

Legal and extra legal channels for the redress of historical injustice: Water rights in India and South Africa

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1. Introduction

Amongst the principal challenges confronting improved access to water for historically disadvantaged social groups is water scarcity resulting from entrenched inequitable patterns of water use. This challenge is compounded by the complex nature of property rights over water, essentially a ‘common-pool’ resource, the use of which tends to be governed by a mix of formal laws, customary rights and constantly evolving informal practices. This paper draws from case studies in India and South Africa to argue that the question of securing water rights is intrinsically linked with the establishment of effective common property regimes for the governance of water. Through two different but related scenarios, the paper demonstrates that legislation plays an important part in this process, but is by no means sufficient to secure water rights equitably. In the process, it explores the more complex relationships that exist between water rights, collective action and the law.

2. Water rights: Tensions of a ‘common-pool’ resource

A property right is defined as ‘an enforceable authority to undertake particular actions in specific domains’ (Ostrom 2000: 332), but there has long been the recognition that property rights are actually social relationships between people in relation to a resource. Property rights regimes are broadly classified according to the holder of these rights: public (the state), private (individuals or legal individuals like corporations) or common property (a clearly defined group of people with legal rights to exclude non-members from using the resource).

While water resources may be privately held, there are inherent problems of operating a perfectly private operating system for water. These problems are owed to water resources sharing two important attributes of what have been described as ‘common pool resources’. These attributes are: one, *non-excludability*, i.e., it is costly and difficult to exclude individuals from using the good, either through physical barriers or legal instruments and two, *subtractability*, i.e., the benefits consumed by one individual subtract from the benefits available to the others (Ostrom 2000: 337). Indeed, despite these attributes, water resources everywhere are not necessarily governed by common-property regimes. Often times, in addition to being privately held, water and other natural resources like forests, may be governed by ‘open access regimes’, where no one has the legal right to exclude anyone from using that resource. Open access regimes include classic cases such as the atmosphere and the open seas, but frequently, open access regimes are also the consequence of ‘ineffective exclusion of non-owners by the entity assigned formal rights of ownership’ (Ostrom 2000: 336). There may also be external interventions by the state such as nationalisation of water and land resources in a number of developing countries in the 1960s, which wiped out *de facto* local users’ common property regimes to *de jure* government property regimes, which then in effect became *de facto* open access regimes. These sorts of interventions have been to the detriment of local users².

This paper makes the case that the management of water, and the securing of water rights henceforth, is essentially a problem to do with the creation of a common property regime for what is essentially a common-pool resource. In most developing countries, water rights are generally

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² The harmful effects of nationalizing resources that had previously been governed by local user-groups have been well documented in India (Gadgil and Iyer 1989; Jodha 1990, 1996) and elsewhere.

based on one of three systems: *prior appropriation* rights or first-come, first-serve allocation; *riparian* rights or allocation based on proximity to flows; and *public allocation* that involves the publicly administered distribution of water. In scenarios as complex as this, a commonly recommended solution for the ‘effective governance’ of water is privatisation. The privatisation argument is put forward by proponents of ‘formal markets’ who believe that only the formal, market-based allocation of water based on ‘well-defined, private, exclusive and transferable rights to water’ can be efficient, besides serving a range of other purposes such as ‘creating entitlements where none existed’ and ‘allowing environmentalists to purchase water rights’ (Mohanty and Gupta, working paper). They are critical of the sorts of existing arrangements for water allocation in developing countries mentioned earlier, describing these as non-market and prone to creating ‘distortions’. This market-centric approach has been criticised on a number of grounds, not the least of which is that the privatisation of water is far from simple. Ostrom (2000) argues that water being a mobile resource unit, privatisation leading to private ownership usually means the individual ownership of withdrawal rights, associated with the ‘allocation of a particular quantity of water per unit of time or the allocation of a right to take water for a particular period of time or at a particular location’, and implementing operational and efficient withdrawal rights is very difficult in practice (Ostrom 2000: 350).

The other response to problems surrounding water rights is to codify these in law, but this is not uncontested either. To begin with, traditionally, water along with other ‘basic’ elements such as space, air and energy has been perceived as a ‘non-legal object, that is incapable of becoming property’ (Singh 1992: 13)³. This eliminates water rights as being purely ‘legal’ rights, as they have not been ‘granted’ by the state or law, only ‘recognised’ by it. Traditionally moreover, water rights have often been group rights of communities or even whole villages over tanks, streams, river banks etc, and this has subsequently conflicted with the imparting of individual rights through modern statutes. The other major conceptual issue regarding water rights is whether they are positive- wherein the state or other people, on whom the corresponding duty lies, can be compelled to ensure that an individual is provided with water- or negative- where the state or other people merely need to keep away to ensure that the individual can enjoy unfettered access (Singh 1992).

