

DRAFT MODEL BILL FOR THE CONSERVATION, PROTECTION AND REGULATION OF GROUNDWATER, 2011

Background and rationale

I. BACKGROUND – GROUNDWATER USE AND CONTEXT

Groundwater use in India has dramatically increased over the last couple of decades and is the backbone of India's agriculture and drinking water security. It is used by millions of farmers across the country and over the last four decades, around 84 per cent of the total addition to the net irrigated areas has come from groundwater. Further, it remains the only drinking water source for most of India's rural households and forms an important supplement to municipal water supply in most of India's towns and cities.

Many industries also depend upon groundwater. Its over-exploitation by industries can cause drinking water shortages and shortages of water for other purposes, including irrigation. This has already triggered conflicts on access to and use of groundwater. This illustrated by the high profile dispute currently on appeal with the Supreme Court involving the Perumatty Grama Panchayat and the Coca Cola Company in Plachimada, Kerala.¹

With an estimated 30-million groundwater extraction structures, India is fast hurtling towards a serious crisis of groundwater overuse and groundwater contamination. The report of the Expert Group on Groundwater Management and Government of the Planning Commission (2007) stated that in 2004, 28 percent of India's blocks were showing alarmingly high levels of groundwater use. In addition to quantitative depletion, many parts of India report severe water quality problems, causing drinking water vulnerability. At the national level, therefore, the Mid-Term Appraisal of the 11th Plan notes that nearly 60 percent of all districts in India have problems related either to the quantitative availability or to quality of groundwater or both. This is a serious situation warranting immediate attention, particularly with regard to drinking water security, given the fact that more than 80 percent of India's drinking water needs are serviced by groundwater resources.

At the same time, some areas reel under the impacts of rising water tables and waterlogging. The challenges of excess groundwater are also a source of significant concerns in many areas that must be addressed on a priority basis.

Groundwater is a common pool resource, which follows complex dynamics influenced by its hydrogeological characteristics.² Water-related programmes such as drinking water and sanitation are still bound to sources rather than resources. Wells are only mechanisms of accessing aquifers, the scientific unit described to define this common pool resource. This focus on sources (rather than resources) has entailed a push for newer groundwater prospects as sources run dry or become unusable as a consequence of groundwater extraction or contamination or both. This approach has led to repeated siting of sources, leading to a proliferation of wells and a race to the pump house, both of which are in strong disagreement with common pool principles. Aquifer-based management of groundwater resources is

¹ *Perumatty Grama Panchayat v State of Kerala* 2004(1) KLT 731 (High Court of Kerala, 2003) and *Hindustan Coca-Cola Beverages v Perumatty Grama Panchayat* 2005(2) KLT 554 (High Court of Kerala, 2005).

² eg P.S. Vijay Shankar, Himanshu Kulkarni & Sunderrajan Krishnan, 'India's Groundwater Challenge and the Way Forward', 46/2 *EPW* 37, 42 (2011).

emerging as a concept for managing groundwater in recent times and needs to be promoted in order to understand groundwater as a common pool resource and manage it as such.

The increasing use of groundwater has significant social consequences. In a context where the poor rely on less powerful extraction mechanisms, small farmers suffer from lowering water tables much before other users of groundwater having the financial means to deepen wells or acquire alternative water sources for irrigation.

Further, there are increasing concerns with regard to the quality of groundwater available rendering a significant proportion of India's rural population vulnerable with regard to the availability of safe water to meet their basic life and livelihood needs. Critical issues include arsenic contamination in the Ganga basin; higher levels of fluoride in many states, in particular in Punjab, Tamil Nadu, Rajasthan and Haryana; and salinity in coastal states such as Gujarat, Kerala and Odisha. In addition, groundwater is affected where rivers are used as municipal or industrial conduit for raw wastewater and where contaminated water is pumped into the ground.

