour; and why they think the way they do. This model is more commonly used by social scientists to analyse conflict without trying to modify, influence and moralise the behaviour of people.

[9] Keebet von Benda-Beckmann (1981) explains in detail about "forum shopping" and "shopping forums" in the context of Indonesian dispute settlements.

Water rights and ownership issues were the major claiming factors responsible for the escalation of conflict in the case discussed here. The notion of legal pluralism[10] is used in this paper to understand the diversity in the role of cultural, social and normative practices in water use conflict. It is realised that the community is not shaped and guided by single legal framework. The actions and behaviour of community members are guided by several local norms, practices, beliefs and regulations. Even normatively defined government laws are reshaped by actors and translated into practice differently according to local situations. Society is guided by the coexistence of complex legal phenomena derived from and embedded in multiplicity of local systems, legal systems and rights (Benda-Beckmann et al. 1998). In practice access, control and transfer of water resources and resolutions of associated conflicts are not completely regulated by states law and regulations alone. Every community has their own organisations, laws and procedures to address these issues. In reality the existence of plural legal systems in the community is itself a source of conflict over water resources. The actors often modify or change state laws fit the local situation. The claim of the owner of the water source for irrigation against the priority for drinking water defined by Water Resources Act of 1992 is example of this modification.

As human behaviour change over time due to social, political, economic and technological changes, water rights also change. Laws and regulations administered by the government are only one of the many forces that change human behaviour and action. There are other guiding factors like customary practices and regulations, religious rules, local norms, economic opportunities, and technical advancement, which greatly influence human behaviour concerning control, use and management of water. These customary practices, adopted local rules and norms to address the changing circumstances, which Benda-Beckmann et al. (1998) call 'local laws', greatly influence water related issue in society. In this regard it is noteworthy to state that the Nepalese court's involvement in settling water related disputes are only small portion of the large number of conflicts over water (Benda-Beckmann et al. 1997). The majority of such conflicts might have been managed by other local forums and processes than courts. Therefore, it is important to know these alternate forums and processes, the people's perceptions about conflicts over water, how they manage these conflicts, the decision processes used to resolve the conflicts, and why they opted for a particular "forum" to resolve their disputes (Benda-Beckmann 1981).

Case study on spring water use negotiation: narrative description

This case study was based on a spring water source named Bhoteko Dharo which is located in ward seven of Pawoti VDC in Dolakha district. The population composition of the study site is Brahmin, Chhetri and Tamang. The population of the

[10] Spiertz (2000) argues that 'legal pluralism means that in many life situations, farmers, water-users, village headmen, bureaucrats, and officials can make use of more than one normative repertoire to rationalise and legitimise their decisions or their behaviour. Plurality of normative frameworks pertaining to the various domains of social life can be found in any society'.

study area is not very diverse socio-economically, but it is a politically diverse group. Political parties like Communist Party Nepal-United Marxist Leninist (CPN-UML), Nepali Congress (NC), Rastrya Prajatantra Party (RPP) were active in this case to influence people in their favour. The study area is relatively densely populated and has few spring sources for drinking water which were providing drinking water for more than 70 households. Among them Bhoteko Dharo was one of the bigger spring water sources located in the land of an individual and serving seven households (hereafter referred as the permanent users) mainly for drinking water and partly for irrigation. Of these seven households, all by and large of similar economic condition, one was a Tamang and three each were Brahmin and Chhetri households. The water source owner was a Chhetri, with a relatively weak economic condition. The average land holding of the permanent users was one hectare. In the lower part of the village 13 households (hereafter referred as "new users"), all economically relatively well-off and socially in higher strata, did not have access to drinking water. All 13 households were Brahmins. Their average land holding was 1.5 hectare. The educational level, access to information and power centres of the new users were also higher than that of the permanent users.

Around 1970, two rich Brahmin families from the lower hamlet tried to obtain water from that source. The source owner and the permanent users agreed to provide part of water to them, but due to the high investment required to complete this project these two households cancelled it. Later in 1989, again all households of the lower hamlet explored the possibility to obtain part of the water from this source and discussed their problem with source owner and permanent users. In the beginning, the permanent users and the source owner agreed to share the water. Accordingly, they decided on the locations of the tap stands, collected stones, requested and received the hardware fittings and construction materials like cement and polythene pipe from the District Panchayat Secretariat (DPS), fetched these materials from district headquarters, and dug out an alignment for laying the pipe. But the construction process was stopped from May 1990 for 2 years as social setting in the village was disturbed on account of the popular movement and the overthrow of the despotic Panchayat regime. In May 1992, the new users again started discussion with the source owner and the permanent users to construct the project.

