

Inter-Sectoral Water Allocation and Conflicts

Perspectives from Rajasthan

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The law and policy frameworks for allocation or reallocation of water to different uses, or within a category of use, remain underdeveloped in India. This paper intends providing a starting point for a conversation on the law and policy dimensions of inter-sectoral water allocation. Focusing on a specific inter-sectoral water allocation conflict in Rajsamand District, Rajasthan, it illustrates gaps in the existing law and policy frameworks and highlights multiple issues that need to be addressed. It argues that the law must go beyond just prioritising water uses and water allocation to understand the issue in a comprehensive manner.

Water allocation has been a worrying concern for the past couple of decades alongside focusing on ways to address water scarcity (Meinzen-Dick and Mendoza 1996). Indeed, the availability of water has become an increasingly serious issue, in particular in drier parts of the country such as Western Rajasthan. Yet, physical availability is one of various issues that must be considered in allocating water because scarcity is as much a social or an economic issue as a question of limited physical availability (UN Water 2007). This makes apportioning or distributing water among different users of a water source a complex issue.

The allocation of a finite quantity of water among different uses is often referred to as inter-sectoral allocation of water. This refers to the allocation of water, which was previously unused, for a new use (such as a new industrial unit), as well as the reallocation of water, which was previously allocated for another use (such as from irrigation to drinking water). This apportioning or distributing often does not take environmental aspects into consideration, such as environmental flows and the need of water for other living beings.

Water allocation is not a new issue, but the debate has been largely led by economists in the context of an overall push for allocation to be undertaken through markets rather than the government (Meinzen-Dick and Appasamy 2002). Inter-sectoral allocation of water has not been explored in detail from a law and policy perspective. This is partly due to that laws concerning the water sector tend to adopt a piecemeal and sectoral approach.

Water scarcity and the absence of mechanisms to ensure that its different uses are considered in view of its overall availability exacerbate inter-sectoral water allocation conflicts. Such conflicts may arise in different contexts and due to different reasons. Conflicts between different users of a single source of water, such as for drinking water, irrigation, and industrial use, is one example. This is the situation in the case study on Lake Rajsamand in Rajasthan, which is presented in Section 2. Conflicts may arise over the quality of water, for example, where pollution of surface water by upstream users has adverse effects on downstream users, or where industrial activity pollutes groundwater sources that are used for drinking water. Inter-sectoral conflicts may also arise due to the reallocation of water, for example, when use of water for irrigation, domestic supply, or fishing is allocated to industrial uses (Das and Pangare 2006). These categories are not exclusive and many conflicts involve an overlap.¹ As in the case of

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allocation, the legal aspects of water-use conflicts have not been given much attention in the literature, except in the case of interstate river water conflicts and international water conflicts (Nariman 2009; Iyer 2002).

Inter-sectoral water conflicts are not uncommon in Rajasthan and in many other parts of the country. We aim to initiate a discussion on inter-sectoral allocation of water and ensuing conflicts from a law and policy perspective. The paper proposes a new conceptual framework for inter-sectoral water allocation based on existing legal principles. It argues that it is imperative for water law and policy to recognise the links between different water uses and different waterbodies. In view of the lack of literature on the subject, we rely on a case study of an inter-sectoral dispute over the water in Lake Rajsamand in Rajasthan, which reached the Supreme Court of India, to illustrate the limits of the existing law and policy framework on inter-sectoral allocation of water and related conflicts.

1 Fragmented Law and Policy Framework

This section examines water-related laws in Rajasthan from the point of view of inter-sectoral water allocation. Two main findings arise from this analysis. First, water law in Rajasthan, as in other states of India, is fragmented. Second, there is no legal framework for inter-sectoral water allocation and conflicts. In the absence of a specific legal framework, this section examines the policy framework and judicial responses that have attempted to fill the gaps in the law.

(A) Sectoral Nature of Water Laws

The bulk of water law in Rajasthan is made of sectoral laws addressing different uses and sources of water. In the case of irrigation, there are a number of relevant laws. These include the Rajasthan Irrigation and Drainage Act, 1954 and the Rajasthan Minor Irrigation Works Act, 1953 centred on the state being the key actor in the development and management of its irrigation potential. The Rajasthan Farmers' Participation in Management of Irrigation Systems Act, 2000 provides for constituting a water users' association for every water user area. The Rajasthan Panchayati Raj Act, 1994 assigns the responsibility of irrigation works of different sizes to gram panchayats (village level), panchayat samitis (block level), and zilla parishads (district level).

Some sectors do not benefit from much legal guidance. For example, there is no specific state law on drinking water. The existing framework is limited to local laws that vest powers and functions relating to drinking water supply with local government bodies (panchayats in rural areas and municipal authorities in urban areas) and the Public Health Engineering Department (PHED) (Rajasthan Panchayati Raj Act, 1994; Rajasthan Municipalities Act, 2009).

Further, sectoral rules do not necessarily apply throughout a sector. This is because there are different rules governing access to and control over surface water and groundwater. Surface water resources are regulated by different legal rules, with the state having statutory power to control all flowing water under the irrigation laws. In the case of groundwater, access is governed

by old rules developed in the 19th century that give landowners virtually all control over groundwater. This dichotomy between groundwater and surface water confirms the fragmented nature of water laws and the difficulty of providing a framework for water allocation, in general, and inter-sectoral water allocation, in particular, in a systematic manner.