Counter-arguments to legal codification have also been proposed by scholars using Amartya Sen’s ‘entitlements’ approach. Within this approach, the law is an important mediating agency that influences the bundles of commodities that an individual can exchange for what he owns; thus, legal shifts may affect both access to and degradation of common property resources, consequently leading to entitlement failures (Sen 1999 cited in Parthasarthy 2002: 3)⁴. Moreover, what is commonly referred to as the ‘law’ or the ‘legal system’ generally is only ‘that portion of the legal structure that is based on what we will come to recognize as the “market principle”’ (Yasuda 2000 as cited in Parthasarthy 2002: 4). The disregard of non-market domains only provides support to dominant legal systems in suppressing traditional or customary rights (Parthasarthy 2002: 4). Citing seminal studies by Arun Agarwal (1999) and Jishnu Das (2000), the author shows that customary legal regimes have provided both property and usufruct rights as well as flexibility of operation, and also that state actions such as the redrawing of village commons or other kinds of legal reinforcement can impact these regimes adversely. A case is thus made for ‘legal pluralism’ within which traditional or customary rights can exist viably.

³ This has been observed in a variety of contexts. For example, the Roman Law did not ever classify running water as capable of becoming someone’s property (Singh 1992). Singh also cites Halsbury’s *Laws of England* which explicitly mentions that water in general cannot be the subject matter of property (1992: 13).

⁴ Common-pool resources are more typically referred to as common property resources, without necessarily alluding to the type of regime they are governed by.

In practice, water rights are mediated by a complex interplay between the formal legal structure and local governance arrangements that may or may not be the consequence of customary rights. Further, as this paper seeks to demonstrate, effective water rights that ensure improved access to water for historically disadvantaged social groups can only be secured when the bigger problem of effective common property regimes that govern water resources is addressed. It draws from case studies in India and South Africa that demonstrate this point, in different ways. In India, the legal framework for water property rights is a combination of customary, juristic, riparian, statutory and group rights. While ground water beneath privately owned lands constitutes private property of the landowner, this is not the case with respect to flowing or standing surface water, where the state continues to hold ‘absolute’ rights while recognising customary and riparian rights. The case study shows how this context sets the ground for various local interpretations of water rights that militate against the establishment of common property regimes. South Africa embodies the rather different situation where the post-apartheid state in its recent 1998 Water Act effectively sets out to extinguish property rights in water, and create a common resource that is to be managed by a three-tier common property regime, at the national, catchment and local water users’ levels. The case study shows how well organised local resistance from existing water users hinders the fulfilment of such progressive legislation. Both cases powerfully illustrate the inadequacy of legislation alone to guarantee effective and equitable common property regimes, and the imperative need for historically situated extra-legal conditions to facilitate such regimes.

3. Water rights in India: Common property, collective action and the law

In India, the central government is responsible for regulation and development of inter-state rivers and river valleys (Union list Item 56), whereas state governments are responsible for water supplies, irrigation and canals, drainage and embankments, water storage and water power (as subject to the provisions of the Union list). However, under the *de facto* interpretation of these responsibilities, state governments have emerged as pre-eminent and water has come to be perceived as a state subject. As mentioned earlier, water rights of the people can be classified into five different types, and their correlation with rights held by the state is illustrated in the table below.

Table 1 Water rights of the people and the State in India

Water Source	Rights of the people	Rights of the State
Rivers & Streams	Customary, riparian and other rights recognised by the courts and under the Easement Act, 1882	Absolute rights of the state under Irrigation and other laws
Tanks, lakes (artificial water bodies)	Individual rights of landowners; customary usufruct rights of the people	No rights if tank is on private land. Rights vested in the panchayats or municipality if tank is on public land.
Tanks, lakes (natural water bodies)	Customary rights of the people	Absolute rights of the state
Private wells	Absolute rights of the landowners	No rights
Public wells	Customary rights of groups (castes or communities); but rights of all under the Constitution and the Civil Liberties Act	Rights of the state to regulate
Tube wells	Unlimited right to draw water from tube wells	Rights to regulate the use of public tube wells

Source: ‘Water Rights in India’ by Chhatrapati Singh (1992), p 25

The first and most important legislation that legitimised the customary rights of the people was the Indian Easements Act of 1882⁵. This Act provides two rules for recognition of easements: first, by long uninterrupted use for 20 years and second, by local customs. Section 2(6) of the Act also recognises customary rights in or over immovable property that any person, the public or even the government may possess, irrespective of other immovable property. Thus, a right may exist by custom in which some people are entitled to take water from another's land. Similarly, riparian rights, or rights of landowners to use the water of a stream or river, which flows past his land equally with other riparian owners, have been established through the recognition of customary law. However, the state continues to hold 'absolute' rights over surface water, producing a number of contentious situations. The state's rights have in the past been challenged by riparian users, who claimed that the state had violated their rights in its pursuit of irrigation projects⁶. These situations have led to arguments for better clarification of surface water rights (Mohanty and Gupta, working paper).

Laws subsequent to the Easements Act have slowly shifted the emphasis on people's water rights from customary to proprietary or usufruct rights (Singh 1992). The Transfer of Property Act 1882 states that easements cannot be transferred separate from the 'dominant heritage'; thus, rights to groundwater belong to the landowners, and can only be reassigned if the land itself is transferred. There are also no customary rights over groundwater, regardless of type. Further, since groundwater is attached to land ownership, which is governed by the tenancy laws of the state, there is no limit on how much groundwater a particular landowner may extract. This has serious equity implications, and there have been repeated recommendations for the separation of groundwater rights from land rights (Kerr et al 2005, Singh 1992).

