Delivering IWRM (SDG 6.5) by Strengthening Atal Bhujal Yojana in Bundelkhand, Uttar Pradesh - Need for a fresh legal perspective

Based on the Case Study of 'Banda Model' on Groundwater Management

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1. Groundwater scenario in Uttar Pradesh

The state of Uttar Pradesh (UP) is the largest extractor of groundwater in India accounting for 18.4% of the total national and 4.5% of the total global groundwater extraction[1]. Groundwater extraction in UP is concentrated mainly in the Western UP, Bundelkhand Region and South Eastern part of the state. The stage of ground water extraction of the state is 70.66%[2]. In 2018, the NITI Aayog's Composite Water Resource Management Index performance for UP noted that the state of UP has mapped only ~20% of over-exploited and critical wells, and constructed no recharge infrastructures—this is critical given that the state has ~17% of the country's groundwater[3].

2. The water crisis in the Bundelkhand Region

The Bundelkhand Region of UP, due to its unique dry and degraded landscape is faced with severe water crisis and has been receiving attention from the policy makers in the central and state government. A special central assistance called Bundelkhand Package is allocated to address region's multi-faceted water and ecological crisis. Despite special policies, regulations and financial arrangements have been made, there has not been much large scale improvement on the ground. Yet there are sporadic examples where a couple of villages have been able to improve the water scenario by reviving village ponds and wells with the support from the local administration, however, there has been little attention to up-scale the practices and learning from such examples at a Region or state level .

3. The existing legal and institutional response to Groundwater Governance at the National level

3.1 *The Constitutional scheme does not provide anything specific on groundwater either to the central or the state governments except that a state has the first charge to regulate groundwater use:*

The Constitution of India does not make distinction between surface water and groundwater while allocating legislative powers on water to the central and the state governments. As per the constitutional scheme, water is a state subject wherein the state government can practically legislate on all aspects of water management. This power of the state governments is subject to the central government's power to make laws for the inter-state rivers and river valleys[4] . The Central Government can play a supporting role for water planning and management under the socio-economic planning which is a concurrent subject[5]. This broad constitutional scheme on water under the constitution does not provide any specific mandate on groundwater. Importantly, agriculture and land which drive groundwater overuse and scarcity are also the state subjects and can be regulated by an appropriate legislation at the state level[6]. It is noteworthy that under the constitution, the state governments can enact legislation on 'rights in or over land'. The expression in or over land is construed to mean that the state is well placed to regulate groundwater which is considered as part of the private property since it is 'in the land' of an owner. It is on this premise and using the Principle of *Eminent Domain* that the state government of Uttar Pradesh has enacted a groundwater law which is discussed subsequently.

3.2 *The National level legal framework on right to groundwater ownership and use relevant for Bundelkhand Region, Uttar Pradesh*

The legislations establishing right to groundwater as part of land rights and hence supporting its unrestricted use, precede the constitutional scheme that allows the state to legislate on aspects of land including on groundwater. The Indian Easement Act, 1882 recognizes the right of the government to regulate water flowing naturally[7]and at the same time recognizes water as an easement right of a property owner as *iura in re aliena*, a legal rights that can't be alienated[8].

[1] Water Resources Group Consultations on the Draft 1.0 of Uttar Pradesh Water Policy, 2021, State Groundwater Department, Uttar Pradesh
[2] See the UP State Government Report on Dynamic Groundwater Resources of Uttar Pradesh, 2022 available at **https://upgwd.gov.in/MediaGallery/ER22Eng.pdf**
[3] **https://social.niti.gov.in/uploads/sample/water_index_report2.pdf** Note that this is observed by the NITI Ayog under the heading 'things to improve'.
[4] Central list-I, Entry 56
[5] Concurrent List-III, Entry 20, Economic and Social Planning
[6] List II- The State List, See entry 14 and entry 18 respectively
[7] Section 2(a) of the Indian Easement Act, 1882
[8] Section 4 of the Indian Easement Act, 1882

However, the import of the two provisions suggests that the government's right to regulate water is not affected by easements and customary rights. Although the Indian Easement Act, 1882 recognizes customary rights in or over immovable property for example in water issuing from a well, however, the Act does not establish or recognizes any natural or customary right over groundwater[9]. In addition to this, the connection between the property rights and proprietary rights are established by the Transfer of Property Act, 1882 shows that an easement (water) cannot be transferred apart from dominant heritage which means that right to land implies right in the groundwater of an owner. Thus Rights in groundwater belong to the land owner since it forms part of the dominant heritage. In short groundwater is attached, like a chattel, to land and property and there is no limitation as to how much groundwater an owner of a private property can draw. This implies that a landowner in the country is also the owner of groundwater. In other words only landowners have legal rights to unrestricted use of groundwater and landless people have no groundwater rights, except certain customary rights to access community wells and hand pumps. In the instance of an owner being a commercial entity or an industry owning the land, the right gets regulated by the limits imposed by the Central Ground Water Authority (CGWA) while granting permission to such withdrawal of water for production or processes. The CGWA was constituted under the Environment (Protection) Act, 1986 which has been helpful in regulating groundwater abstraction and is discussed in details below.