II. GROUNDWATER RULES DEVELOPED SINCE THE NINETEENTH CENTURY

The basic framework for control and access to groundwater has substantially remained unchanged since the nineteenth century. It is characterised by several elements:

- Existing rules of access to and control over groundwater are still based on the common law doctrine of absolute dominion. This gives the landowner the right to take substantially as much groundwater as she or he desires with virtually no limitation or liability to adjoining landowners or the environment.
- Common law rules of access to and control over groundwater are a regulatory basis that:
 - Is based on a now dated scientific understanding of groundwater that fails, for instance, to take into account patterns of aquifer recharge and the interconnectivity between surface and groundwater;
 - Constitutes an atomised regulatory framework that does not take into account the need to regulate groundwater at the aquifer level (rather than the landowner level);
 - Excludes all landless groundwater users from the regulatory regime.
- In effect, the legal status of groundwater under common law rules is that of a chattel to the land. In other words, landowners do not own groundwater but enjoy access as part and parcel of their ownership rights to the land above. At the same time, there is no natural right in groundwater percolating in undefined channels under one's land.³
- The legal regime concerning access to and control over groundwater has often been linked to one of the few statutory frameworks that directly addresses groundwater, the Indian Easements Act, 1882. While this legislation is relevant, it does not define the rights of landowners over groundwater and consequently does not constrain reforms of the legal regime. This is for the following reasons:
 - An easement right involves by definition a (dominant) owner claiming the easementary right and a (servient) owner on whose land the easementary right is

³ N.S. Soman, 'Legal Regime of Underground Water Resources', *Cochin University Law Review* 147, 148 (2008).

exercised. Consequently, '[o]wnership and easement are inconsistent and cannot coexist in the same person'.⁴

- The legal position as clarified in *Acton v Blundell* is that there is no easementary right in groundwater but rather that access to groundwater is a right attached to the land.⁵
- The Indian Easements Act, 1882 provides guidance for distinguishing percolating groundwater from groundwater flowing in 'defined channels'. It confirms that wherever groundwater is found to flow in defined channels, the regime for appropriation is the same as that for surface water. In 2011, since surface water is regulated under the principle of public trust, the same applies to flowing groundwater.

The basic legal framework for access to and control over groundwater outlined here was never appropriate and reforms have thus long been necessary. This is due to:

- The inappropriate scientific understanding underlying the rules in place;
- The inappropriateness of the rules introduced for all the areas of the country that do not benefit from the same relative water abundance found in England where their conceptual framework was first developed;
- The limited scope of regulation, whose focus stops at administering the respective claims of different landowners, with no regard for the need to regulate groundwater at an aquifer level; and
- The socially inequitable framework excluding landless groundwater users from the purview of the rules even where it is their main source of drinking and livelihood water.

III. MODEL BILL TO REGULATE AND CONTROL THE DEVELOPMENT AND MANAGEMENT OF GROUND WATER

Rapidly increasing groundwater use and lowering water tables led the Government of India to take early notice of the need for a statutory framework governing groundwater. As a result, starting in 1970, the Government of India put forward a Model Bill to Regulate and Control the Development and Management of Ground Water for adoption by the states. This model bill has been revised several times (1992, 1996 and 2005) but the basic scheme adopted in 1970 has been retained to date. In other words, the Model Bill to Regulate and Control the Development and Management of Ground Water, 2005 still reflects an understanding of the groundwater challenges of an earlier era.

The Model Bill, 2005 focuses on identifying zones where groundwater is already over-exploited. It provides for the establishment of a State Groundwater Authority that is established, in particular with powers to notify areas to regulate and control the development and management of groundwater.

In the zones that have been notified, certain controls are put in place, including the necessity for users to obtain a permit for most groundwater uses. The permits are issued by the

⁴ M.S. Vani, 'Groundwater Law in India: A New Approach', in Ramaswamy Iyer ed., *Water and the Laws in India* 435, 444 (New Delhi: Sage, 2009).

⁵ *Acton v Blundell* (1843) 12 M. & W., 324, cited in Frederick Peacock, *The Law Relating to Easements in British India* (Calcutta: Thacker, 1904).

Authority, that may impose conditions while granting the permit and can also alter the same or cancel the permit if required by the groundwater situation.

While the Model Bill, 2005 introduces a limited regulatory framework to address groundwater depletion, it does not tackle the more difficult questions that arise. The questions that need to be addressed but do not find an answer in the Model Bill, 2005 include the need to:

- Address existing over-exploitation rather than largely grandfathering existing uses;
- Do more than restrict existing rights in a limited way without changing the legal status of groundwater. By failing to do so, the Model Bill ends up reaffirming the nexus between land and access to groundwater;
- Address the need to sever the link between land ownership and control over groundwater to ensure socially more equitable access to groundwater;
- Address the need to sever the link between land ownership and control over groundwater to ensure regulation of groundwater on an aquifer basis;
- Implement the 73rd and 74th amendments to the Constitution of India. The Model Bill fails in this regard by not providing for any institutional structure below the state level.