Finally, group rights of village communities over publicly owned water resources such as tanks, ponds, streams and public wells arise from statutory provisions, especially the Panchayat Acts of various states⁷. Panchayats are by law, required to regulate the usufruct rights of all people in the village to these water bodies, but their performance has been varied and in most cases, apathetic. This situation acts as a constraining factor on the establishment of common-property regimes, further allowing wrongful claimants of customary and riparian rights and engendering inequitable situations of accessing common water bodies. This is the subject of the following story.

The story of Neelpura, Madhya Pradesh

The story of Neelpura⁸, a small tribal village in Dewas district in south-west Madhya Pradesh, a state in central India, is one of water rights being denied to the poorest people through the deliberate misinterpretation of law by a small but powerful minority. An equally integral part of the story is that this injustice was redressed, not through any change in formal legislation, but through the overturning of the prevailing inequitable arrangement through a new collective agreement, crafted through popular mobilisation.

The legal framework for water rights in Madhya Pradesh resembles other parts of the country; 'all lands belong to the state government, *including standing and flowing water*, mines, quarries, minerals and forests, reserved or not, and all rights in the subsoil of any land are the property of

⁵ An easement 'is a right which the owner or occupier of certain land possesses, as such, for the beneficial enjoyment of that land, to do and continue to do something, or to prevent and continue to prevent something being done, in or upon, in respect of certain other land not his own' (Indian Easements Act 1882).

⁶ Both the Madras High Court in 1936 and the Bombay High Court in 1976 have established that the state's rights do not amount to 'absolute' rights (Mohanty and Gupta, working paper, p 12).

⁷ Panchayats are three-tier elected local bodies at the district, block and village levels, and were granted constitutional recognition in 1993.

⁸ Name of the village and all individuals have been changed to preserve anonymity.

the state government⁹. However, the state is somewhat unique in that it accepts formal responsibility for providing *nistar* or communal land to serve a variety of common ends (such as cremation grounds and parks) required for the ‘business of living’ (Ramanathan 2000-4). Further, the Code also recognises customary and easementary rights of individuals to land and water on occupied lands- that do not belong to, or are controlled or managed by the state government. Such rights are recorded in the *wajib-ul-arz*, a record of customs in each village. The state government is authorised to intervene in the *wajib-ul-arz* ‘only when all persons interested in such entry so desire, or where a court intervenes to rule on an existing entry, or decrees the existence of a custom that has not yet been recorded’¹⁰.

Dewas is a dryland district, with low and undependable rainfall, but contains striking regional disparities between its plateau and valley portions as divided by the Narmada river which flows through the district. The ‘ghaat-upar’ (in Hindi, meaning the area above the valley) region comprising the fertile Malwa uplands is both economically and politically dominant within the district. Neelpura is located in Bagli *tehsil* (block) deep in the valley or *ghaat-neeche* and shares its larger history of economic marginalisation and resource degradation. Bagli and other parts of the *ghaat-neeche* have large tribal pockets, interspersed with a non-tribal majority. In Neelpura, like elsewhere in Bagli, most tribals have small plots of land (1-3 acres) that were given by the government at the turn of the century, but practise rainfed agriculture. They suffer wage related exploitation at the hands of their non-tribal neighbours and have also succumbed to a tortuous routine of annual migration to the Malwa uplands, where unlike *ghaat-neeche* villages, irrigated cultivation continues for the winter (*rabi*) crop as well as during the summer.

In 1992, a small group of left-minded friends set up an NGO in Bagli with the intention of engaging in grassroots work and advocacy in this politically and economically marginalized region. This NGO was called *Samaj Pragati Sahyog* (in Hindi, meaning ‘Support for Social Progress’), henceforth referred to as SPS. The organisation started their activities in Neelpura, which was both small and poor, as also conveniently located near the main road. Water scarcity is the key problem afflicting the region, and SPS obtained funds from the central government to implement a number of well-digging and water conservation projects in the village. Under various schemes, it excavated, repaired and deepened the wells of virtually every farmer in the village. Neelpura has only one common water body, a *naala* or stream of water which is 1000 meters long and flows down through the heart of the village. Farmers have fields on either side of the *naala*, though lands upstream are far more fertile than those downstream. The lower reaches of the Neelpura watershed have an underlying stratum of limestone and by the time the *naala* flows downstream, most of its water disappears underground. SPS quickly discovered that the use of this *naala* had been improperly appropriated by a small group of upstream farmers, in particular Mahbub Khan, the largest landowner and moneylender in the village, who drew waters continuously through underground channels and daringly, through electric pump sets and diesel engines from the surface itself. With a few farmers siphoning off waters upstream, poorer farmers downstream had practically no access to running water or the opportunity to recharge their wells. Village livestock were the worst affected, since the *naala* ran dry after the rainy season.