3.3 *Does the ownership in groundwater gives absolute rights to exploit and pollute aquifers?- the role of regulatory regime on environment protection and groundwater*

The right in groundwater of an individual, community or a business entity is regulated through a regime of environment protection laws led by the Environment (Protection) Act, (EPA), 1986 that provides power to the Central Government to undertake measures to prohibit or restrict activities that have negative impacts on environment and actions that lead to environmental insecurity. The Central Government can issue directions and create special institutions to deal with environmental concerns. Using the wide powers under the EPA, 1986 and on the direction of the Supreme Court of India invoking the provisions of this Act, the Central Government has established the Central Groundwater Authority (CGWA) which is a National level authority on groundwater regulation and management[10]. Pursuant to this, the Central Groundwater Board has also been constituted as a technical agency to provide assistance to the state ground water boards. Thus the CGWA and the CGWB/SGWB have the regulatory and institutional roles for managing groundwater. The CGWA is empowered to regulate the overexploitation in the already stressed blocks as mapped and inventoried by the CGWB and the State Boards. The Authority draws its powers from the EPA, 1986. The Authority and the CGWB are administered by the Ministry of Jal Shakti, Government of India which is nodal Ministry for the management of groundwater at the national level in the country. Thus the powers of the EPA, 1986 exercised by the established institutions at the national level can regulate groundwater use and abstraction. However, the national level institutional mechanism has not been able to regulate land owners from exploiting groundwater in Uttar Pradesh and get groundwater recognized as a common pool resource distinct from the absolute property rights of an individual due to the fact that the two central laws discussed above, namely the Indian Property Act, 1882 and the Indian Easement Act, 1882 continue to be in existence and apply to all the property owners and easements in the country. Another reason for the inability of national level on groundwater scenario is the ambiguity in the powers and functions of both the institutions and their institutional capacity as these are understaffed and lack clarity on various issues.

3.4 *The underutilized role of the Disaster Management Act, 2005 in groundwater protection through drought disaster governance in Bundelkhand Region, Uttar Pradesh – The lack of coordination and consensus on the definition of drought*

Drought is a notified national disaster under the Disaster Management Act, 2005. The Act mandates every agency at the state and district level to allocate financial and human resources for disaster management and

[9] Singh, Chhatrapati, Water Law in India, 1992, Indian Law Institute, Water Project Series.
[10] See M.C. Mehta vs. Union of India & Others (1997)11SCC312, **https://indiankanoon.org/doc/68882889/**

Drought is a notified national disaster under the Disaster Management Act, 2005. The Act mandates every agency at the state and district level to allocate financial and human resources for disaster management and produce a report in this regard to the National Disaster Management Authority (NDMA). Every state is required to prepare the State Disaster Management Plan (SDMP) and District Disaster Management Plan (DDMP). The Central Government is responsible for financial assistance for disaster preparedness, planning and relief. The National Disaster Management Plan (NDMP) provides the foundation and principles on which the SDMP and the DDMPs are based. The National Disaster Management Plan 2019 provides extensive guidance on drought parameters for assessing and monitoring the droughts for its declaration and delineated the roles and responsibilities to various departments including the agriculture, the water resources and the Panchayati Raj. In addition to cumbersome coordination process, lack of uniform definition of drought makes it difficult for the state government to claim financial assistance and initiate drought planning. In successive years, despite drought like situation in Bundelkhand Region, it has not been easy to do a concerted planning and investment to keep it away. Hence, despite supporting provisions to initiate groundwater enhancement through conservation and watershed works, the Bundelkhand Region of Uttar Pradesh has not benefitted from the Disaster Risk Reduction (DRR) frameworks at the national and state level.

3.5 *The paradigm shift on groundwater management as per the directives under National Water Policy (NWP), 2012 and the response under the Uttar Pradesh Water Policy, 1999*

The NWP, 2012 sought to achieve a paradigm shift in all aspects of water governance including on groundwater[11]. The NWP has number of specific provisions dealing with groundwater management and calls for enhancing groundwater through various strategies. However, the national level policy directions need to be appropriately supported by the enabling or corresponding provisions by the state level policies or action plans so that the policies can be transformed into concrete actions. It would thus be critical to highlight the policy directions on groundwater at the national and state level in comparative perspective so as to understand the UP's formal position on groundwater management. It is to be noted that the UP government has recently revised its State Water Policy, 1999 wherein groundwater is recognized as a community resource but the State Government is yet to adopt the revised Water Policy formally[12].