A. STATE GROUNDWATER LEGISLATION

The Model Bill to Regulate and Control the Development and Management of Ground Water was largely ignored by states for about three decades. It is only over the past fifteen years that states and UTs have started adopting groundwater legislation. The states/UTs that have adopted groundwater legislation are: Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Karnataka, Kerala, Maharashtra (drinking water focus), Tamil Nadu, West Bengal; Chandigarh, Dadra and Nagar Haveli, Lakshadweep and Pondicherry. Some states, like Maharashtra and Uttar Pradesh have groundwater bills that are pending adoption by the legislative assembly.

In all the states/UTs that have adopted groundwater legislation, the basic framework is directly derived from the existing Model Bill. The very fact of adopting a law related to groundwater confirms the increasing importance of groundwater. At the same time, groundwater laws adopted in recent years are neither adequate nor satisfactory, in large part because of the shortcomings in the Model Bill, 2005 highlighted above.

IV. TOWARDS A NEW LEGAL FRAMEWORK FOR GROUNDWATER

The present legal situation calls for significant changes. Overall, the existing legal framework is inadequate to address the challenges of groundwater use and conservation facing most states of the country.⁶

⁶ cf. Planning Commission of India, Mid-term Appraisal – Eleventh Five Year Plan 2007-2012 (Government of India, 2011), para 21.52.

There seems to be an increasing recognition that the status quo is not appropriate anymore. Thus, even though some states still reject the very idea of adopting groundwater legislation, there is an increasing consensus that groundwater legislation is required.⁷

A number of reasons call for the adoption of a new legal regime:

- The overbearing power of landowners on access to and control over groundwater ensures that regulation remains atomised. It thus fails to provide an overall regime for tackling over-extraction, contamination and protection on a larger scale.
- The direct links between rights to groundwater and land ownership excludes the vast number of landless people from a direct stake in the regime. Given the inequality in land holdings, this rule gives large landowners a disproportionately larger access to groundwater. This rule also negatively affects landless farmers' access to groundwater as they are disqualified from acquiring institutional credit for development of groundwater.
- The existing groundwater legal regime (common law rules and legislation) fail to incorporate the many legal developments that have taken place over the past few decades in the legal framework. This includes failing to incorporate new water law principles (for instance, public trust), environmental law principles (for instance, the precautionary principle), decentralisation principles embodied in the 73rd and 74th amendments to the Constitution, and failing to take notice of the changes in irrigation law focusing on participatory irrigation management proposed for the past fifteen years and implemented in a number of states.⁸
- The existing groundwater legal regime fails to integrate the fundamental right to water that has been a part of Indian law for the past two decades.⁹ In a context where groundwater is the primary source of drinking water for the overwhelming majority of the population, the legal framework related to groundwater needs to reflect the priority given to the fundamental right over rights granted to landowners.

V. SALIENT FEATURES OF THE MODEL BILL FOR THE CONSERVATION, PROTECTION AND REGULATION OF GROUNDWATER, 2011

The Model Bill for the Conservation, Protection and Regulation of Groundwater, 2011 [hereafter Model Bill, 2011] has been drafted keeping in mind all the elements mentioned above.

The Model Bill, 2011 is built around an understanding that it is the farmers and all persons living in rural areas that are the most directly affected by the existing legal regime. It is thus based on the idea that while protection of groundwater is key to the long-term sustainability of the resource, this must be considered in a framework in which livelihoods and basic drinking water needs are of central importance.

The overall objectives of the Model Bill, 2011 are to:

⁷ eg Department of Drinking Water and Sanitation – Rural Drinking Water, Strategic Plan 2011-2022 – Ensuring Drinking Water Security in Rural India, 5(4)(2).

⁸ eg Andhra Pradesh Farmers' Management of Irrigation Systems Act, 1997; Gujarat Water Users' Participatory Irrigation Management Act, 2007; Maharashtra Management of Irrigation Systems by the Farmers Act, 2005 and Tamil Nadu Farmers Management of Irrigation Systems Act, 2000.

⁹ eg *Subhash Kumar v State of Bihar* AIR 1991 SC 420 (Supreme Court, 1991).