Following our previous discussion, the appropriation of *naala* waters by upstream farmers was first of all, a violation of riparian water rights since riparian users downstream were being deprived of their share of water, and secondly, a violation of group village rights over what was a public resource. Moreover, despite the *naala* being the only common water body in the village

⁹ The Madhya Pradesh Land Revenue Code 1959, cited in Ramanathan (2000-4: 1), italics added.

¹⁰ The Madhya Pradesh Land Revenue Code, Section 242 (5)

and the presence of a clearly identified group of users¹¹, there were no effective rules governing its 'common' use. Thus, while the *naala* was theoretically being governed by an 'open-access' regime, in practice, withdrawal rights over its waters had been privately appropriated by a dominant and exploitative minority. Farmers felt disgruntled about this- indeed, they had a fine understanding of the intricate ecological relationships between the water of the *naala* and village groundwater- but had never collectively mobilised to challenge Mahbub and the handful of other upstream farmers owing to the context of unequal power relations. During its well-digging activities, SPS encountered apprehensions from a large number of farmers that increased groundwater through well-digging may adversely affect the flow of *naala* waters. However, they also appreciated that there was a reduced need to depend directly on the surface water of the *naala*, and soon recognised that their newly acquired wells would not be charged if *naala* waters did not flow continuously.

In 1995, SPS was invited by the Dewas district administration to implement a watershed development project in Neelpura watershed¹². The state government implements the Union Ministry of Rural Development's Watershed Development Programme, designed to regenerate rural livelihoods through soil and water conservation. Watershed project works included treatment of the *naala*'s catchment, but SPS realised that under the existing arrangement, a rich, minority would corner the likely benefits. It resolved not to go ahead with project activities until the arrangement had been overturned. It is clear that SPS was attempting to intervene in a highly contentious area that other project agencies may have disregarded, but one that had actually been specified within its role as a project implementing agency. The Ministry of Rural Development's policy framework emphasise 'common property resources' and their proper consideration within the project action plan. In the three years since its arrival in Neelpura, SPS had been working to mobilise popular opinion in the village to formulate a collective agreement to regulate the use of *naala* waters. This agreement was ultimately formulated in October 1995.

139 farmers from Neelpura and some adjacent villages, who constituted 99% of the co-riparians of the *naala* signed a written resolution, which in translation from Hindi reads as follows:

It is decided by consent (*sarvasammati*) that nobody would ever draw water from the *naala* using a *naarda*. Those farmers who have wells will also not draw water from the *naala* using motors. Those farmers who do not have wells have agreed to draw water from the *naala* on a limited basis according to rules. After the water in the *naala* stops flowing, nobody would draw water from it, irrespective of whether they have wells or not. This water would be kept for cattle only. *All villagers agree to this resolution (italics added).*

Mahbub Khan protested vehemently, but under the weight of collective opinion and the NGO's vigilant stand, had to block the underground channels with cement along with the other farmers. Those who had water in their wells or lands on which wells could be dug, had to remove motors from the *naala*. SPS even constructed additional wells wherever necessary, free of any contributions from the farmer. The *naala* agreement was a matter of tremendous pride for SPS, and it mediated this to the last detail. In the initial days after the agreement, enthused villagers set up a system of rotation to watch the *naala* against possible violators at night.

¹¹ Indeed, the *naala* possessed both the attributes of 'common-pool' resources identified by Ostrom, i.e., non-excludability and subtractability.

¹² The term 'watershed' above any point on a defined drainage channel is used to denote all the land and water areas that drain through that point, leading to the 'normalisation' of a 'micro-watershed' as a 'rational' unit of planning (Tideman 1998: 7).

Mahbub Khan moved the court against the agreement, claiming 'easementary rights' over the *naala*, under the Indian Easementary Act of 1882 recognised in the state Land Revenue Code of 1959. As previously stated, the principal clause of this Act is it allows a single user or group of users exclusive or predominant use over a village resource, on the basis of 'long use or prescription', on the grounds that this use has been peaceable, open and uninterrupted for at least 20 years, as an easement and over a resource that is not owned by anyone in particular. His response bears crucial implications for the relevance of law in guaranteeing water rights. To begin with, claiming easementary rights over *naala* waters was inappropriate because the resource in question was a *common* body, the use to which had been guaranteed through the recognition of *nistar* or communal rights by the state Land Revenue Code. In a context where Mahbub had never been challenged over his appropriation of *naala* waters, such misinterpretation of the law was deliberate and intended precisely to perpetuate an unjust and illegal arrangement. Given that the majority of the other users are poor and illiterate with little or no understanding of their rights, exploitation based on such legal misinterpretation could have been unchecked for long.

Acting on the strength of the collective opinion it had mobilised in Neelpura, SPS fought back claiming that none of the grounds put forward by Mahbub were valid. After extensive legal research, it offered convincing reasons- the *naala* was actually owned by the government, which in 1993 had issued an order prohibiting villagers to refrain from its use (apropos its 'absolute' rights over all 'flowing and standing water'), and Mahbub himself had claimed right of use for the last 17 years only. Mahbub was reprimanded for coming to court with 'unclean hands' and his appeal for 'easementary right' was struck down. This had the effect of upholding the *naala* agreement and effectively altered the local field of power. Mahbub Khan was dealt a clear blow, symbolic and material, and SPS established itself as pro-active agency of change.