At that time, the source owner refused to give water, citing the possibility of shortage of water for the dry season. The hidden reason behind this disagreement was rooted in the better position of the new users and the political differences between many members of two groups. The source owner perceived that the new users were relatively better-off and some of them had tried to diminish his status in the past by accusing him of being the agitator of the community. A few people from another area, who had hopes of getting water from this source and were politically different from the leaders of the new users, supported and pushed the source owner to refuse to share water, raising the problem of lack of water to irrigate the area surrounding this source. Hence the source owner refused to share this water source. Those people who were politically different from the many of the new users indirectly enhanced this

conflict. At the same time, one of the new users threatened the source owner, saying that if he would not give water, he should be ready to face physical attack, and he announced his determination that at any cost he would take water from this source. The source owner explained his view on this matter thus:

> "Earlier I agreed to provide part of the water. But when some of them tried to demonstrate their muscle power to take my property, I did not agree. Should I compromise the irrigation to my rice field because of their threats? Their power and money are usually very decisive, but they cannot influence me. I have rights over this water source. They knew that I have no other source to irrigate my field so at least there should be some solution to irrigate my field. I was looking for alternatives. But when I got the threat of physical attack, I immediately refused to share the water source."

The political differences between the villagers were one of the major factors responsible for accelerating the conflict. According to villagers other than the permanent and the new users, this source was sufficient for both groups of people, both for drinking water and for irrigation of the field surrounding that water source. Therefore, lack of water was not the real cause of the conflict. The root cause of the disagreement was the jealousy over the rising prestige[11] of the new users.

The new users were continuously attempting to resolve the problem based on the customary rule which accorded priority for drinking water over irrigation. They also approached the District Development Committee (DDC) for a negotiation as the DPS[12] was involved in this project. However, the DDC was not interested to get involved in this conflict and suggested that they resolve it locally with the help of their VDC. The VDC also did not show interest to resolve this conflict. The main reason for the unwillingness of the DDC and the VDC was political, as the majority of the new users were politically different from the VDC chairman[13] and some new users were even his strong opponents. So, the Ward Chairman (WC) was requested by the new users to negotiate with the permanent users and the source owner. As a problem solving strategy, the WC invited one 'overseer' from the District Water Supply Office (DWSO) to measure the capacity of the water source. The overseer verified that the source was sufficient to meet the need of both groups of users. This negotiation process was disturbed for some time due to local and parliamentary elections and further delayed due to the absence of the source owner who had gone to Kathmandu to work for some months. In the mean time, the new users were looking for an

[11] Having a water tap in the house is a symbol of prestige in the rural areas. Therefore, the source owner was not interested to see the new users having drinking water taps in their houses because he had no water tap stand in his house.

[12] The name of the District Panchayat Secretariat (DPS) was changed to District Development Committee (DDC) after the restoration of democracy in 1990.

[13] The DDC Chairman was convinced by the VDC Chairman and followed his approach because they were from the same political party.

alternate source from Bhaireko Dharo. During the process of exploring alternate sources, the new users were passive about the disputed source. However, this alternate source was found to be economically very expensive. Therefore, the new users again returned to negotiate for the disputed source that took almost three years to reach a compromise.

An active woman from the new users group, who was also one of the initiators of the negotiation process, said that fetching water was the main responsibility of women. Women from every household have to collect approximately 200-400 litres of water daily for household (human and animal) consumption. Generally, it takes around 20-25 minutes to collect water from the source. Hence, the drinking water problem was primarily related to women. Therefore, the women of the potential users informally talked many times with and convinced the women of the source owner and the permanent users. That effort put positive pressure to their male members. They intensively discussed this problem in various public occasions such *mela-parma,*[14] *hatbazaar,*[15] *pani-pandhero*[16], *ghans-daura janda*[17], and *bibaha-bratabandha.*[18] The new users used relatives of the permanent users and religious leaders to convince the resisting party. The Brahmin priest commonly called *purohit*[19] was mobilised to convince them. The villagers invited the Environment and Population Awareness Programme (ENAP), an NGO facilitating different activities in other areas in the VDC, to help resolve the conflict. ENAP organised different trainings on water source conservation, sanitation, community participation, conflict resolution and formal and informal meetings and discussions. At the end of all these efforts and with the help of ENAP the villagers succeeded in forming a mediation group (MG) from within the community to mediate between the conflicting parties.

The MG proposed the following suggestions to resolve the conflict on the use of the water source. The source owner should either sell the water source to the new users on the condition that it would be accessible for both groups of users, or the owner should allow them to take water under the following conditions:

- The new users should construct a reservoir tank close to the source to collect water.
- Water should be collected in the reservoir tank at night.

[14] An exchange of labour in the village to perform main agricultural activities like transplanting of rice, harvesting of crops, etc. People from all households participate in such activities rotationally.

[15] An informal forum where people gather weekly or fortnightly to sell or buy different goods and to settle many practical issues. *Hat-bazaar* is the principal forum to discuss different problems and issues.

[16] Every morning and evening many women gather at a water source to collect water. At that time they discuss different issues and share their feelings, experiences and difficulties.

[17] As a common practice in the village many people go together to the forest to collect firewood and grass where they share their ideas and opinions and discuss different issues.