1. Regulate and control iniquitous groundwater use and distribution, based on priority of allocation to ensure in particular that the drinking water/domestic needs of every person and irrigation needs of small and landless farmers can be met;¹⁰
2. Ensure safe and secure drinking/domestic water for all people, particularly in groundwater dependent regions;
3. Regulate the over-extraction of groundwater in order to ensure the sustainability of groundwater resources, equity of their use and distribution, and to ensure fulfilment of ecosystem needs;
4. Promote and protect community-based, participatory mechanisms of groundwater management that is adapted to specific locations considering resource, enhancement and socio-economic set up;¹¹
5. Prevent and mitigate contamination of groundwater resources;
6. Promote and protect good conservation, augmentation (recharge) and management practices; and
7. Protect areas of land that are crucial for the sustainable management of groundwater resources and ensure that high groundwater consuming industries are not located in areas unable to support them.¹²

A. LEGAL AND INSTITUTIONAL BASES

The Model Bill, 2011 draws on the various developments that have taken place in the legal framework since the Government of India proposed the first Model Bill in 1970. In particular, it reflects the following:

1. The principle that water, and groundwater specifically, is a public trust as put forward by the Supreme Court.¹³ This applies to groundwater as a resource and not to mechanisms for abstracting it.
2. The recognition of the fundamental right to water by the Supreme Court.¹⁴
3. The principle of subsidiarity, as explicated in the 73rd and 74th amendments to the Constitution (Articles 243G and 243W).
4. Protection principles, such as the prevention and precautionary principles, most recently statutorily recognised in the National Green Tribunal Act, 2010 (Section 20).

The Model Bill also builds on existing laws and schemes and contextualises them to groundwater. This is, for instance, the case of:

1. The Right to Information Act, 2005.

¹⁰ cf. Recommendation 8, Ministry of Water Resources, Recommendations of the Symposium on Groundwater Governance: Ownership of Groundwater and its Pricing, 16 November 2006, already recognising the need to reflect equity and the protection of weaker sections.

¹¹ As called for in Recommendations 7 and 16, Ministry of Water Resources, Recommendations of the Symposium on Groundwater Governance: Ownership of Groundwater and its Pricing, 16 November 2006.

¹² As called for in Recommendation 3, Ministry of Water Resources, Recommendations of the Symposium on Groundwater Governance: Ownership of Groundwater and its Pricing, 16 November 2006.

¹³ *State of West Bengal v. Kesoram Industries* (2004) 10 SCC 201 (Supreme Court, 2004).

¹⁴ *Subhash Kumar v. State of Bihar* AIR 1991 SC 420 (Supreme Court, 1991).

2. The Environmental Impact Assessment Notification, 2006 under the Environment (Protection) Act, 1986.
3. Social audits called for under various schemes and policies of the Government.¹⁵

1. Institutional framework

The institutional framework proposed in the Model Bill, 2011 is based on the principle of subsidiarity and framed around existing units of territorial governance. At the same time, in recognition of the fact that aquifer boundaries do not follow administrative boundaries, it provides for mechanisms that ensure that administrative boundaries do not come in the way of effective protection of groundwater aquifers.

The Model Bill, 2011 is also based on an understanding that duplication of institutions and mechanisms should be avoided to the greatest possible extent. Thus, it provides for an institutional framework devoted to groundwater to ensure appropriate management of groundwater from the local to the state level. At the same time, it provides for collaboration or integration of groundwater to already existing institutions addressing water, such as the Central Groundwater Board. In addition, it provides for existing institutions to support the new local level institutions to ensure that they are not hampered in implementing the legislation by a lack of technical or other expertise.

2. A Model Bill adapted to state-specific circumstances

The Model Bill is based on an understanding that it should be adopted at the state level in a form that suits the specific conditions and needs of that particular state. In addition, it is expected that the Model Bill will be adapted to suit the existing institutional and legal framework of the state to avoid duplication.

B. IMPACTS OF THE MODEL BILL

The Model Bill, 2011 provides that groundwater is a public trust. This implies that the state at all levels (from the panchayat to the state government) is the custodian of the resource. The new legal status of public trust for groundwater as a resource does not affect in any way the sources used by individuals or communities to access groundwater.

The Model Bill, 2011 proposes a new legal framework that will ensure effective regulation of large-scale groundwater use. It will have no impact on the overwhelming majority of small farmers' groundwater use whose rights of access will not be affected. Rather, it will contribute to ensure that all farmers (and more broadly groundwater users) benefit from better groundwater availability in the long run by restricting over-exploitation by large users that threatens access by the majority of small users.

The Model Bill, 2011 is built around the need to regulate unreasonable uses of sources of groundwater that threaten the aquifer to ensure that the resource itself is protected and can provide a sustainable basis for meeting the basic needs of every person for decades to come.

¹⁵ eg Total Sanitation Campaign Guidelines, 2011, section 18.