The process of formulating this agreement and abiding by it introduced new political as well as economic behaviour by farmers in Neelpura. SPS had effectively facilitated the establishment of a common property regime with clearly stated rules for a clearly defined group of users of what was essentially a common pool resource. This episode had an extremely positive impact on the working culture of panchayat institutions in the area. In a context where panchayats rarely convene gram sabhas (village assemblies), the Bhimpura-Neelpura panchayat had passed a public resolution legitimising the *naala* agreement. SPS had thus also galvanised the locally elected panchayat into securing the group water rights of its constituent village community over the *naala*. In economic terms, the *naala* agreement proved to be central to the more equitable distribution of typical project benefits, allowing most farmers new opportunities for income generation (including increases in double and multi-cropping, improved cropping practices and the growth of easily marketable crops such as cotton and soybean). As a result of these changes, the poorest tribals from Neelpura were spared of their arduous annual ritual of migration to the Malwa uplands during the long, dry summer, and have since been able to work on their own fields, or as wage labourers in nearby lands, but also on project construction work in their village and remain hopeful of finding employment through the expanding activities of the NGO.

4. Legislating reform in South Africa: creating a common resource

As in so many other regards, the past decade in South Africa has witnessed measures taken by government to redress the gross discrimination in water rights. The passage of new legislation promised radical change in the process by which access to water is determined. Drawing on work undertaken in the sugar and fruit-growing 'lowveldt' area near Malelane, in Mpumalanga Province, this paper identifies obstacles to achieving that change and possible ways to overcome them.

Under the apartheid regime, water rights were defined by the 1956 Water Act, which recognised both ‘private’ water (wells, springs and streams on privately owned land), and ‘public’ water (water shared among different users). Rights to public water were primarily riparian rights, with the quantity of water to be withdrawn from a stream by any individual notionally determined by the length of their riparian boundary as a proportion of the total. In common with many other parts of South Africa, the land around Malelane was divided up in the early twentieth century into farms for European settlement, with each farm having the possibility of drawing water for irrigation from one of the rivers in the area, principally the Crocodile, or its tributaries the Lomati or Komati. Africans had no rights to land, and therefore no rights to water. Under the 1956 Water Act, the government reserved the right to designate a Water Control Area where competition for water was strong and regulation was needed. In rural areas, management of water in a Water Control Area was delegated to the local Irrigation Boards. Although Irrigation Boards are ‘self-governing’ farmers organisations, with officials elected by the membership, the designation of a Water Control Area greatly reinforced the powers of the a Board to regulate individual farmers’ use of water, and, even more important, extended this regulation to all farmers using irrigation within the Board’s area of jurisdiction. Outside Water Control Areas, Irrigation Boards only governed water use by those who voluntarily were members.

From the 1960s to the 1980s commercial agriculture developed rapidly in the lowveldt, focused primarily on sugar to supply a sugar mill at Malelane , and tropical and subtropical fruit (citrus, bananas, mangoes, and papaya) for the South African and export markets. As a result of intensifying water use for irrigation a Water Control Area was established. In the mid 1970s the South African Department of Water Affairs made formal allocations of permitted amounts of water that each riparian property could withdraw from the rivers covered by the Water Control Area. By the 1980s the apartheid policy sought a more formal separation of the black population by designating ethnically-defined ‘homeland’ areas as the areas in which black people would be legally allowed to live and to which black people would be moved from areas reserved for the white population. A homeland area called Nkomazi, one of a number of disparate areas to be administered by an African entity designated as KaNgwane, was established in 1982 in the lowveldt, at the margins of the commercial farming area, but including a number of farms with riparian water rights that the government had purchased for the resettlement of the black population. . At the establishment of the Kangwane administration in 1982, the Nkomazi region was allocated the water rights of 17 farms, totalling 7327 ha along the lower Komati which fell within the homeland boundary (Government Gazette No 8061, 5/3/82). Water rights were also proclaimed on farms totalling 7196 ha, also on the lower Komati but within ‘South African’ (white farming) territory. In the decade that followed, irrigation development on the Komati in Kangwane amounted to only 400 ha, but by 1995 a government study (JIBS reference) reported developed irrigation on the lower Komati as 14335 ha, which suggests that the Irrigation Board had permitted the South African commercial farmers to use the Kangwane water allocation.

The advent of democratic government in South Africa in 1994 brought constitutional change and the repeal of apartheid legislation, and was followed by a wave of new laws that sought to redress the past discrimination against Africans’ rights to use natural resources. The purpose of the National Water Act of 1998 is stated (sect 2) as: “to ensure that the nation’s water resources are protected, used, developed, conserved, managed, and controlled in ways that take into account...