The state government has been working for the past few years to adopt water laws that are not limited to sectoral concerns and issues. This includes the preparation of the Draft Rajasthan Water Resources Management Act, 2012. More recently, the government has adopted the Rajasthan River Basin and Water Resources Planning Act, 2015 that establishes the River Basin and Water Resources Planning Authority, which will be responsible, among others, for the planning of all watershed, irrigation and drinking water projects.

Despite these recent efforts, water law in Rajasthan is characterised by the absence of a set of principles guiding all uses of all water sources, while no law considers links between different sectors and uses. This explains in part why the policy framework, although non-binding, has become, in practice, more important than water law since it provides guidance for administrators to take decisions in specific cases.

(B) Policy Framework: A First Step towards Prioritisation?

The absence of a legal framework for inter-sectoral water allocation has created a vacuum, which has been partly filled by the executive through policies. The Rajasthan State Water Policy (SWP) 2010 provides, for instance, for "judicious and economically sound allocation of water resources to different sectors, with drinking water supply as a first priority" (para 1.1.1). The remaining order of priorities for allocating water resources and planning purposes is human drinking water followed by livestock drinking water, other domestic, commercial and municipal water uses, agriculture, power generation, environmental, and ecological, industrial, non-consumptive uses and others. The SWP (para 1.2.3) also mandates including a drinking water component in all existing and future irrigation and multipurpose projects where there is no dependable alternative source of drinking water, and adopting a policy of conjunctive use of water.

This prioritisation of the uses of water is a useful guide but insufficient since the SWP is neither binding on decision-making authorities nor justiciable. In more practical terms, this means that the Water Resources Department (WRD) can change the order of priority after obtaining cabinet approval, citing exceptional circumstances (GoR 2010). Further, the prioritisation of drinking water on an ad hoc basis through executive orders is not an alternative to prioritisation as a legal norm framed in water laws.

The limitations of attempting to provide a framework for prioritisation of water uses for inter-sectoral allocation through policies have already been illustrated by developments at the national level. The National Water Policy, 2002 included, for instance, a water allocation provision that prioritised drinking water over irrigation and other uses. The National Water Policy, 2012 has, however, done away with this provision. The only

remnants of prioritisation are found in a clause stating that the “principle of equity and social justice must inform use and allocation of water.” In addition, the new policy recognises that drinking water and sanitation are “pre-emptive needs” followed by other priority allocation such as for basic domestic needs and subsistence agriculture. Beyond this, it only provides that inter-sectoral allocation should be done in a manner that promotes “conservation and efficient use.” This constitutes an unwelcome dilution of the earlier framework and confirms the undesirability of relying on policies for long-term solutions instead of developing an inter-sectoral water allocation framework. Indeed, the government can at any time, and without reference to any particular framework or procedure, amend, change and/or rewrite policies without consulting the elected representatives of the people (Cullet 2012). Policies are thus a possible starting point for an allocation framework, but they remain rudimentary as a regulatory tool.

(C) Judicial Contribution—Filling Gaps Sporadically

As mentioned, the water law in Rajasthan do not provide the basis for inter-sectoral allocation. Nevertheless, the higher judiciary has dealt with issues relating to water allocation and related conflicts on various occasions. In the absence of a guiding legal framework, it has adjudicated conflicts on the basis of claims made by the parties to the dispute and this does not provide an appropriate starting point for the elaboration of universally applicable principles.

It is nevertheless important to understand how courts have understood inter-sectoral allocation and what rules and principles have been applied to resolve conflicts. An example is *Abdul Rehman vs State of Rajasthan* (2004) where it was argued that protection of tanks and ponds was necessary to enjoy a “quality life” as guaranteed under Article 21 of the Constitution. One of the issues taken up by the Rajasthan High Court was the link between different water uses and the way in which allocation of water for irrigation and drinking water can be affected by the construction of structures such as anicuts, check dams and water-harvesting structures. The court’s decision relied on the findings of an expert committee constituted on its directions. This committee inspected various lakes, including Lake Rajsamand, and observed that anicuts were a major factor affecting water flows. It recommended that the height of anicuts be restricted to 2 metres and higher ones be dismantled (para 15). In its decision, the high court directed the state government to consider the report and recommendations of the expert committee, and to prepare a plan to take effective steps to restore the catchment areas to their original shape (para 16).

Another example is *Suo Motu vs State of Rajasthan* (SB Civil Writ Petition No 11153/2011, order of 29 May 2012), where the high court took suo motu cognisance of newspaper reports on the “premature death” of the Ramgarh Dam in Jaipur District “on account of large-scale inaction on the part of the state government coupled with illegal acts of others.”² It observed that water flows to the dam were obstructed by the excessive

construction of anicuts and directed the government to prevent the construction of anicuts higher than 2 metres. The court, however, recognised the need for anicuts with a height of more than 2 metres in exceptional cases, but made the permission of the WRD mandatory in such cases (para 25).

In these two cases, the high court focused on a specific issue concerning inter-sectoral water allocation, that is, river flows in the context of insufficient availability of water in reservoirs. This is relevant and interesting, but fails to consider several other issues and thus remains restricted in scope, as shown in Section 3.

2 Water-Use Conflicts in Rajsamand—Key Issues and Implications

The law and policy aspects of water-use conflicts related to allocation cannot be analysed without reference to specific case studies because of the lack of literature on the subject. Lake Rajsamand is an apt example because it demonstrates the various dimensions and kinds of water-use conflicts, such as inter-sectoral, intra-sectoral and inter-basin. This section focuses on a specific legal dispute and analyses its various dimensions, whether addressed in formal legal proceedings or not.