Matrix-1: Key Policy Directives under the NWP and the corresponding provisions in the UP State Water Policy, 1999

Key policy directives on groundwater governance at the national and state level	Corresponding provisions under the National Water Policy, 2012	Corresponding provisions under the Uttar Pradesh State Water Policy, 1999
Groundwater as a community resource and not individual property	(vi) Groundwater, though part of hydrological cycle and a community resource, is still perceived as an individual property and is exploited inequitably and without any consideration to its sustainability leading to its over-exploitation in several areas.	No such recognition of groundwater as a community resource. The Provision reads thus - In view of the water resources (surface and underground) availability of the state and status of present use and to cater for future needs up to 2025, judicious and optimal exploitation, utilization, conservation and management of this limited resource is imperative. Such a planning should also address to reconcile the conflicts, if they arise, between different uses.

[11] Water: Towards a paradigm shift in the Twelfth Plan **https://www.indiawaterportal.org/articles/water-towards-paradigm-shift-twelfth-plan-paper-mihir-shah-epw**
[12] See the draft policy on **https://upgwd.gov.in/MediaGallery/SWPUP2020DraftFeb20.pdf**

Need for a Water Framework Law	2.2 Such a framework law must recognize water not only as a scarce resource but also as a sustainer of life and ecology. Therefore, water, particularly, groundwater, needs to be managed as a community resource held, by the state, under public trust doctrine to achieve food security, livelihood, and equitable and sustainable development for all. Existing Acts may have to be modified accordingly.	The "State Water Policy" while recognizing the water resource as a state subject under the constitution and addressing to its specific requirements, needs to be inconsonance with the general guidelines and parameters laid down in the "National Water Policy".
IWD activities from groundwater perspectives by converging other programs such as MNREGA	(5.6) Integrated Watershed development activities with groundwater perspectives need to be taken in a comprehensive manner to increase soil moisture, reduce sediment yield and increase overall land and water productivity. To the extent possible, existing programs like MGNREGS may be used by farmers to harvest rain water by using farm ponds and other soil and water conservation measures.	A river basin or a sub-basin in case of surface water along with the corresponding aquifer for ground water should be considered as a unit of development while planning for water resources of the state rather than consideration of an individual project. The planning of such a unit should take into account the present status of development and consider surface and ground water as a unitary resource ensuring their optimal conjunctive use wherein drainage should also be considered as its integral part.
The rule for the over-drawl of groundwater	7.6 The over-drawl of groundwater should be minimized by regulating the use of electricity for its extraction. Separate electric feeders for pumping ground water for agricultural use should be considered.	Conjunctive Use: Conjunctive management and ground water recharge should be central to ground water management. To augment the ground water by artificial means surplus monsoon runoff between sub-basin within river systems should be transferred and stored in the available aquifers, by applying different appropriate recharge techniques such as, construction of recharge ponds/percolation tanks and de-siltation of existing ponds, construction of recharge shafts in the existing ponds, construction of gravity head recharge wells and conversion of existing tube wells/wells into gravity head recharge well, construction of water conservation of existing tube wells/wells into gravity head recharge well, construction of water conservation structures such as Nala Bunds, Contour Bunds, Gully plugs, construction of recharge basin etc. in the dark & gray blocks. However, while undertaking any recharge project, it must be ensured that such projects do not pollute the ground water aquifer.

The comparative Matrix shows that the key directives under the National Water Policy (NWP), 2012 on groundwater are not ingrained in the UP State Water Policy, 1999 though the State Water Policy (SWP) needs to be in consonance with the NWP. It means that the UP State should have aligned its 1999 policy with the NWP, especially given that NWP has very different prescription for the management of groundwater resources.

4. The Policy, legal and regulatory response to groundwater crisis in the Bundelkhand Region, Uttar Pradesh

4.1 *The limited focus of the UP Water Policy, 1999 on groundwater and the Draft UP Water Policy, 2020*

As seen above, the UP Water Policy, 1999 has very limited focus on groundwater. Conjunctive use and groundwater recharge is the only specific policy direction under the Policy. The Draft Water Policy of UP, 2020 is more closely aligned with the directives of the NWP, 2012 in general and with the approach to management of ground water specifically[13]. However, the Draft SWP, 2020 is still to be adopted by the state government.