- meeting basic human needs of present and future generations;
- promoting equitable access to water;
- redressing the results of past racial and gender discrimination;
- promoting the efficient, sustainable and beneficial use of water in the public interest
- facilitating economic and social development;

- providing for growing demand for water use;
- protecting aquatic and associated ecosystems and their biological diversity;
- reducing and preventing pollution and degradation of water resources;
- meeting international obligations;
- promoting dam safety;
- managing floods and droughts,

and for achieving this purpose, to establish suitable institutions and to ensure that they have appropriate community, racial and gender representation.”

Key aspects of the new legislation are as follows:

- Effective abolition of water rights tied to ownership of riparian land.
- Abolition of the distinction between ‘private’ and ‘public’ water, and the assertion of the status of “all water in the water cycle whether on land, underground, or in surface channels, falling on, flowing through or infiltrating between such systems” as “an indivisible national asset” over which the National Government will act as the custodian in the public interest (DWAf 1997).
- The guarantee of water to meet basic human needs and to maintain environmental sustainability, to be known as ‘the Reserve’.
- The allocation of water to meet other needs that are beneficial in the public interest.
- Allocations will not be permanent, but for a ‘reasonable period’, and may be traded between water users with Ministerial consent.
- The new legislation broadens the definition of water use to include any activities which result in reduction of stream flow (eg forest plantations), or deterioration of the water resource (eg waste, effluent, or cooling water disposal), or removing and disposing of underground water (eg mining).
- All water, wherever in the water cycle it occurs will be subject to a catchment management charge which will cover actual costs of catchment management activities.
- Some or all charges may be waived for disadvantaged groups to promote equitable access for productive purposes such as agriculture.
- Water management will be carried out in regional or catchment water management areas, “recognising that conflicting interests will intensify the need for national management and supervision, and that the policy of subsidiarity does not interfere with the need for a perspective on water use.
- Phased establishment of catchment management agencies, subject to national authority, to undertake water resource management in water management areas. (DWAf, 1997)
- In shared river basins, Government will be empowered to give priority over other uses to ensure that the legitimate requirements of neighbouring countries will be met.

The institutional framework for operating the new legislation has three main elements: a National Water Resources Strategy (NWRS), Catchment Management Agencies (CMAs), and Water Users Associations (WUAs).

The 1998 Water Act effectively sets out to extinguish private property rights in water and create a common resource that is common property managed at these three different levels: nation (NWRS), catchment (CMA) and local water resource (WUA). While this conceptualisation of the water resource allows for the principle of ‘self-governing’ institutions (Ostrom, 2000), the need for governance at *all* levels to implement a *national* policy of redistribution of water access to groups that were historically disadvantaged raises issues about the relationship between different levels of management, and the limits to the principal of self-government and subsidiarity.

In the Nkomazi, since 1994 black farmers have gained access to irrigation for the first time, and 9500ha has been developed in a series of schemes of 100 – 800 ha each under the Nkomazi Irrigation Expansion Programme (NIEP) on the lower Komati and lower Lomati rivers, bordering the white commercial farming areas. Individual holdings are generally in the range of 5 to 15 ha. These developments have brought black farmers into competition for water with white farmers. However, despite the completion of a major new dam in the area in 1998, at Driekoppies, further expansion of irrigation is constrained by lack of water. There is a consensus that water use by the commercial sector exceeded allocation (an “overallocation” according to water resources Director W van de Westhuyzen, interviewed in 1999, “commercial farmers exceeded their allocation” according to Technology Support Services director, Roché Mataré), but it is not clear what the consequences are for current water availability for black farmers. Within the 1992 agreement between Swaziland and South Africa on water use in the Komati catchment, the then Kangwane administration was allocated water for 12000 ha (sugar cane). Under the NIEP, projects were distributed between the different tribal authorities in the Nkomazi region, up to a total of 9500ha, with a further 2500ha to be developed in the Mswati region of the upper Komati subcatchment. There is confusion as to whether this is additional to the allocations of around 7000ha made in 1982, and indeed whether any of these agreements will now be honoured.

In practice, making water available to black farmers will depend on white farmers’ willingness to reduce the amount of water they take from the rivers. This is because a large part of the expertise and knowledge about local water use resides in the white farming sector and the Irrigation Boards. This is exemplified by the simple question of how much water is being used by the commercial farming sector. In 1999, this was illustrated by discrepancies in estimates of irrigation in the Crocodile river catchment. These ranged from 297.7 Mm³/a in a government study (JIBS 1995) to 307 Mm³/a estimated by a water engineering consultancy company (MBB 1988), to 424 Mm³/a annually scheduled by Irrigation Boards.

The reality of water management in South Africa is that local commercial interests, and particularly farming interests, achieved a large measure of decentralised governance over water use during the apartheid period, and the capacity for detailed local management of water does not exist within central state agency (the Department for Water Affairs and Forestry – DWAF). This means that the capacity of local (white) elites controlling resources such as water to resist national policies to redistribute access in favour of historically disadvantaged groups is high. The capacity of local black farmers to challenge this white domination of water resources is low, mainly due to ineffective and unfocused organisational and representative structures. These are in part a legacy of the old ‘homeland’ administrations, notably the Department of Agriculture, that have been incorporated into post-apartheid Provincial government to speak on behalf of black farmers. In the Nkomazi area there are a large number of black farmers’ organisations with an interest in irrigation development. Their effective representation is undermined by a number of factors, including: weak institutional and technical support from the Department of Agriculture, and internal tensions due to challenges to the legitimacy of land allocations made by tribal authorities.