(A) Lake Rajsamand: Microcosm of Multiple Water Conflicts

Lake Rajsamand, formed in 1676 by building a dam across the Gomati River during the reign of Maharana Raj Singh (Rathore 2011), is a significant source of freshwater in the district. It is approximately 6 kilometres long, 2.5 km wide and 18 m deep with a catchment area of around 510 square km. Drinking water, irrigation and industrial use are the major uses of the lake water. The lake was originally intended to receive water from the Gomati River but two more sources were added later to provide more water—the Nandsamand Dam built in 1957 across the Banas River and the Chikalwas Dam built in 1997 on the Khari River.

The irrigation department is in charge of the maintenance of the lake. However, the power to allocate water for different uses is exercised by the District Water Distribution Committee (DWDC), headed by the district collector with representatives of different sectoral agencies, including the irrigation department and the PHED (GoR 2005).

The lake is the major source of drinking water to Rajsamand town. There are a total of 6,672 water connections, of which 6,215 are domestic (GoR 2008: 4). The PHED buys water from the irrigation department to supply drinking water to the town. Irrigation is another key use, through two canals. The right canal has around 6,000 hectares of irrigable land, which requires around 43 cubic feet per second (cusecs) of water, and the left canal has around 22,000 hectares of irrigable land with a requirement of 140 cusecs. The third important user of the lake is JK Industries, Kankroli, which is entitled to a regular supply of 41 million cubic feet (MCF) of water per annum (7,00,000 gallons per day) for 20 years through an agreement with the state government (Agreement 2006). The agreement also allows JK Industries to lift water from the

dead storage when live storage capacity is not available. Thus, it is the only user that has a right to a fixed quantity of the lake water.

Conflicts over the Use of Lake Rajsamand: A conflict among users of the lake water developed progressively. This was primarily due to inadequate supply to meet the needs of all users, which culminated in the lake drying up in the early 2000s. The water scarcity was such that there were occasions during the dry season when water was taken through tube wells and open wells from the bed of the dried lake to meet drinking water requirements (Gor 2008: 4). In meetings, farmers in the command area of the canals complained that they had not received water for a number of years, barring a few years.³

The priority of the right of JK Industries over all other users was also a matter of concern. Though this right is subject to the condition that sufficient water should be reserved for meeting drinking water needs, it does not appear to have been fulfilled all the time. It was alleged by some of our interviewees that while Rajsamand District faced a drought for five years, the district administration supplied water from the lake to JK Industries regularly, including by boring the dried bed.⁴

Physical water scarcity in the early 2000s led to responses and protests by mainly urban drinking water users of the lake (NAAUSS 2006: para 11). The Lok Adhikar Manch (LAM), a non-governmental organisation based in Rajsamand, initiated the Rajsamand Jheel Bharo Abhiyan (Fill Lake Rajsamand Campaign). Users of the lake also demanded the supply of water from the Nandsamand and the Chikalwas Dams to address the issue of scarcity.

In 2006, the scenario changed when the lake filled up to the level of 19 feet (5.79 metres) due to good rainfall. The DWDC decided on 26 October 2006 to allocate up to 5 feet (1.52 metres) of water for irrigation. This decision triggered a conflict between urban drinking water use and irrigation. Residents of Rajsamand town felt that the DWDC decision would affect their drinking water needs. It was argued that water below the five footmark could not be used because of slurry and mud and that the release of water for irrigation would result in a water crisis for the town.⁵ On 28–29 October 2006, a bandh was called for in Rajsamand by the Rajsamand Jheel Jal Samrakshan Manch to protest against the DWDC's decision. Nevertheless, the DWDC maintained that water for irrigation was allocated after reserving sufficient water for drinking purposes, and that the decision was necessary to protect the interests of farmers.

The Court as the Ultimate Arbiter: In the aftermath of the DWDC's decision, the LAM filed a public interest litigation (PIL) before the High Court of Rajasthan, challenging it primarily on the need to secure water in the lake for drinking water use. It sought a direction to maintain a minimum water level as a reserve to ensure there was enough water for drinking and other domestic purposes. The petition also sought directions to regulate the use of water for agricultural or commercial uses and for enhancing the water level by transferring water

from the Chikalwas and Nandsamand Dams. Further, it brought the issue of obstructions, including anicuts in the catchment area, which blocked the flow of water to the lake, before the court.

It took the high court four years to dispose of the matter. In its decision of 2 December 2010, the court ordered that at least 600 MCFT of water (approximately 7 feet) should be available in the lake "as far as possible" (NAAUSS 2010). This can be compared to the court's order of 10 November 2006 where it had stated that 9 feet should be kept for the purpose of drinking/domestic needs of Rajsamand town (NAAUSS 2006a). The court also directed the state government to take steps to increase the water level in the lake by diverting water from the Chikalwas and Nandsamand Dams. On obstruction to the flow of water to the lake, it ordered that the flow should be canalised.

The LAM felt aggrieved by the decision of the high court, in particular the dilution of the order of 2006. As a result, it approached the Supreme Court. In 2012, the Supreme Court upheld the order of the high court (NAAUSS 2012).

The Lake Rajsamand decision presents interesting lessons in inter-sectoral water allocation and conflicts. First, the high court applied, in effect, the principle of priority to drinking water by directing the state government to maintain a minimum level of water in the lake. The high court did not, however, refer to the fundamental human right to water, which has long been held to be a part of the right to life guaranteed under the Constitution (Subhash Kumar 1991).