[18] These are religious ceremonies which represent the marriage *(bibaha)* and sacred thread *(bratabandha)* given to the male to be eligible for marriage. For these occasions women have to work together in advance to prepare materials where they share their feeling and experiences with each other.

[19] Brahmin priest. He has generally strong influence on his clients *(jajamans)*.

- Water should not be collected in the reservoir tank during the time there is water shortage for transplanting rice.
- The new users should take the responsibility for the conservation of source.
- The source owner and the permanent users should inform the new users and the MG before diverting the water for transplanting rice.
- Both groups should apologise for the past mistakes.
- If a misunderstanding emerges, then users should inform the MG.

This proposal was thoroughly discussed in successive meetings with the permanent users, the source owner, the staff of the ENAP, other villagers and the new users. Finally the proposal with the above mentioned conditions was accepted and an agreement was reached to use the source by both groups of users.

Discussion and analysis of the conflict resolution process

In this section, I will analyse the conflict resolution process from an interpretative approach to answer the questions why and how the conflict was negotiated in that particular way. This case is an example of successful water use negotiation at the community level from the initiatives of the local people. The major strategies chosen for the negotiation processes in this case were accommodation, consensus and compromise. Both parties did not opt for coercion or withdrawal strategies to resolve this conflict. Rather they sought a solution within the frame of accommodation and consensual compromise. Water use negotiation in this case is not operated in a vacuum. It is involved with the wider social relations and processes in the community. Conflict or negotiation depends on decision and activities of the actors involved. So water use negotiation in this case is related to cultural, social and customary practices of the community. Water use conflicts are a complex social process and can be affected by confusions and misunderstanding among the actors. These conflicts may erupt due to several potential reasons such as diversity and inconsistency in the application of customary practices and formal legal procedures, different perceptions of ownership and rights, and management differences. The crucial roles played by the factors and actors in the conflict resolution process are discussed briefly below. This is an example of a win-win (Bush and Folgar 1994, Wertheim 1997) type of negotiation through consensual compromise. Accommodation of the interest of the other party was the main characteristics of this negotiation.

Drinking water needs of the villagers

One of the major factors for both the creation and the resolution of the conflict was the need for drinking water of the new users. They greatly suffered from a shortage of drinking water so they made utmost efforts to obtain it. The main arguments of the new users to lay claims to this source were (1) the sufficiency of water in the source, (2) it is less expensive than the alternate source to use, and (3) the source owner and the permanent users had agreed to provide part of water in 1970.

They were trying to resolve the conflict through consensus. Therefore, they had approach various forums. They approached the DDC and the VDC, mobilised the priest, their relatives, wives and community leaders to convince the source owner and the permanent users, and also invited ENAP to facilitate the negotiation process rather use formal legal measures (through police and courts). Various forums like ENAP, DWSO, and the priest were actively involved in negotiating the conflict. In this circumstance, these forums were involved not only to resolve conflict but also for their identity and prestige. If the new users had not made such rigorous efforts, the problem would not have been resolved. They learnt new ways to resolve water use conflict through mediation. However, this does not mean that the local people did not know about the local process of mediation. But the way they approached this mediation was different from the conventional ways of local level mediation. The saying that "necessity is the mother of invention" was clearly reflected in this case, as the users made every effort to resolve the conflict in a consensual way. The argument of the new users was based on the priority given to use water for drinking water over irrigation. It was a matter of debate among the villagers about the control over water by an individual and the right to use water publicly. But the perception of the villagers on water as a common resource for drinking water was strong in the locality. People argue that they have a common right to use water first for drinking water as a customary and religious practice accepted since time immemorial in this area which is still guiding human behaviour in this matter. This case clearly reflects that government laws and regulations are not the only force which gives priority to drinking water; several other social relations and practices, religious rules and local norms also give priority to drinking water over other uses of water. These social relations and practices have enormous influence in the local level water use negotiation (Benda-Beckmann et al. 1998, Spiertz 2000, Upreti 1998).

Issue of water rights and ownership

Scarcity of water is the means for the people to find ways to acquire rights to such water sources either by using their historical association or citing riparian rights or interpreting legislated laws in their favour. Water rights (WR) and ownership deals with sanctioned behavioural relations among men that arise from the existence of things and pertain to their use. WR are closely embedded in the historical, social and cultural context. The concept of water rights asserts specific legal status to water and even is even connected with land rights, i.e., the land on or in which the water source is located. This determines the customary water right. The case shows that customary rules such as existing users have senior rights over new users, the land in the vicinity of the water source has a prior right, etc. (Cf. Khanal and K.C. 1997) do not function always very strictly, rather, they function on the basis of agreement (Benda-Beckmann 1996). People construct water rights on the basis of historical and normative background (Upreti 1998, Benda-Beckmann, et al. 1997). The landowner claims water right when the source is located in his land (Upreti 1998). Water rights could also be directly related with land rights and other social relations. The Water Resources Act