4.2 *The Policy for Groundwater Management, Rainwater Harvesting and Groundwater Recharge in Uttar Pradesh, 2013[14] - first of its kind but not seen on the ground in more than a decade after it adoption*

The Policy for Groundwater Management, Rainwater Harvesting and Groundwater Recharge in Uttar Pradesh (the UPGMR), 2013 states that the groundwater is the foremost need of the state and its long term management and planning is imperative. The Policy seeks to provide overall guidance for the conservation and management of groundwater through a series of measures such as aquifer mapping and aquifer-based groundwater management; Optimum use of groundwater and planned management of its exploitation; Rain water harvesting and groundwater recharge in an integrated manner; Setting groundwater regulation process; Monitoring and mapping of groundwater quality for environment protection; Promoting groundwater data management with a State Ground Water Informatics Centre; Preparation of district-wise water management plans; Training, publicity, extension and public awareness and strengthening existing institutional system. The Policy though one of the first attempts by the state to deal comprehensively with groundwater has stepped-in where the overall State Water Policy, 1999 has not been revised and does not provide an incentive based mechanism to encourage large extractors of groundwater to increase their recharge and extract groundwater sustainably.

Matrix-II: Twenty Years Journey of Major Policy Initiatives on groundwater in UP (2000-2020) – Need to learn the lessons from each policy initiative and its implications on the ground

Year	Policy Initiative on Groundwater	Focus
2000	Building Construction and development laws 2000 included provisions on groundwater recharge in urban areas	Urban and peri-urban areas in the entire State
2004	Monitoring of Rainwater harvesting through a high level "Executive Committee, 2004 and issue necessary directions	Urban areas
2004	Declaration of Groundwater department as the Nodal Agency in 2004 for all aspects related to groundwater	All
2005	Rainwater harvesting given impetus by establishing a Technical Co-ordination Committee (TCC) under the chairmanship of District Magistrate in each district, 2005	Urban

[13] For the Draft State Water Policy see **https://upgwd.gov.in/MediaGallery/SWPUP2020DraftFeb20.pdf**
[14] Government Order No 280/60-1-2013-7 WP-2004, TCIII dated 18 February, 2013 and published in Uttar Pradesh Extraordinary Gazette, 2013 **https://cuts citee.org/pdf/Groundwater_Policy_and_Regulatory_Mechanism_in_Uttar_Pradesh.pdf**

2006	In 2006-07, an exhaustive 'Master Plan for rain water harvesting and groundwater recharge in problematic areas of Uttar Pradesh' has been prepared covering 141 blocks of 36 districts and 431 urban bodies.	Rural and urban
2009	'Adarsh Jalsaya Yozna' launched for the revival of water bodies in rural and urban areas in the state.	Rural and urban
2009	In 2009, a major program of rain water harvesting and recharging was started in 130 stressed blocks of the state, with the objective to bring stressed block into safe category.	Rural and urban
2012	An integrated program for rain water harvesting, groundwater recharge and water conservation was launched in year 2012, covering 108 over-exploited and critical blocks of the state	Rural and urban
2015	The 'Mukhya Mantri Jal Bachao Abhiyan' was launched in the state as a major water conservation initiative.	All areas
2015	The State Planning Commission submitted actionable plan to arrest 'Unplanned Groundwater Extraction'	All areas
2017	State Groundwater Conservation Mission, 2017 launched with a focus on stressed areas wherein 54 blocks from Bundelkhand region were selected with the objective to enhance groundwater availability. The Mission required preparation of an Implementable Action Plan by the Groundwater Department for each block.	Bundelkhand focus
2020	Atal Bhujal Yojana launched with a focus on Bundelkhand region in UP covering 20 blocks and 550 gram Panchayats.	Bundelkhand Focus

As it can be seen from the above Matrix that the state has been consistently launching initiatives on groundwater management and it may be noted that almost 30% of the focus of schemes have been on rainwater harvesting which has clearly not picked up momentum in the state. It thus requires a State level planning and reflection to understand the reasons why RWH has not been a success in the State despite a considerable focus by the State Government. The reasons could be attributed to the hap-hazard design of the urban areas and lack of spaces to install rainwater harvesting structures. The other observation is the multiplicity of missions and constant changing nature of their names, though the objectives of each of these missions are common. It is also not clear if the earlier missions were discontinued or assimilated in the new ones. For example the 2007 State Master Plan for recharging groundwater in problematic areas was followed by Adarsh Jalasaya Yojana, 2009. The continuity and convergence of these programs and their outcomes are not known. Similarly, the continuity and convergence between Mukhya Mantri Jal Bachao Yojana, 2015 and State Groundwater Mission, 2017 are not clearly visible.