Second, the court failed to engage effectively with the issue of inter-sectoral water allocation and related conflicts. It did not discuss any general principles that could be applied in the case of water use and allocation conflicts. The approach was narrow in its understanding of inter-sectoral water allocation and conflicts. The court looked at, and decided, only one aspect of the conflict and overlooked other dimensions.

Thus, the court did not address the issue of the protecting the catchment area of the lake comprehensively despite considering the obstruction of the flow of water to the lake by mining activities and dumping of wastes. Its response was limited to directing the state government to take steps to prevent the obstruction of water.

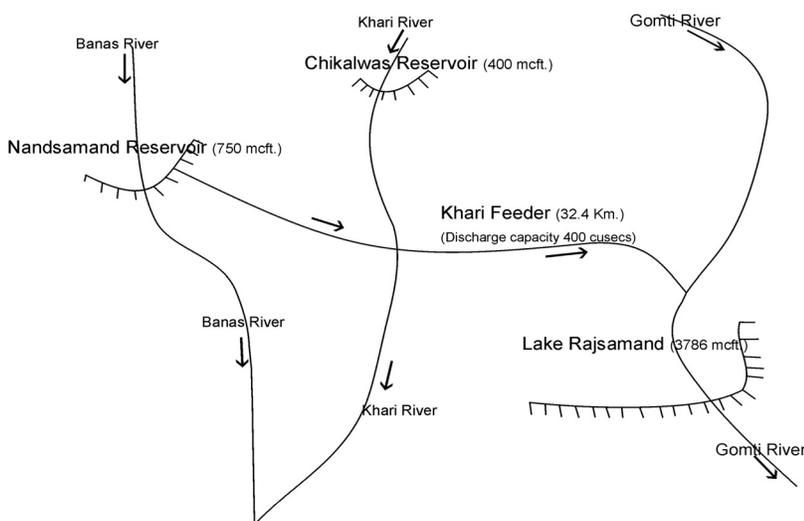
(B) Other Dimensions of the Conflict

The conflict adjudicated by the high court was conceived in the limited context of the claims made by the parties and additional representations by some other affected parties. This did not constitute a comprehensive mapping of the nature of the conflict and its broader ramifications. Several other issues should have been considered if the conflict was to be understood and resolved in a comprehensive manner.

Beyond Natural Catchment: An important dimension of the conflict over Lake Rajsamand is that it extends beyond its natural catchment. This is because a canal was built from the Nandsamand Dam to Lake Rajsamand to transfer water in times of drought. As such, the Nandsamand Dam was built on

Figure 1: Inter-basin Aspects

Lake Rajsamand and Environs



Adapted from Counter Affidavit filed on behalf of the Respondents, Special Leave Petition (Civil) No 832 of 2012 (filed on 9 March 2012).

the Banas River and supplies water for irrigation to farmers in its command area and is the major source of drinking water for Nathdwara town.

Any water allocation from Lake Rajsamand may thus affect beneficiaries of the Nandsamand Dam if water is diverted to the Gomati River basin. This was understood by water users in the command area of the dam who raised objections to transferring water to Lake Rajsamand. Residents of Nathdwara town intervened in the court case because they feared that their entitlement to drinking water would be affected by such a transfer (NAAUSS 2006b).

The court's decision did "use" the inter-basin dimension of the conflict in its directions since it requested the government to take steps to transfer water from the Nandsamand and Chikalwas Dams to Lake Rajsamand. However, it did not consider the impact of this transfer on uses of water from the Nandsamand Dam. It seems to have simply assumed that there was enough water in the Nandsamand and Chikalwas Dams. This is, however, an inappropriate basis for decision-making. Indeed, the Banas River that used to be a perennial river a few decades ago now flows only for three to four months a year downstream of the Nandsamand Dam.⁶ This has serious effects on people who rely on the river for their consumptive or non-consumptive water uses, and has even more of a serious effect on the river's ecology. The court failed to consider these issues and seems, in effect, to have triggered a conflict between users of different water sources in the name of resolving an inter-sectoral water-use conflict. Visits to the command area of the Chikalwas Dam and areas close to the Banas River indicated that people understand that each cumulative intervention is problematic and that broader solutions are necessary. There is a need to take these additional issues into consideration if judicial decisions, such as the one concerning Lake Rajsamand, are to be considered legitimate by all parties, in addition to being appropriate from an environmental flow perspective.

Mining and Water Flows: Another dimension of the conflict that was not given enough visibility in the judicial proceedings is the impact of activities that reduce water flows into Lake Rajsamand. Marble mining is one of the economic mainstays of the district that generated a revenue of Rs 877 crore in 2012–13. There are an estimated 421 mines in the catchment area of the Gomati River (NAAUSS 2006a). The main problems associated with mineral mining are dumping of marble wastes into the river, which has reduced its depth significantly, and mine pits in the catchment area, which prevent rainwater from flowing into the lake. These pits get filled during the monsoon and this water is used by mining industries (Sebastian 2005), exacerbating the water crisis and conflicts in Rajsamand.

This problem was noted by the expert committee constituted as per the direction of the high court in the Abdul Rehman case. It observed that big flawed marble stones and marble slurry obstruct the flow of water to the lake from the Gomati River (Agrawal 2012). This was confirmed by the high court in the Lake Rajsamand case (order of 10 November 2006). It found that flows of water were obstructed by mining activity, leading it to direct that "the flow of water shall be canalised. Efforts will be made to canalise the flow of water by constructing proper canals to take it to the Rajsamand lake."