1992 explicitly specified that the ownership of water within the kingdom of Nepal is vested in the state and that the right to use water is granted with certain provisions by the state (see Pradhan, this volume). Due to increase in population, change in land-use pattern and technological changes, water rights patterns are also changing to address such changes. Water rights are also shaped and influenced by power structure and social relationships as well as other rights. Legal construction of water rights should be distinguished from actual social relationships among right holders to better understand water rights.[20]

The issue of water rights (especially ownership issue) was one of the important causes of the conflict. It is important to note that the context (e.g., the presence or absence of rules about the uses of water, alternatives to exploit water resource, and ways of monitoring and controlling the behaviour of source owner), content and time factors were important in this negotiation process. The source was located in the land of an individual. So he claimed that he had ownership rights, including both use and control rights, to this source. This claim was also supported by riparian right, right of prior appropriation and ownership rights of his land where the source was located. In contrast, the new users claimed their right according to the priority given to drinking water by the Water Resources Act, 1992 and on religious ground. This case study reveals that local people reconstruct and renegotiate water rights by using religious and normative arguments (Benda-Beckmann et al. 1997). In this situation, the disputing parties looked for different options to justify their claims. The new users first approached their DDC and VDC to resolve the conflict. These formal authorities commonly make decisions on such complaints with references to legal principles, rules and procedures (e.g., VDC and DDC Acts). They later contacted informal but socially recognised institutions and forums such as the former revenue collector and priests, who negotiate such disputes on the basis of customary norms and local practices. In this case, local cultural and religious systems clearly emphasised the common use of water by both permanent and new users. Finally, all permanent users agreed to provide water to the new users which made the stand of the source owner weaker and ultimately he too agreed to provide water to the new users. However, the permanent users and the source owner have good relations with new users due to the influence of local norms which emphasised the co-operation and harmony among the villagers. The existence of legal rules and principles may not necessarily always shape the behaviour of people. These rules and principles can be relevant only when people respond and behave accordingly (Benda-Beckmann et al. 1997). People follow legal rules or look for legal basis to legitimise their claims when water rights become problematic or contested.

[20] To elaborate this Benda-Beckmann et al. (1997: 226) explain, "water rights and the legally defined conditions under which certain social entities can acquire such rights are part of water law; the actual constellation of social relationships between concrete social entities and concrete water resources on the other hand quite different phenomena. If this distinction is not made, there is no room for looking at interrelationships between legal forms or types of property relationships and the concrete manifestations of property relationships in social and economic life. Questions concerning the relationships between types of water rights and their distribution can not be dealt with systematically."

Another important issue in conflicts related to water rights is the interpretation of local laws (or rules) by different categories of people involved in the conflicts. The interpretation of these laws by authoritative experts (for example, judges, administrators and project personnel) might be different from the local people themselves. The interpretation of local law by the priest and the source owner was entirely different at the earlier stage of the conflict. In conflicts related to water resource, disputing parties do not necessarily always approach the legal authorities for legal solutions. Even if one of them approach legal authorities, they cannot continue with their claim for long as the legal or formal solution highly depends on power relationship. For example, the problem of the new users was not taken seriously by the DDC and the VDC due to political differences. After that, the conflict was locally resolved through negotiations and compromises on the basis of social networks and local power relationship. Good relationship with local elite and powerful people may facilitate quick negotiation as against accelerating conflict by bad relation with them. The stability of conflict management is often shaped by the stability of local power relations and networks. Changes in power structure and social relationships, technological changes, etc. alter the earlier negotiations and create new conflicts. The role of the Ward Chairman was important as he had authority as an elected local politician as well as a member of the village elite. It is important to think what would have happened if the new users had been poorer than the source owner and he had better outside connections. Certainly, the outcome of the negotiation would not be the same as it is now. So the role of social status, economic condition and linkage is important.

Cultural norms, values and beliefs

Norms, values and beliefs play a crucial role in conflict resolution process (Spradely and McCurdy 1981). These norms, values and beliefs led to a pragmatic course of action in water distribution and use. In the study area, it was considered a sin not to provide drinking water. As a norm, it does not matter who owns the source, drinking water should be accessible to the general public and should get priority over irrigation. A strong belief promoted by the priest that 'those who hinder others from taking drinking water will go to hell after death' had great influence in the negotiation to use the water source. In this way religious law shaped the behaviour and action of the villagers. In customary practice, people from their own experience inherited from their ancestors learn to coexist peacefully in their community. Villagers have a saying, *"Desko deuta bhanda gaon ko bhut kamlagchha* (The ghost of one's own village is more useful than a god in another locality)." So, the villagers adapted their behaviour locally to address their needs in an accommodative way and made utmost efforts to negotiate locally in a win-win condition.