4.3 *The Uttar Pradesh Ground Water (Management and Regulation) Act, 2019 and the Rules, 2020*

Recently, the state government has enacted the Uttar Pradesh Ground Water (Management and Regulation) Act (UPGWA), 2019 and the Rules, 2020 which shows its commitment to regulate groundwater overuse and exploitation. As it can be inferred, a number of schemes and missions rolled out in the past did not yield any desired results, a law was necessary to enforce compliance. The UPGWA among other things aims at ensuring sustainability and equity in groundwater use. Importantly, the Act establishes an institutional mechanism at the decentralized level to deal with groundwater management. The law provides for the constitution of Gram Panchayat Ground Water Sub-Committee in every Gram Panchayat; Block Panchayat Ground Water Management Committee at the block level and a Municipal Water Management Committee and District Ground Water Management Council at the municipal and district level and the Uttar Pradesh State Ground Water Management and Regulatory Authority at the state level. The State Groundwater Department is the Technical Secretariat to the Authority for identifying areas such as over-exploited and critical blocks and providing information to Councils. The Act empowers the state government to notify areas where groundwater levels have depleted to critical or alarming levels and bans construction of new wells in such areas. It requires registration of drilling agencies and existing commercial, industrial, infrastructural and bulk users of groundwater, preparation of Ground Water Security Plans, fixing ground water abstraction limit and imposing annual fees for ground water drawn.

The Act also has a water quality focus and requires State Groundwater Department to identify and demarcate areas affected by poor water quality both in urban and rural areas and collect information related to groundwater pollution and its sources. A synergy with the State Pollution Control Board must be desirable but does not seem to have been envisaged.

Importantly, the Act provides for self-regulation in rural notified areas. Thus the regulatory provisions of the Act are confined to urban and commercial uses of water and the rural use of groundwater and its management is left to the discretion and expectation from a rural users whereas it is known that rural areas are equally responsible for the over abstraction of groundwater in Uttar Pradesh. However, the major user sectors, agriculture and domestic, have been kept out of the regulatory provisions of the Act. Domestic and agricultural users shall get the registration of their wells only (online or direct). Further, no penal provision shall be applicable on domestic and agricultural users of groundwater. It is thus not clear as to why the Act does not regulate in the rural areas and requires a rural user to self-regulate its use of groundwater in a notified area. This also implies that in a non-notified area, the rural user is not required to self-regulate.

Box-1: Non-applicability of UPGWA, 2019 and the Rules 2020 to rural areas defeats it objectives and fails to address water crisis in Bundelkhand Region

While the UPGWA, 2019 is an important step, its complete lack of regulation of groundwater mismanagement in rural areas can potentially defeat the very purpose for which this law has been enacted and can leave the industry and commercial establishments burdened with the sole responsibility to comply with the law. The rules under this Act have also been framed as the Uttar Pradesh Ground Water (Management and Regulation) Rules, 2020. There are several aspects of this law that requires critical assessment for various reasons but are beyond the scope of this legal brief. The importance of this law for the Bundelkhand Region water crisis is that it will not make much difference to groundwater security and restoration as there are no major industries or bulk groundwater users in Bundelkhand Region. The overexploitation happens at the farm level by the farmers for which the Act provides self-regulation and fails to abate or control groundwater abstraction even in the notified areas.

5. The Atal Bhujal Yojana, (2020-2025) – Locating the role and efficacy of a Central Scheme within the legal and regulatory landscape on groundwater management at the state level in Uttar Pradesh

The Atal Bhujal Yojana (ABY), running from 2020-2025, co-exists with the Uttar Pradesh Groundwater Act (UPGWA) of 2019. This raises a key question: how does a central scheme like ABY, which proposes an institutional framework for groundwater management, interact with an existing state law that establishes its own framework (including bodies like Gram Panchayats)?

To address this, we need to examine the specific role of ABY within UP's legal landscape. Does it offer complementary measures to UPGWA, or is there potential for redundancy? A clearer understanding of their linkages and potential for collaboration is crucial.

5.1 *An Overview of Atal Bhujal Yojana:*

5.1.1 A Central Scheme with financial assistance to support groundwater management:

Foremost, ABY is a Central Government Scheme with the contribution from the Government of India and the World Bank in the 50:50 ratios with a total outlay of INR 6000 crores. These funds are provided to beneficiary states in the form of grants-in-aid to be utilized for groundwater conservation and management. Thus, it can be understood as an external central level mechanism with financial assistance to complement the state's efforts and initiatives. The objective of the ABY is to improve the management of groundwater resources in the water stressed areas of the selected states. This improvement is sought to be achieved through appropriate investment and management actions to be led by the community but ABY does not define community. A community could potentially lead to improvement in groundwater in both rural and urban areas. From other elements of the ABY it can only be inferred that the scheme is more inclined to rural areas.