This last factor is evident particularly in Nkomazi where the perceived success of the NIEP sugarcane schemes has prompted competing claims over land with potential for irrigation. The complexity of overlapping claims to land which are the legacy of repeated removals and resettlement of communities in ‘homeland areas under apartheid presents a particular hazard for water allocation. In particular, the allocation of an permit to use water may strengthen one set of competing land claims against another. It seems clear that the relatively large sums earned by black cane growers on the NIEP schemes, coupled with the large numbers of potential growers

excluded by the 'first phase' of the NIEP, have generated many proposals for further irrigation schemes to spread the benefits more widely among the population of Nkomazi. A main focus for representation of claims for a 'second phase' NIEP is the Central Steering Committee (CSC) for the NIEP, which brings together representatives of each of the separate irrigation schemes under the NIEP. The CSC has asked a couple of black consultants from firms based in the Provincial capital, Nelspruit, to represent the interests of aspirant black irrigators on DWAF's catchment management steering committee for the Nkomazi. One of these consultants has been involved in securing off-shore funding for a new irrigation scheme for black smallholders in the Nkomazi area.

The CSC leadership, while pressing for wider access to irrigated sugar, also makes clear its view that the advantages of a guaranteed market for sugar are offset by risks of dependency on a single crop, and are anxious to see diversification to alternative crops such as vegetables or fruit orchards and their processed products (eg fruit juice). It seems clear, however, that the local sugar mill intends to stipulate minimum areas for sugar contracts to ensure 'full-time sugar cane farmers', reducing scope for diversification. Moreover, although black farmers are represented on the local Irrigation Boards, they recognise a gulf in influence between themselves and the commercial sector, describing their participation in irrigation board meetings as "window dressing" for an organisation whose decisions reflect the interests of the largest water users.

More critically, for all the sophistication of the CSC leadership's analysis, black farmers remain inexperienced in the day to day operations of growing cane, and consequently heavily dependent upon managerial support, currently provided by commercial contractors and consultants, one of whose field staff expressed concern at the high level of dependency he felt from the irrigation groups with whom he worked. Perhaps the biggest weakness of black farmers and their representatives is the almost complete lack of an independent technical (i.e. hydrological or engineering) competence to interpret, let alone challenge, commercial farmers' information about water availability and use. Even the Nelspruit-based consultants who are working on black farmers' behalf are from non-engineering backgrounds, one being in marketing and the other in social development. The reality is that the technical competence needed for viability in the market economy exists only in the commercial sector. For black farmers it is presently only on offer from the sugar company.

With a relatively weak local constituency from which to advance redistributive change, the question arises as to what opportunities exist for the (central) state to foster a self-governing local organisation that will support change. One over-riding factor in favour of this happening is the political imperative, fuelled by white farmers' perception that if redistribution of access to land and water is not achieved by their own organisations they will confront violent expropriation as occurred in Zimbabwe (Cousins ref). There are signs that there is room for redistribution. It is widely acknowledged that irrigation on commercial farms is inefficient and up to a third of the water used could be saved if new equipment were to be installed, thus making water available for black farmers. There is also widespread acknowledgement that water tariffs should be lower for poorer farmers than for large-scale commercial water users, indicating an acceptance of a principle of cross-subsidy from white to black farmers. However, two factors that are commonly identified as requirements of effective self-governing organisations have yet to be put in place. One is the clear definition of the resource. The other is clear definition of the membership of the group with rights to use it.

Lack of clarity (see above) about the amount of water available for irrigation is a major obstacle to meaningful negotiation about (re) allocation. The DWAF has chosen the Nkomazi region as the first in which to pilot a process of registration of water use by existing water users and

verification of that water use through GPS and satellite imaging in conjunction with inspection visits to farms. This process is costly and time-consuming but is regarded as the only means by which to establish an authoritative estimate of water use, taking full account of less visible resources such as farm dams for water storage (often filled by pumping from the river), which can evade existing water use control mechanisms.

Definition of membership of the group with use rights has proved more difficult, in part because of ambiguities in the drafting of the Water Act. This regards Water Users associations (WUA), into which Irrigation Boards are expected to be transformed, as made of voluntary membership and does not stipulate that all water users must belong to a WUA. For existing Irrigation Boards, this raises the prospect of trying to manage a resource without the power to exclude other users. For those accustomed to that power, under the terms of the old Water Control Area, this is unworkable, and, indeed, the principles of common resource management state that to be the case.

The central authority thus faces the challenge of confronting local elite power in seeking to redistribute access to previously disadvantaged black farmers. In doing so it may need to combine a degree of central intervention, such as establishing an authoritative and transparent information base on water availability, with a willingness to strengthen the legal authority of local water management organisations – albeit elite-dominated – over regulation of water usage, by making membership of Water Users' Associations – and hence subordination to those local authorities' rules - compulsory for all water users.