Local institutions such as the *purohit*, *mela-parma*, and *bibaha-bratabandh* are inherited from the religious culture. These institutions play an important role at the local level to shape the course of action for negotiation. A belief like "to provide drinking water is to pave the path to go to heaven and to create obstacles on

drinking water use is to be prepared to go to hell and face serious trouble of drinking water after death" was a crucial psychological factor to bring people to the negotiation table. The priest presented this belief to the source owner and the permanent users to provide water. The MG, on the ground of local norms, persuaded the permanent users to share the water with the new users. Negotiation for sharing water source promoted water users to use local networks and social relations. The drinking water problem was successively discussed in the different forums by the new users, which created a very favourable situation to resolve the conflict. It has become evident that mobilisation of indigenous institutions for joint actions is essential for local level water use negotiation. Indigenous institutions were able to create a conducive environment for the negotiation. Indigenous institutions are also important to deal with power[21] in this case. Power played a crucial role in resolution of the water use conflict.

The mediation group and the priest

Mediation practices and the *purohit* (priest) are inherited from past generations to deal with the social and religious issues in the community. The MG was composed of socially respected local people, four men and three women of the village, selected by the villagers to mediate the water use conflict. The criteria to select the MG members were their neutrality, convincing ability and willingness. Mediation differs from arbitration. In arbitration both conflicting parties consent to the intervention of third party whose judgement they must agree to accept before hand (Nader and Todd 1978). In this case the conflicting parties did not agree to accept the judgement of the MG beforehand. The *purohit* is a culturally and socially recognised person who performs domestic religious ceremonies and also acts as a bridge between the villagers for information and communication. These two institutions played a crucial role in mediating this case. From the beginning, the MG made several attempts to convince the source owner and the permanent users, contacted the DWSO and brought a technician to justify the capacity of the water source, organised discussion meetings, developed and forwarded different problem solving proposals, established norms, and coordinated the implementation of project. The ENAP strategically supported the MG to perform these activities. The priest convinced the source owner and the permanent users by highlighting the religious importance of giving drinking water to others. Because of the nature of his work the priest had frequent house-to-house contacts and good relations with his clients. Generally, his clients did not prefer to go against his arguments. This made the work of the ENAP and the MG easier. Therefore, mediation by such institutions has the potential to change the behaviour of people who are in the very midst of conflict. Mediation processes are greatly influenced by cultural and social situation and by the positions of mediators.

[21] Power is conceptualised as the ability to gain the preferred outcome in opposition to the other party's interest (Colemann 1977, King 1987).

In rural areas mediation is very common as the senior people mediate between conflicting parties in many issues. However, the form of mediation in this case was different from this indigenous form of mediation because the mediation in this case was of semi-formal structure, with a committee composed of selected people representing and accepted by both groups of users. From this case it is clear that the success or failure of mediation is determined by social relation of the mediators. The MG members were socially accepted and believed by both groups of users which were the main reason for the acceptance by both parties of the resolution formulated by them (the MG members).

The role of women

In the hill and mountain regions, women are the key persons for using and managing resources. Rural women are one of the main sources of indigenous knowledge and skills for resources handling and management (Ghale and Gurung 1998). Therefore, women are a crucial force in local resource management. The initiative of the women from the new users group was another factor which contributed to the resolution of the conflict in this case. These women discussed the drinking water problem in different forums with the male members of the permanent users and together they ultimately were able to create a favourable condition to share the water. In addition, some women participated in the training provided by ENAP. A few women were even members of the MG and played an important role in the mediation. In this case women, especially older married females, were far more co-operative and assertive in resolving the local level conflicts because of their ability to accommodate different perspectives. Even the wife of the source owner was in the favour of providing drinking water to the new users. From this event it is very clear that drinking water is the top priority of women. Women members explained that men were very much sensitive about drinking water as against irrigation because they do not fetch drinking water.

The solidarity among the women of both groups was a unique strength in this mediation. The male members were involved in the conflict, but the women were creating a positive social pressure to resolve it. The political grouping and biases are very low in case of women as compared to male members in the community. Therefore, the party-led political bias was not a hindrance to share and discuss the problem among the women. From such efforts of the women, even the political manipulation of the conflict by different local political workers became weak. In this case the role of women was not only significant in acquisition and distribution of water but also equally important for decision making and conservation of water source.

The role of the ENAP and the DWSO technician

Though initiative was taken by local people, especially by women, ENAP later played an important role in resolving the conflict by organising different awareness raising activities, discussion meetings and conflict resolution trainings. The strategic support

of ENAP to the MG in performing the mediation task appeared to be very important. The overseer (technician) from the DWSO technically justified the capacity of the source sufficient for both groups of people. This justification weakened the stand of the source owner. The real cause of the conflict was actually not the shortage of water. All the villagers, including the source owner, the permanent users, the new users and the local politicians were aware about the sufficiency of this water source for both group of users. Political differences and social prestige were the real reasons for the disagreement which was framed in terms of shortage of water for irrigation. Therefore, the DWSO technician was brought in by the MG not really to assess the capacity of the water source, but to technically disqualify the claim of the source owner. So the role of DWSO technician was strategic and tactical rather than scientific and technical. After the report provided by the technician, the permanent users also became passive because they had no room for argument about the sufficiency of water. Local politicians also lost their ground to support the argument of lack of water for irrigation. Then other villagers, the MG and the new users further exerted pressure on the source owner to negotiate. So this type of facilitation[22] process contributed significantly to the resolution of the conflict. This study revealed that given an appropriate facilitation by independent development organisations (e.g., ENAP) and the opportunity to create a common forum, actors themselves are able to learn to resolve the conflict. In this case the neutrality of the facilitators and mediators was very important. It appeared that the initiatives taken by the local people were supported by the ENAP and DWSO technicians. The conflict resolution process was moved fast with the help of these organisations. Basically this is a social learning process (Parson and Clark 1995, Maarleveld et al. 1997, Röling 1996a, 1996b) facilitated by an NGO and the new users. In this case the role of social learning seems crucial because it enabled people to modify their behaviour to resolve the conflict. People learn from the negotiation process itself to resolve community conflicts.