5.1.2 The two components of ABY:

The ABY has two components that are its defining features as far as the intervention areas are concerned – i) Institutional strengthening; ii) Incentive Component.

(i) Institutionally, the ABY is built on the premise of institutional strengthening and capacity building of institutions involved in groundwater governance in the target states will be done and it aims to route the incentives aimed at rewarding/incentivizing states for working towards long term sustainability of groundwater resources. While institutional capacity improvements have been part of almost all the schemes and initiatives in Uttar Pradesh that we have discussed above, it is the Incentive Component of the ABY that makes it unique and deserves some discussion.

Box-2: The Atal Bhujal Yojana (ABY) breaks New Grounds

The Atal Bhujal Yojana (ABY) breaks new grounds by directly addressing institutional limitations in groundwater management. Unlike previous schemes in Uttar Pradesh, ABY goes beyond just strengthening institutions. It adds a powerful incentive component that rewards states for achieving long-term groundwater sustainability.

(ii) The ABY's Incentive Component allocates funds to state agencies. These funds are used to reward states that successfully achieve convergence between various central and state government schemes. Convergence refers to aligning these programs to work together more effectively. Additionally, the incentive supports interventions that promote sustainable groundwater management through community participation. The amount of funding a state receives is directly linked to its performance on established disbursement.

5.1.3 The Water Budget based Water Security Plans:

In addition to the focus on infrastructure development, the Atal Bhujal Yojana (ABY) emphasizes water budgeting as a crucial tool for planning. This approach involves assessing current and future water needs for both surface and groundwater resources. The Gram Panchayat (GP), with the support of Water Management Committees and District Implementing Partners, takes the lead in preparing a Water Budget. This information then forms the basis for preparing Village Water Security Plans (VWSPs).

VWSPs are five-year plans outlining the interventions and investments required to meet anticipated water demands. These plans can be revised every five years to reflect changing circumstances. The ABY ensures community participation in this process by mandating the Gram Panchayat to prepare VWSPs with the support of relevant committees, such as the Water Management Committee (WMC), Village Water and Sanitation Committee (VWSC), or Participatory Groundwater Management Committee (PGWMC). Furthermore, VWSPs are linked to the Jal Jeevan Mission Scheme at the Gram Panchayat level for a cohesive approach. The final approval of VWSPs rests with the Gram Panchayat, reflecting the program's emphasis on community ownership of sustainable groundwater management initiatives.

5.2 *The missing linkages between the institutional schemes of ABY and the UPGWA, 2019:*

There are a number of contesting issues that could arise due to the existing institutional layout of the ABY. Firstly, the GP as the agency preparing the VWSP is also the approving agency. This could in practice mean that support agencies will prepare the Plan and GP will merely approve it without being necessarily involved in the process thus defeating the capacity building component of the ABY. The ABY lacks clarity regarding its target that which sections of the village community will be targeted - land owners, landless, entire Gram Sabha, is not clear. Thirdly, the ABY is completely delinked and makes no mention of the institutional structure established by the UPGWA, 2020 wherein the Act establishes an institutional mechanism at the decentralized level to deal with groundwater management in the form of Gram Panchayat Ground Water Sub-Committee in every Gram Panchayat; Block Panchayat Ground Water Management Committee at the block level and a Municipal Water Management Committee and District Ground Water Management Council at the municipal and district level. The ABY being limited in its life of five years seems to lack institutional integration by itself by overlooking the existing strengths of the legal and institutional framework on groundwater in Uttar Pradesh.

Box-3: ABY and State Groundwater Law: Interplay and Concerns

The Atal Bhujal Yojna (ABY) and the UP Groundwater Act, 2019 (the Act) have the potential to work together, but with some key considerations. While the Act focuses on self-regulation in rural areas, it lacks provisions for ensuring groundwater sustainability. The ABY aims to bridge this gap by supporting village institutions and incentivizing sustainable practices.

Complementary Strengths, Different Approaches: ABY Addresses a Regulatory Gap:The Act prioritizes self-regulation without penalty mechanisms for overexploitation at the farm/community level. ABY complements this by strengthening village institutions and promoting community-driven management, although it doesn't directly regulate or penalize overuse.

Concerns Regarding ABY Implementation: Top-Down Structure vs. Community Leadership: ABY establishes a multi-tiered committee system involving technical experts up to the district level. This structure raises concerns about Gram Panchayats (GPs) potentially becoming mere approving bodies due to a lack of technical expertise.

Navigating Overlapping Committees: ABY's committee structure needs to clarify how it interacts with the existing Gram Panchayat Groundwater Sub-Committee and other water management bodies

established under the Act at the block and district level. Overlapping structures could hinder effective implementation.