The response of the court to mining was appropriate in the limited context of water flows. At the same time, it did not engage with the basic conflict between industrial activities that affect water flows and water supply and water law. Making the link would not have required developing an entirely new area of regulation. There already exists a regulatory framework on marble mining that can contribute significantly to minimising its adverse implications, including effects on the catchment area of Lake Rajsamand, namely, the Rajasthan Minor Mineral Concession Rules, 1986 (the Rules) framed under the Mines and Minerals (Development and Regulation) Act, 1957. The Rules permit the government to adopt special procedures for leasing out certain minerals (Rule 65A), as was done for marble mining through the adoption of the Marble Policy, 2002. This provides that the Department of Mines and Geology can include certain conditions in a licence in the interests of the environment, flora and fauna (GoR 2002). The licence holder has a duty to dump waste in prescribed sites, to reclaim the mining area at their own cost, and to plant trees. Non-compliance can lead to cancellation of the licence (GoR 2002: Rule 9).

The Marble Policy, 2002 also prescribes that there should be a mining plan where the area of the lease is more than 4 hectares. It does not elaborate on the details of the mining plan, but the Rules specify that it must include a precise map showing all environmental amenities and an assessment of the effect of mining activities on them (Rule 37E). It is mandatory for the licence holder to carry out mining operations in

accordance with the mining plan, and a violation can lead to suspension of operations. The Rules further specifically include measures to be undertaken by the licence holder to protect water resources in the mining area, including the duty to ensure that no natural watercourses and/or water resources are obstructed due to the mining operation and the duty to take adequate measures for the protection of older streams emanating/passing through the area (Rule 37r).

This brief exposition confirms that there is a framework for addressing the effects of mining on water in Rajasthan that could have been applied here. The real issue is ensuring that the different conflicts that intersect are identified as being linked, and adjudicated as such.

Statewide Anicut Regulation and Its Implications for Water Allocation in Rajsamand: A third dimension of the conflict is that water availability in one area is affected by inter-sectoral water allocation decisions taken in other parts of the state. Here too, Lake Rajsamand is an example of the kind of problems that will increasingly surface if inter-sectoral allocation is not conceived in broader terms in a consistent manner.

Lake Rajsamand on the Gomati River is a part of the Banas River basin that provides water to the Bisalpur Dam located some 200 km downstream. The Bisalpur Dam is used in part to provide better water supply services to Jaipur city and other neighbouring districts. An informal prioritisation of water needs in favour of the residents of the capital city was made and this led the state government to take measures such as banning the construction of anicuts in excess of 2 metres height throughout the catchment area.

Farmers in Rajsamand District stated that the decision of the state government to ban anicuts higher than 2 metres had affected them. They highlighted that the prohibition/regulation of construction of anicuts affected the availability of water for irrigation. This is crucial for farmers who depend on groundwater because groundwater replenishment is a key reason for constructing anicuts and check dams.

This highlights the link between water-use conflicts in Rajsamand and water use allocation and priority decisions made at the state level. A water allocation scheme must thus consider both surface water sources and groundwater as well as a variety of factors, from the local level to state-level policy decisions.

3 Strengthening the Legal Framework for Inter-Sectoral Allocation

The analysis of developments in Rajsamand confirms that the current law and policy framework for inter-sectoral allocation of water is both underdeveloped and inappropriate. This is partly because policymakers and lawyers have failed to effectively move beyond sectoral and use-specific views of water. These views were never appropriate, and it is imperative to reconsider this in a context of increasing competition over available water, increasing uses of water and limited overall availability.

Inter-sectoral allocation of water is organised largely around economic principles. In the context of water sector

reforms introduced over the past two decades, this has meant that allocation or reallocation is increasingly based on considerations of efficiency with equity, other factors being considered secondary (Dinar et al 1997). This does not necessarily ensure that any given allocation benefits the most marginalised first, and that it benefits everyone equally and is environment friendly.

Where conflicts over a given allocation arise, they are sometimes adjudicated through administrative conflict resolution mechanisms. The basis for the decision are the claims made by the parties to the dispute. This is in a sense appropriate since water is eminently political and will always remain so. At the same time, this cannot be the only basis for adjudicating allocation conflicts since this gives actors with more lobbying capacity a disproportionate say in the decision-making. It gives very little or no weight to marginalised actors and the environment. This is also an inefficient way of allocating water since political patronage is by definition temporary and needs to be constantly renewed along with parameters that keep changing.

In a limited number of cases, conflicts over allocation reach the courts. At that level, the existing legal framework is applied by courts. In the absence of appropriate guidance, adjudication is largely ad hoc and may not necessarily consider all the relevant dimensions, as happened in Rajsamand. Further, courts are not well placed to follow up and ensure that the principles introduced are applied in a systemic manner. The decisions tend to focus on conflicts of use, which is what litigants bring to the court, rather than issues related to protecting the source of water.

(A) Applying Basic Legal Principles to Inter-Sectoral Allocation

The present situation is marked by two partly contradictory trends on the legal front. On the one hand, the existing legal framework does not include any comprehensive and structured framework for inter-sectoral allocation. On the other hand, the existing legal framework includes the basic principles that are necessary for establishing a balanced and fair inter-sectoral allocation framework based on a paradigm centred around equity and environmental justice.

The introduction of a more visible set of legal principles for inter-sectoral water allocation is necessitated by that different decisions have effects beyond specific contexts. It is also necessary to ensure that there is overall consistency in the practice of the government from the local to the state level. This will ensure that courts do not have to step in to perform the government's function of water allocation, except in the rarest of cases.

Principles are needed not only to ensure that allocation decisions take into account a broader set of variables in the water sector, but also that this is done in relation to other sectors. For instance, in a context where irrigation is increasingly dependent on groundwater, the link between irrigation and power is becoming stronger. There have been attempts to regulate groundwater use for irrigation through electricity supply.