ENAP was working in the VDC since 1993 in various awareness raising activities. This was an opportunity for ENAP to get involved in the conflict resolution process so as to increase their popularity in this locality. ENAP explored the real cause of the conflict which was not lack of water. Rather, it was framed in terms of political interests and personal differences. So ENAP worked as a forum to facilitate the negotiation process and shopped for a forum (conflict) to enhance its prestige. Due to various efforts by the mediators the earlier interest-based relation of the source owner and the permanent users with the new users changed. The permanent users were convinced by the arguments of the women and the overseer and were in favour of resolving the conflict through negotiation which ultimately weakened the claim of the source owner also led to the loss of the support of his neighbours. This case reveals that just as conflicting parties shop for forums to

[22] Facilitation is a process which develops the capacity of conflicting parties to solve their conflicts by learning and adapting. Facilitation focuses on capacity building to cope with conflicts through participation of the conflicting parties in decision making and action process.

resolve their conflicts, different organisations and institutions like ENAP, Ward Chairman, and the priest too shop for conflicts which they attempt to 'resolve' in order to enhance their power and prestige.

Communication and facilitation

Communication plays a central role in any approach to the resolution and management of conflict (Habermas 1989). Listening to others and understanding their views are important steps in conflict resolution process. Communication helps to identify alternatives, get agreements on rules of negotiation and build relationships for conflict resolution. The ability to communicate is a fundamental step in conflict management (Hamilton 1995). Linkages and dialogues between users, their wives, friends the priest, the MG and the staff from development organisations were good examples of the communication networks in this case which not only enhanced the resolution of conflict but also promoted learning in water resource management. Two way communication and exchange of information among and between these various actors proved decisive in resolving the conflict. Communication helped people of different levels of social aggregation (users, other villagers, the DWSO, etc.) to develop adaptive knowledge to resolve the conflict. The negotiation process was guided by the perception of two dimensions of conflict, i.e., how important or unimportant it is to satisfy our needs and how important or unimportant it is to satisfy other people's needs. This led to a collaborative negotiation. Here mediation involved two levels: a rational level of decision making process and a psychological (emotional) process. The outcome of negotiation in this case is likely to be a result of psychological process.

Facilitation is a pragmatic approach to enhance flexibility, adaptation, information gathering, utilisation and interactive learning to promote non-coercive change (Röling 1996a, 1996b; Woodhill and Röling 1998; Maarelveld et al. 1997). This facilitation process starts either locally or with the help of external organisations. In this case, ENAP facilitated the resolution of the conflict. Facilitation brought the conflicting parties together in a common forum, i.e., the MG, to discuss the issue. The role of an NGO seemed crucial to create awareness among the users and to form the MG which ultimately resulted in the negotiation. One of the important aspects of social learning is the facilitation of mediation and negotiation of conflicts between individual and collective interests. Negotiated agreement on use of the water source is an example of communication. Facilitation in this case promoted participatory processes of conflict resolution by involving all stakeholders in the discussions of the problem, norms setting and agreement on water use. Therefore, facilitation promoted recognition of consensual agreement on water use. Many learning theorists have highlighted that 'learning provides alternatives for problems' (Röling 1996a, Hamilton 1995); this case exemplifies this statement. People learn from the process itself. Conflict was necessary to come to an agreement to share the water source for common benefit. Collective action process promoted such long term

co-operation among the people of the two hamlets. The study shows that local people were not only active negotiators and mediators of conflict but also active managers and networkers. Local people deliberately seek relationships with different people to exchange knowledge, information and experiences and to build alliance to develop and implement new ways of managing conflicts. Local people are the principal managers of the local natural resources (Rhoades 1997). Instead of going to the court to resolve their conflict, they successfully negotiated locally in a way which was acceptable to the both groups.

Power relationship

Power relationship was a common characteristic in both the creation and the resolution of conflict in this case because the conflict was repeatedly manipulated by politicians for their political benefit. Earlier in 1970, the source owner agreed to share the water source with two powerful people because they forced him to do so. It was very difficult for him not to give water to them because of their strong influence and hold in the village. Even till 1989, the power relationship in the village was stable and the new users were more influential. But after the restoration of democracy, the earlier stable power relationship was changed. The emergence of different political parties drastically changed the local power structure. The permanent users, the new users and the villagers were involved with different political parties as their voters and supporters. Therefore, these political parties exercised their political and social power in favour of their voters and supporters, thereby greatly influencing the negotiation process. In this case, power relations among the actors were crucial in the community level water use negotiation process. Consensual conflict resolution could be achieved without any delay if earlier power relationships were acknowledged. But this type of power relationship was not really contributive to the democratisation of society.