Moving Forward: Ensure ABY empowers GPs by providing technical support and capacity building. Streamline the committee structure to avoid duplication and foster collaboration between ABY and the Act's frameworks. By addressing these concerns, the ABY and the Act can work together to achieve sustainable rural groundwater management in Uttar Pradesh.

6. The Banda Model: Insights for Groundwater Governance

The term refers here "Banda Model "is not a formal term. It is being used in this Legal Brief to generalize two case studies from two different perspectives emerging from the Banda District in Bundelkhand Region, India. The first case involves a top-down approach (district to village) led by a civil servant to improve groundwater availability through traditional water body restoration (ponds, wells, step-wells, etc.). The second case, from Jakhni Village, exemplifies a bottom-up approach where the community transformed a water-scarce village into a surplus one with minimal external support. Both offer valuable lessons for groundwater governance in Uttar Pradesh (UP) and can be integrated into village water security plans under the ABY. A few generic impressions can be drawn from the two case studies.

- *District Leadership Matters:* Strong leadership and community engagement by district administration can significantly improve water conservation efforts, particularly for groundwater.
- *Mobilizing Public Acceptance:* Public awareness campaigns and local dialogues can leverage the connection between groundwater, land rights, and common pool resources. Property owners can then exercise self-regulation as envisioned by the UP Groundwater Act (2019).
- *Community Mobilization:* Effective campaigns and persistent dialogues can empower communities to manage their water resources.
- *Synergy of Schemes:* Convergence of programs like MGNREGS, watershed management, and Jal Jeevan Mission can play a crucial role in achieving water security.
- *Community-led Revival:* Communities possess the potential to revive water bodies and improve groundwater levels without external aid, provided there's strong leadership, inclusivity, and ownership of the initiative.
- *Replicating Success: The Jakhni village model should be replicated by sharing learnings and creating more "Jal Grams" (water villages).*
- *District Support: Proactive villages can be supported by the district administration in their groundwater conservation efforts.*

Case Study-1: Bhujal Badhao-Payjal Bachao Abhiyan (Banda Water Campaign)[15]:

Understanding the implications of water crisis, the Banda District Administration under the supervision of Dr. Heera Lal, I.A.S., the then District Magistrate, had launched a District-wide water conservation campaign (Bhujal Badhao Payjal Bachao Abhiyaan). This experiment led by Banda District authorities focused on sensitizing, mobilizing and incentivizing people in rural Banda District (covering 470 Gram Panchayats) towards treating groundwater as a common resource.

With major focus on community mobilization and participation, Banda District Administration used WaterAid's Jal Choupal model, a model to embed democratic water dialogues at grassroots level, to spread awareness among rural population about the need for water conservation prior to beginning

[15] Various Media Report and the write ups by the Water Aid shared by Dr Heera Lal, former District Magistrate, Banda

the campaign. A total of 470 Jal Choupals were organized in various Gram Panchayats, wherein 35,000 community members were sensitized on water security issues and to foster community ownership towards the campaign. This campaign adopted participatory groundwater conservation and management approach through simple recharge measures through rainwater harvesting structures A total of 2,605 contour trenches were constructed around 2,443 drinking water sources (Hand pumps & wells) and wells were constructed as part of this campaign along with digging/ rehabilitation of 49 minor irrigation ponds, 523 Gram Panchayat community ponds and construction of 840 farm ponds, 82 roof top rain water harvesting-cum-recharge pit structures, 1536 trenches/ recharge pits and 1311 farm bunds. Through this campaign, the Banda District Administration has helped elevate the District's water table by an average of 1.34m which resulted in improved well-being of Banda District's population. The Campaign was led in two major phases as under:

Phase-1 comprised of mobilizing the District Administration and carrying out physical infrastructure works. As part of the Phase-1, a total 2605 trenches were constructed around 260 wells and 2,183 hand-pumps were constructed across 8 blocks and 470 Gram Panchayats in Banda District. As a result of these trenches, an additional recharge capacity of 110001 cubic meters (or kilo litres) per annum has been created. These recharge structures have alleviated drinking water crisis among households in the 470 Gram Panchayats.