In Rajsamand, the separation of lines into two-phase and three-phase has been initiated, as done earlier in Gujarat (Shah and Verma 2008). The supply of the three-phase lines used for pumping groundwater is limited to a few hours everyday in an attempt to reduce groundwater draft without affecting household electricity use.⁷ This highlights the immediate link between the two sectors and the need to take all relevant sectors into consideration while making water allocation decisions.

Similarly, local or state-level water allocations depend on precipitation, itself linked to the global water cycle that is directly influenced by climate change. There are thus direct links between the environment and water sectors that may seem remote when looked at from the point of view of a single district but are central to realistic allocation decisions in the long run. More generally, this confirms that it is not just water allocation that matters here but also the principle of environmental justice.

In more specific terms, the following needs to be integrated into water allocation. First, new bases need to be given to water law so that the present sectoral approach makes way for a more unified framework. The basic problem is the sectoral and piecemeal manner in which water law has developed. This has translated into different water rights for different water uses (for example, irrigation and drinking water) and for different bodies of water (for example, surface water and groundwater). Further, the underlying assumptions of the legal framework are different for different rights, as some water rights are directly linked to landownership (for example, irrigation, groundwater) while others (for example, drinking water) are not (Cullet 2009). A holistic approach, which considers water as a single unit for use, control, and management purposes, is missing in existing water laws. Adopting a framework legislation is one way of addressing the problems associated with the sectoral nature of water law. Rajasthan happens to be the first state that is considering adopting such legislation. The Draft Rajasthan Water Resources Management Act, 2012 provides, for instance, that “all water resources in the state of Rajasthan shall be held in public trust by the state on behalf of the people and communities of the state of Rajasthan.”

Second, the principles of equality and equity must form part of any allocation scheme. This is particularly important because equity is a basic principle applicable throughout the legal framework whereas efficiency is not. Thus, in the case of a conflict, say between urban and rural drinking water users or between irrigation and environmental flows, the weighing must include reference not only to allocation between two sectors, but also other factors that influence these uses. This constitutes an avenue to ensure, for instance, considering the increasingly debated conjunctive water use in legal terms (Srinivasan and Kulkarni 2014). There is a technical side to such issues, and also a substantive one that needs to be approached in part through equity considerations.

Third, the inter-sectoral water allocation framework has to decentralise the governance of water. There is a relatively

well-defined legal framework for the allocation of responsibilities over water at the panchayat, block, district and state levels. Yet, this does not include principles concerning their interrelationships. With water, the most obvious principle to adopt is that of subsidiarity. In general terms, the subsidiarity principle requires that decisions should be taken at the lowest possible administrative level while recognising that certain issues need to be coordinated at a higher level. The only existing proposal for regulating water in this way is found in the Planning Commission’s (2011a) Model Bill for the Conservation, Protection and Regulation of Groundwater. This is centred on the idea that water issues are best addressed at the local level but within a framework that recognises the intersection of local, regional and state-level water issues. While the Model Bill focuses on groundwater, the same logic should be applied more generally to water, in general. In the Lake Rajsamand dispute, this would imply that decisions taken by the collector should effectively represent the views of all the affected gram sabhas rather than only groups with lobbying power at the district level.

Fourth, inter-sectoral allocation must integrate basic environmental law principles such as the prevention and precautionary principles. There is nothing new here since water is covered in environmental statutes and the whole of environmental law bears in principle on water management. The reality, however, is that unless one speaks of water pollution, which is understood as an environmental issue, other water issues are usually considered as being exclusively water issues and the link with the environment is not made. As confirmed by our case study, this is inappropriate because it leads to allocation decisions that prioritise the short-term demands of water users who, in this case, were directly lobbying the collector, and excludes environmental considerations that are often of a more long-term nature. Unfortunately, the high court failed to consider this broader context and implications of water use, allocation, and conflicts in Rajsamand, thereby confirming the need for more a formal imposition of the consideration of environmental law principles on all actors involved in taking inter-sectoral decisions.

(B) Ensuring Binding Prioritisation and Its Comprehensive Application

The existing framework for inter-sectoral allocation of water is in essence limited to the prioritisation framework found in national and state water policies. As discussed in Section 1, this does not provide a firm legal basis for

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prioritising water uses because they are non-justiciable and can be changed at any point without reference to any particular procedure.

Prioritisation of water uses is only one of the elements necessary for facilitating inter-sectoral allocation. It has already been widely debated in policy terms and gives useful guidance to administrators. Yet, the only clear prioritisation that exists in the legal framework is of drinking water over all other uses because it constitutes the core of the fundamental right to water. This priority has never been questioned. This was reiterated by the high court in the Lake Rajsamand case where it recognised the obligation of the state “to provide adequate drinking water facility for the entire population both in urban and rural areas. The need for drinking water is always the first charge on any available water.” In general, the relevant agencies seem to naturally abide by this priority. This is exemplified by the 2009 order of the WRD for fixing use priorities. Through it, the state government prohibited the use of water in tanks, dams and anicuts for irrigation purposes due to a weak monsoon and scarcity of water for drinking purposes. The order prescribed that, barring a few tanks that received sufficient inflows, “water in all the other dams, tanks and anicuts is hereby reserved for drinking purposes” (GoR 2009). In case water was available for irrigation, the order required the DWDC concerned to pass a resolution to that effect with prior clearance from the state government.