The discussion of the case study clearly illustrates that this case is an example of successful water use negotiation at the community level. Different factors and actors played important roles to resolve the conflict in a condition of consensual accommodation. Among them local laws, religious norms, and customary practices greatly influenced the negotiation process. The roles of local institutions, technical report of the overseer and the facilitation process of ENAP were other contributing factors in this successful negotiation. The importance and suitability of local institutions to resolve water use conflict at community level was distinctly observed. Different local institutions provided effective forums to discuss the problems and to explore alternatives. These institutions have their own peculiarities in dealing with the activities of community members. Learning aspect in this case was strong. Social networks were effectively mobilised to bring conflicting parties to the negotiation table. The facilitation role of NGO proved to be crucial to bring the conflicting interests of different people to an agreement.

Conclusion

I used community level water use negotiation practice as a starting point to analyse the dynamics of conflict resolution practices using legal anthropological and social learning perspectives. This conflict was related to acquisition and distribution of drinking water and legitimate way of control. Hence, the interpretation of the case was based on normative beliefs and values of the community. The emergence of networks and purposeful platforms (Röling 1996a) gave optional choices for forum shopping (Benda-Beckmann 1981) to the disputing parties. The case shows that the users are capable and knowledgeable of negotiating for sharing the water source in a plural legal and normative situation using various forums. The role of local norms and institutions is very important in conflict resolution. Learning from experiences, joint decision making and collective action, effective communication, purposeful platforms and local networks are also important variables in any successful negotiation. The study shows that different groups and individuals react very differently to the same problem. This leads to the conclusion that conflicts over water resource are not neutral but culturally and socially defined and purposefully interpreted. One of the lessons I can draw from the case study is that communities are not guided by a unitary legal system and that rules do not always shape the behaviour of people. Rules are modified locally by people to suit their needs and claims. Conflicts are not only harmful but also play a positive role in changing existing power structures and social relations towards the democratisation of society.

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Glossary of terms as used in this book

adhikara	right or claim; authority
adhiya	a system of sharecropping in which the landlord appropriates half the produce as rent
aguwa	leader of an irrigation system, used by Tharus
badhgar	headman of a Tharu village, used in Rajapur
bakas patra	a document transferring property as a gift
bandhak	possessory mortgage
bandhaki	a mortgagee
bari	upland fields, similar to *pakho,* where maize, millet and potatoes are grown; increasingly, *bari* fields are irrigated during winter
bataiya	sharecropping
begari	forced, unpaid labour, usually for landlords and other village functionaries
bhit	unirrigated land and homesites in the Terai region, similar to *bari* in the hills
bhog	enjoyment
bhog chalan	right to enjoy or continue using land, water, forest, road, etc. based on 'customary' or traditional use
bhupati	lord of the land, an epithet for Hindu kings
bigha	a unit of land equivalent to 1.6 acres or 0.67 hectares, used in the Terai
birta	land grants made to individuals by the king or the state, usually tax-free and inheritable
birtawar	a holder of *birta* tenure
budha-paka	the elderly
bukrahi	the wife of a bonded labourer known as *kamaiya*
chaudhari	a functionary responsible for tax-collection at the *parganna* (group of villages) level in the Terai before the *[jimidari]* system was introduced
chawkidar	[*chaukidar*] watchman or guard
chuhan	drainage water, usually from one field to another
daudaha	officials sent from the capital to the districts to hear complaints and resolve disputes

dhanhar	irrigated land where rice can be cultivated, used in the Terai for *khet*
dittha	a government functionary
guthi	an endowment of land made for religious, social or philanthropic purposes.
hak	right or claim; authority
jaggadhani	landowner
jaggawal	[*jaggawala*] landholder; a person who has rights to receive rent from a land
jagir	*raikar* land assigned to government officials in lieu of their salaries
jagirdar	the holder of *jagir* tenure
jal upobhakta samiti	water users committee
jamindar	used as alternative spelling of *jimidar*; currently used to mean a landlord with large holdings [also *zamindar*]
jhara	forced and unpaid labour, usually due to the state but also to government functionaries such as tax-collectors; also compulsory labour contribution for repair and maintenance of irrigation systems
jharali	as in *jhara*
jimidar	a revenue collector at the village (*mauja*) level
jimmawal	a revenue collector functionary of *khet* lands in the hills
jirayat	a plot of taxable land attached to the post of *jimidar*, as part of his emoluments
juini	share of ancestral property kept by the parents for their maintenance during old age
kaata	administrative unit consisting of several villages located at the foothills or lower slopes of hills in the Terai, similar to *parganna*
kalmi	labourer
kamaiya	bonded labourer (annual contractual labourer)
kattawal	a village herald
khara	fine for not fulfilling an obligation, such as labour contribution, or infringement of rules
khet	irrigated land in the hills, usually levelled and bunded, where rice can be grown (often translated as low land)
khola	[*kholo*] a small river
kholsa	[*kholso*] a stream flowing in a ravine, usually only during monsoon
kipat	a form of land tenure in which locally based kin group owns the land, prevalent among a few communities in Nepal, such as Limbus and Rais
kisan	farmer