Phase- 2 comprised of reviving traditional water bodies (from April to November 2019) and was called 'Kuan Taalab Jiao Abhiyaan' (bring life back to wells and ponds campaign). People from 470 Gram Panchayats in Banda District took charge and got into action to volunteer and implement the campaign to restore and protect their drinking water sources and improve water table through various water recharge initiatives. Construction of water conservation and recharge structures such as farm ponds, minor irrigation ponds, community ponds and recharge pits was completed during this phase along with the installation of rooftop rainwater harvesting systems in government buildings and educational institutions. As a result of this phase, 49 minor irrigation ponds, 249 Gram Panchayats community ponds (under MGNREGS) and 274 Gram Panchayats community ponds (under Gram Nidhi) were rehabilitated or dug, 840 farm ponds (Khet Talabs), 82 roof top rain water harvesting-cum- recharge pit structures in different government buildings, 1536 trenches/ recharge pits in educational institutions and 1311 farm bunds were constructed. During this period, technical models for the construction of contour trenches, rain water harvesting structures, farm ponds were developed and disseminated through public campaigns by the District Administration. Booklets and posters printed in Hindi, the local language were extensively distributed among community members as part of the Information, Education and Communication (IEC).

Case Study 2: "Khet par med, med par ped" (Fields Bounded by Trees) - Jakhni Village: A Water Conservation Oasis in Bundelkhand

Jakhni village in Banda district, once water-scarce, has become a beacon of hope for water conservation in the Bundelkhand region. Through a community-driven initiative led by a farmer Mr. Uma Shankar Pandey, the village revived 6 ponds and 30 wells, significantly raising the groundwater level. Their motto, "khet par med, med par ped" (every farm to have a water boundary and trees over them), exemplifies their holistic approach. The Jakhni campaign focused on retaining rainwater within village boundaries through various methods. This included reviving traditional water bodies and promoting tree planting. By storing water in fields surrounded by trees on bunds (raised embankments), they not only increased the water table but also created a microclimate conducive to water conservation. This cohesive, community-based water management strategy has led to a dramatic improvement in Jakhni's water situation. Increased agricultural production has transformed Jakhni into one of the most prosperous villages in Uttar Pradesh. Jakhni's success story serves as a powerful example of how community participation and simple, yet effective, water conservation practices can create a sustainable and thriving environment.

7. Strengthening the Policy and Legal Framework for Groundwater Conservation in Bundelkhand Region

- *Formalize and Adopt the State Water Policy:* While the National Water Policy-2012 offers guidance, Uttar Pradesh needs to formally adopt its own comprehensive draft water policy-2020. This policy should explicitly declare groundwater a community resource.
- *Link Disaster Management and Groundwater Regulation:* Despite facing frequent droughts, Bundelkhand Region lacks a strong connection between its disaster management framework and groundwater conservation efforts. The state should integrate its Groundwater Regulatory Framework with the Disaster Management Law to prioritize groundwater security in drought-prone areas vulnerable to climate change.
- *Learn from Past Initiatives:* The Uttar Pradesh government has undertaken various groundwater management initiatives since 2000. However, these experiences, both successes and limitations, haven't been fully utilized to improve current conservation efforts.
- *Implement the Draft Water Policy:* The Draft Uttar Pradesh Water Policy (2020) should be formally adopted to enact its measures for improving the groundwater situation in Bundelkhand Region
- *Expand Groundwater Regulation:* The Uttar Pradesh Groundwater (Regulation and Management) Act, 2019, needs to be extended to rural areas and farmers through a phased approach with appropriate clearance mechanisms. Without this, the Act's impact on curbing groundwater insecurity will be minimal.
- *Synergy between Atal Bhujal Yojana and UP Groundwater Act:* The Atal Bhujal Yojana (ABY) and the UP Groundwater Act (2019) have complementary objectives. ABY fills the gap by supporting self-regulation in rural areas through capacity building and incentives.
- *Align Institutional Mechanisms:* The institutional structures under ABY and the UP Groundwater Act needs to be aligned. This will provide statutory backing to ABY beyond its five-year life span.
- *Scale up Successful Initiatives:* The successes of the Banda Water Campaign and Jakhni village need to be documented, institutionalized, and widely shared. This will facilitate their replication in other Bundelkhand Region districts and villages, and beyond.

India Water Partnership (IWP):

IWP is a non-profit organisation with the goal of propagating, promoting and supporting Integrated Water Resources Management in India. It has also been accredited by Global Water Partnership (GWP) as Country Water Partnership. IWP Vision is “A Water Secure India [with participation of all stakeholders]” and Mission is “Sustainable and Inclusive Water Management at National, Regional, River basin/Sub-basin and Local Levels in India”. IWP works towards water security in India by following the concept of Integrated Water Resources Management (IWRM). It engages in a dispassionate analysis of various water-related issues and steers the policy discourse on social, economic, and ecological issues on a scientific basis.

Indian Environment Law Organization (IELO):

IELO is a law firm dedicated to the evolution and progressive development of environment and development laws through. IELO’s mission is to make development more inclusive, equitable, sustainable and benign, with committed legal services in the field of natural resource law and environmental law. IELO strives to bring to the fore critical environmental concerns and imperatives so that these are incorporated in the development policies and laws of the country.