Such measures may be appropriate responses in specific cases. However, prioritisation of drinking water on an ad hoc basis through an executive order cannot be an alternative to legally sanctioned prioritisation. Thus, while prioritisation is not denied by any actor in Rajsamand, the Lake Rajsamand case shows that JK Industries enjoys de facto first priority on the lake because it is the only user that benefits from a special legal arrangement. This is problematic because, in practice, this priority may trump drinking water needs.

The first step forward would be to include a clause in legislation mirroring the prioritisation scheme in the Rajasthan State Water Policy, 2010. Such a proposal was first made in two legislations drafted by the Planning Commission in 2011. This is also found in the Draft Rajasthan Water Resources Management Act, 2012, which recognises it and provides for a prioritisation of water in Section 25, starting with drinking water, water for livestock, municipal use, food security and ecology. This is followed by secondary uses focusing on irrigation, and tertiary uses including power generation, commercial fisheries, industrial use, recreational use and other purposes.

This binding prioritisation would be an important first step in making inter-sectoral allocation more consistent and predictable. At the same time, administrators require more than a linear prioritisation framework to resolve practical issues. This is well illustrated by the case study. What is at stake is not only allocation between drinking water, irrigation, industrial use and environmental flows, but also allocation between different and competing drinking water needs in different areas (urban and rural) and between different industrial needs (for example,

the consumptive uses of JK Industries and mining activities affecting the catchment zone).

(C) Responding to Multi-scalar Water Conflicts in a Comprehensive Manner

Increasingly complex issues of inter-sectoral allocation of water among competing uses will arise in the future given the increasing economic, social, and physical scarcity of water. Even if it was binding, the current prioritisation scheme would be insufficient because inter-sectoral allocation is often determined only at the specific level at which competing uses are identified. This often fails to recognise the effects of decisions taken at one level or the other.

The Lake Rajsamand case highlights that this “limited” dispute between the drinking water needs of town residents and farmers in the command area is actually much more complex than it appears on the surface. Even the limited scope of the judicial proceedings could not avoid including some more elements than the issues originally presented to it, such as the claims of the residents of Nathdwara town. However, the high court’s decision is silent on various other factors that directly contribute to the conflict, such as the significant effect of mining in the catchment area of the lake. It is also silent on the effects of water allocation decisions on downstream areas. This can be attributed to that neither the environment nor downstream water users were represented in the judicial proceedings. Yet, every decision has downstream effects and this is confirmed by the Abdul Rehman case that considers the issue from this viewpoint. Both the lack of consideration of downstream users and the blanket imposition of an allocation benefiting only downstream users are unfair and environmentally unsound.

The basic point that arises in the Lake Rajsamand case is thus that there are multiple conflicts at different levels. An effective response requires looking at them comprehensively and addressing all the different issues concurrently.

The most glaring issue is the lack of focus on protecting the catchment area of Lake Rajsamand. Marble mining and its effects constitute the most significant aspect of the local dispute that was not fully taken into consideration in the judicial proceedings. This is not surprising for two reasons. First, the mining lobby is strong in the area and the main applicant in the judicial proceedings did not particularly emphasise the mining dimension to avoid “creating” additional conflicts that they would not have been able to address. Second, as indicated, the high court did not seem to be ready to make direct links between mining and the water law.

Moving beyond mining and the catchment area, various other conflicts should be addressed here. These include issues related to the allocation of surface water and groundwater, and the allocation of water in two separate watercourses, the Banas River and the Gomati River. This also includes the conflict between the use of water in the upstream portion of the Banas River and the demands of downstream users for more water in the Bisalpur Dam. The limited example of the Lake Rajsamand case confirms that such disputes must be addressed at multiple levels. It is as inappropriate for a

state-level agency to make blanket impositions that affect the whole state as it is for a local dispute to be decided without considering the broader downstream environmental and social impacts of water allocation.

Conclusions

The regulation of inter-sectoral allocation of water is one of the major unaddressed challenges for water law. There is an urgent need that this issue be taken up more seriously. The Lake Rajsamand case provides an illustration of the limits of a legal framework that does not provide guidance for inter-sectoral allocation and for the basis of allocation decisions looking beyond the claims made by users. This is particularly damaging from the point of view of the environment and poor and underprivileged users.

This article has shown that conflicts concerning inter-sectoral allocation centre around claims made by users for

the available water. This fails to take into account the manner in which the water is made available, the factors that restrict its use, and the consequences of a certain allocation on downstream users. It is necessary to move beyond an understanding of water as a resource that is simply available for use without considering the upstream and downstream environmental dimensions of such decisions, and the consequences on users who are less (or not) represented in the balancing act.

It is time to devise a framework that does not look at water as a natural resource to be allocated efficiently but rather as one that regards it as a fundamental right to be allocated equitably, as a key component of the environment, and as the direct and indirect source of numerous livelihoods. This requires situating existing legal principles at the centre of inter-sectoral allocation to arrive at comprehensive, equitable and environment-friendly outcomes.

NOTES

- For example, inter-sectoral water conflicts may also arise because different sources of water (such as surface water and groundwater) are governed by different sets of rules and overseen by different institutions even though they are hydrologically interlinked and influence each other.
- The Ramgarh Dam, which was inaugurated in 1903, used to be the major source of water for irrigation and drinking water for Jaipur District.
- Personal communication with farmers during field visits in May 2013 and August 2013.
- Personal communication with Narendra Singh, National General Secretary, LAM.
- Personal communication with Narendra Singh, National General Secretary, LAM.
- Confirmed in personal communications, for instance, with Ramji in Amlói and Nanda Khera in Batkera.
- Interview with Dinesh Sharma, Assistant Engineer, Ajmer Vidhyut Vitaran Nigam.