5. Conclusion

Both the Indian and South African case studies powerfully illustrate a number of conceptual issues regarding water rights raised at the outset. First, property rights over water are determined by a complex mesh of different rights and practices, instead of a single overarching law that is straightforwardly implemented. In India, the legal framework concerning property rights over water comprises a combination of customary, juristic, riparian, statutory and group rights. While ground water beneath privately owned lands constitutes private property of the landowner, this is not the case with respect to flowing or standing surface water, where the state continues to hold 'absolute' rights while recognising customary and riparian rights. This sets the stage for various possible interpretations of water rights. Further, the apathetic condition of most panchayats in the country implies that group rights of publicly owned water resources are frequently not secured, and minority powerful interests wrongfully claim customary easement and riparian rights. The South African scenario is perhaps more progressive than India in that the post-apartheid central state in 1998 established an overarching legal framework that set out to null private property rights in water (notably riparian rights as also the distinction between private and public water) and created a common resource that is to be managed by a three-tier common property regime. The case study describes the various factors that work against the practical enforcement of this law.

Second, the law(s) securing water rights may have very different meanings in practice. The *naala* and other similar water bodies such as rivers and streams, which share properties of common-pool resources, are not necessarily governed by common property regimes. In fact, the iniquitous arrangement for water extraction prevalent in Neelpura is a widely observed problem in common-pool resources throughout India, whereby dominant elites militate against the establishment of or adherence to any commonly agreed rules of access and use. In theory then, such resources are governed by open access regimes; in practice, they are appropriated as private property by a single dominant individual or group, whose actions deprive other users of their share of the resource. In South Africa, where the law in fact created the institutional conditions to transform

the existing private governance of water into common property governance, historically driven racial inequalities of prior access, knowledge, organisation and representation allows white commercial farmers to retain an unfair control over the decentralised governance of water, which in turn defeats the progressive, redistributive logic of the new Act. In fact, an interesting fallout of the new, equitable water law is that it has intensified conflicts and contests over another resource-land-; since the allocation of a permit to use water potentially strengthens one set of competing land claims over the other. This works to the detriment of black farmers as land allocations made to them by tribal authorities frequently lack legitimacy.

Third, irrespective of formal laws- whether those in South Africa that explicitly facilitate common property regimes or in India that do not- actually existing governance regimes complement the organisational skills and knowledge of those involved. In Neelpura in India, deep-rooted ignorance of riparian and group rights allowed a dominant minority to appropriate a vital common-pool resource for their private gain, and no common property regimes could be established until SPS's dramatic intervention. Ironically enough, in this case, recourse to formal arbitration in a court of law took place only as a defence mechanism, when Mahbub Khan was challenged through collective action. It was then that Khan resorted to a deliberate misinterpretation of the law to assert his exclusive easement rights over the *naala*. The oppressed are barely aware of their rights and are not easily able to evoke law in their daily life. Similarly, in Nkomazi in South Africa, black farmers were unable to reap the true benefits of the progressive legislation as a large part of the expertise and knowledge about local water use continues to reside in the white farming sector and irrigation boards. Here again, formal changes in legislation were not enough to secure effective common property regimes, and in fact there is the pressing need for political mobilisation and awareness building in order to promote the organisational skills and knowledge of the historically disadvantaged black farmers.

To conclude, each of these issues reiterates that the guaranteeing of clear, secure water rights is inevitably linked with the larger issues concerning the effective establishment of common property governance of water, for which legislation is necessary but inadequate. The Neelpura case poignantly demonstrates how informal arrangements for the governance of water continued *despite* and *beneath* the law, and a potent combination of disempowerment, illiteracy and lack of mobilisation allowed such inequitable governance arrangements to continue. On a more positive note, the Neelpura case shows also that popular mobilisation by a pro-active agency, such as SPS, was integral to the facilitation of collective action and the consequent collective agreement. SPS acted as a comprehensive political entrepreneur: increasing local awareness of riparian water rights, mediating a signature campaign, allaying individual concerns of poor farmers, galvanising the formal recognition of the collective agreement in the local panchayat and ultimately fighting out the defendant in a court of a law (which laudably, upheld the rule of law). Each of these aspects was equally significant in redressing the unjust arrangement for the use of *naala* waters through an effective common property regime, where simply enacting legislation would not have been enough. This point could not have been truer in the South African case, where the central government needs to play the part of a pro-active agency and defeat locally vested interests, if it is to truly pursue its objective of broadening its social goals through the creation of common property regimes for water. Clearly then, water rights are contingent on complex and multi-layered relationships between the law(s), its interpretation, local power relationships and the possibility of collective mobilisation, and measures for redressing violations of such rights must take this complexity into account. Ultimately, the redress of historical injustice regarding water rights through effective common property regimes cannot occur in the absence of a larger political struggle, facilitated by a pro-active agency, be it a popular organisation or the state itself.

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