kotwal	village functionary, a sort of policeman and herald
kulari	[*kulo*] guard, especially of the diversion structure [also *kulera*]
kulo	irrigation canal
kulo samiti	a committee which manages the canal
kuwa	a well or water hole
mahato	a Tharu village headman
malik	lord
malpot	land revenue (tax)
mato muri	a unit of land equivalent to 1,369 square feet; 4 *muries* equal one *ropani* (0.05 ha)
mauja	a village as a unit of settlement and revenue collection
mitra-saino	ritual friendship
mohi	tenant farmer
muhan	a spring
mukhiya	a tax collector in the hill region, usually of produce in *bari* or *pakho* land
mul	a spring
muluk	land or country, also used in the sense of possessions of the king
muri	a volumetric unit equivalent to 48.77 kg. of paddy, 68.05 kg. of wheat or maize
pakho	unirrigated land in the hills on which crops such as dry rice, millet or corn can be grown, often used synonymously with *bari* (upland)
pahadi	[*pahari*] a person from the hills
pale	guard; turnholder
palebhai	turnholder or shareholder of irrigation water, as used in Ilam
pancha-bhaladmi	the five respected persons
panchakhat	five great or heinous crimes such as murder, armed robbery, incest, treason, etc. punishable by death, bodily mutilation, banishment, confiscation of property or degradation of caste
pancharuwa	a water distributor, a term used by Tharus, similar to *panipale*
panbatuwa	water distribution structure
panchayat	a partyless political system introduced by King Mahendra in 1960
panikar	[*pankar*] water-tax; a fee levied for use of irrigation water
panipale	water guard and water distributor
parampara	tradition
parganna	[*praganna*] a unit of revenue administration in the Terai, consisting of a group of villages known as *maujas*
pathi	a volumetric measurement, one twentieth of a *muri*

patwari	[*patuwari*] a village level functionary in the Terai responsible for maintaining revenue records
pot	land tax
purohit	a household Brahmin priest [also *pandit*]
raikar	land on which the state collects tax
raiti	a landholder (tenants on *raikar* lands)
raja	(usually used as *raja-rajauta*) a vassal chief or a king, usually of small kingdoms
rajya	a vassal state or principality
rakam	land granted to a person to perform services for the state
ropani	unit of land measurement in the hills, equivalent to 0.05 ha.
sakcchi	[*sakcchi*] witness
sardaruwa	leader, like *aguwa*, especially of irrigation users, used by Tharus
shakti	power, force
siran	head
siran kulo	the most upstream irrigation canal
subba	village headman and revenue collector among Limbus
talukdar	a village level revenue collector in the hills
thari	a village level revenue collector in the hills
thek thiti	a system of land tax collection on a contractual basis in the hills
tiro	land tax
zamindar	currently used to mean a landlord with large holding; used earlier as an alternative spelling of *jimidar*

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About the contributing institutions

Legal Research and Development Forum (FREEDEAL) is a Kathmandu based, registered Non-Governmental Organisation engaged in research, training, legal literacy and socio-legal activities. It undertakes multidimensional and multidisciplinary research on environment, water rights, civil and criminal problems, the legal profession and the judiciary. It also trains staff members of other NGOs on anthropological research methods, especially pertaining to land and water rights, organises legal literacy workshops and conferences on various legal topics. FREEDEAL has published several books, mainly dealing with company and constitutional law, and is planning to publish a series of books on land, water and environmental rights in Nepal.

The Chair of Agrarian Law and Rural Development is part of the Department of Social Sciences of Wageningen Agricultural University. In teaching and research the members of the chair group are concerned with the significance of complex legal systems and institutions for rural development. One of the major themes is the management and exploitation of natural resources in third world states, with specific attention for (common) property regimes, equitable access to and sustainable use of natural resources. Research by staff and PhD students is carried out in Indonesia, Nepal, India and some African and Latin American states. Besides, problems of social (in)security, cooperation and financial intermediation of rural populations, governance and gender issues receive special attention. Theoretically, teaching and research combine legal and legal anthropological and sociological approaches. Members of the chair group have been engaged in several international teaching and research training courses. The chair participates in the Dutch Research School CERES.

The Faculty of Law of Erasmus University Rotterdam teaches law with a special focus on its social and economic settings. Social sciences and economics are important parts of the curriculum and in research. Main fields of study are business law, international law and comparative law. In international law issues of natural resources and global governance figure prominently.