REFERENCES

- Agrawal, Yogesh Chandra (2012): "Rehabilitation of Water Resources," Paper presented at India Water Week 2012—Water, Energy and Food Security: Call for Solutions, New Delhi, 10–14 April.
- Agreement (2006): Agreement between the Government of Rajasthan and J K Industries Ltd for the Supply of Water from Rajsamand Tank (Kankarli) to JK Industries Ltd, 21 March.
- Cullet, Philippe (2009): *Water Law, Poverty and Development—Water Law Reforms in India*, Oxford: Oxford University Press.
- Cullet, Philippe (2012): "Is Water Policy the New Water Law?—Rethinking the Place of Law in Water Sector Reforms," *IDS Bulletin*, 43 (2), pp 69–78.
- Das, Binayak and Ganesh Pangare (2006): "Privatization: In Chhattisgarh, a River Becomes Private Property," *Economic & Political Weekly*, 41 (7), pp 611–12.
- Dinar, Ariel, Mark W Rosegrant and Ruth Meinzen-Dick (1997): "Water Allocation Mechanisms – Principles and Examples," Policy Research Working Paper, Washington DC: World Bank.

- GoR (Government of Rajasthan) (2002): Marble Policy, 2002, Notification by the Mines (Gr II) Department, Jaipur, 1 March.
- (2005): Draft Sector Policy for Rural Drinking Water and Sanitation.
- (2008): Environmental Assessment Document: Rajasthan Urban Sector Development Investment Programme.
- (2009): Order—Reservation of Water for Drinking in Irrigation Tanks/Dams/Anicuts in the State, Water Resources Department, 4 September.
- (2010): Water Resources Department, Order No PCE-RAP/RWM/OACD, 24 May.
- Iyer, Ramaswamy R (2002): "Inter-State Water Disputes Act, 1956: Difficulties and Solutions," *Economic & Political Weekly*, 37 (28), pp 2907–10.
- Meinzen-Dick, Ruth and Meyra Mendoza (1996): "Alternative Water Allocation Mechanisms – Indian and International Experiences," *Economic & Political Weekly*, 31(13), pp A-25–30.
- Meinzen-Dick, Ruth and Paul P Appasamy (2002): "Urbanization and Intersectoral Competition for Water" in Woodrow Wilson International Center for Scholars, *Finding the Source: The Linkages between Population and Water*, Washington DC: Woodrow Wilson International Center for Scholars, pp 27–51.
- Nariman, F S (2009): "Inter-State Water Disputes: A Nightmare!" *Water and the Laws in India*, Ramaswamy R Iyer (ed), New Delhi: Sage, pp 32–57.
- NAAUSS (2006): *Nagrik Adhikar Avam Upphokta Sanrakshan Sansthan vs State of Rajasthan*, High Court of Rajasthan, Civil Writ Petition (PIL) Petition No 6250 of 2006 (copy on file with the authors).
- (2006a): *Nagrik Adhikar Avam Upphokta Sanrakshan Sansthan vs State of Rajasthan*, Civil Writ (PIL) Petition No 6250 of 2006, Order of 10 November 2006, www.ielrc.org/content/co615.pdf
- (2006b): *Nagrik Adhikar Avam Upphokta Sanrakshan Sansthan vs State of Rajasthan*, Application to implead the applicants (Gopal Lakhara and Srikant) as party-respondents or to allow the applicants to intervene in the matter on account of the circumstances effecting (sic) the Nathdwara township as well as revenue tehsil Nathdwara, district Rajsamand, 11 December 2006 (copy of the application on file with the authors).

- (2010): *Nagrik Adhikar Avam Upphokta Sanrakshan Sansthan vs State of Rajasthan*, High Court of Rajasthan, Civil Writ (PIL) Petition No 6250 of 2006, Order 2 December 2010, <http://www.ielrc.org/content/c1003.pdf>
- (2012): *Nagrik Adhikar Avam Upphokta Sanrakshan Sansthan vs State of Rajasthan*, Supreme Court of India, Special Leave Appeal (Civil) 832/2012, Order of 28 September 2012, <http://www.ielrc.org/content/c1203.pdf>
- Planning Commission (2011): Draft National Water Framework Act, 2011.
- (2011a): Model Bill for the Conservation, Protection and Regulation of Groundwater, 2011.
- Rathore, Narpal Singh (2011): "A Historical Perspective of the Development of Rain Water Harvesting Techniques in the Mewar Region, Udaipur, Rajasthan, India," *International Journal of Water Resources & Arid Environments*, 1(4), pp 285–94.
- Sebastian, Sonny (2005): "The Trouble with Haphazard Mining," *Hindu*, 5 November, www.hindu.com/2005/11/05/stories/2005110504391100.htm.
- Shah, Tushaar and Shilp Verma (2008): "Co-Management of Electricity and Groundwater: An Assessment of Gujarat's Jyotigram Scheme," *Economic & Political Weekly*, 43 (7), pp 59–66.
- Srinivasan, Veena and Seema Kulkarni (2014): "Examining the Emerging Role of Groundwater in Water Inequity in India," *Water International*, 39 (2), pp 172–86.
- Subhash Kumar vs State of Bihar*, Supreme Court of India, AIR 1991 SC 420.
- UN Water (2007): "Coping with Water Scarcity—Challenge of the Twenty-first Century," <http://www.unwater.org/wdo7/downloads/documents/escarcity.pdf>

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