



सत्यमेव जयते

Govt. of India  
Ministry of Jal Shakti  
Dept. of Water Resources, River Development  
& Ganga Rejuvenation

# ATAL BHUJAL YOJANA (ATAL JAL)

*..Aiming at a Paradigm shift in groundwater management in India*

**21<sup>st</sup> July, 2026**  
**New Delhi**



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# Ground Water Resources Scenario in India

## Ground Water

As per CAG 2021 report, GW Caters to

62%

Of irrigated  
area

- Annual Ground water Extraction – 249 bcm (GWRA, 2017-during the inception of the scheme), largest user of groundwater.
- Reduced to 247 bcm (GWRA, 2025)



Irrigation

2017: 222 bcm (89%)

2025: 215 bcm (87%)

85%

Domestic  
water needs

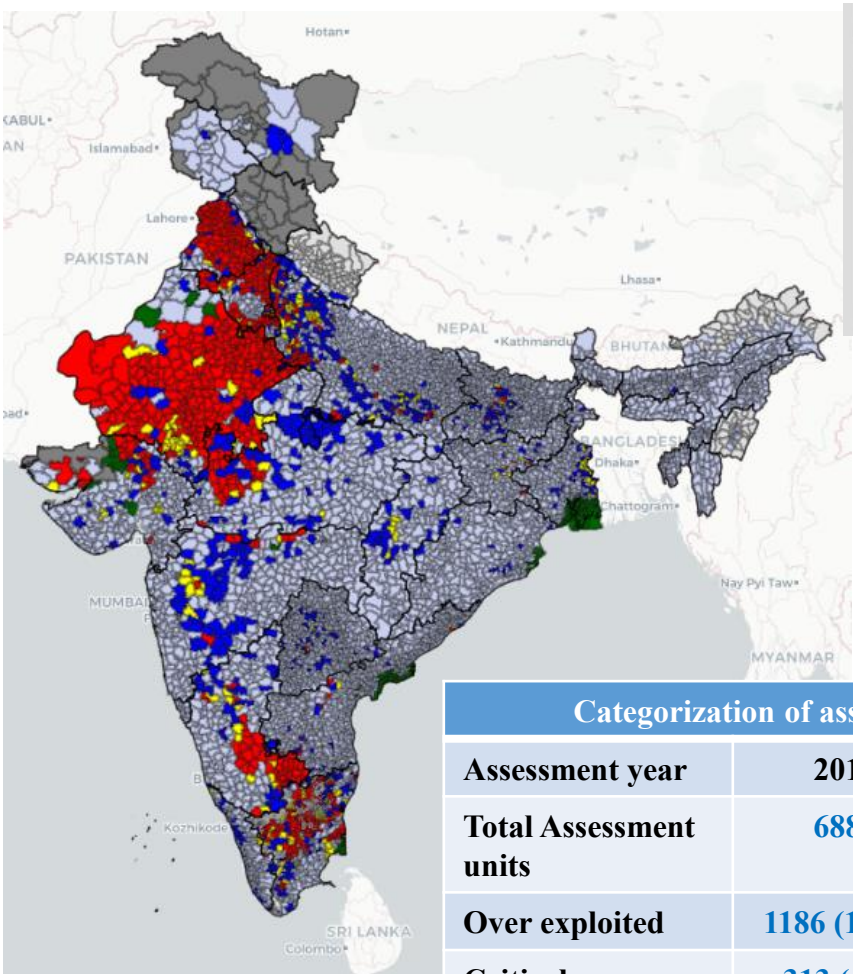


Domestic and Industrial

2017: 27 bcm (11%)

2025: 32 bcm (13%)

## Categorization of Assessment Units



Categorization of assessment units

| Assessment year        | 2017        | 2025       |
|------------------------|-------------|------------|
| Total Assessment units | 6881        | 6762       |
| Over exploited         | 1186 (17 %) | 730 (11%)  |
| Critical               | 313 (4%)    | 201 (3%)   |
| Semi-critical          | 972 (14 %)  | 758 (11%)  |
| Safe                   | 4310 (63 %) | 4946 (73%) |
| Saline                 | 100 (2 %)   | 127 (2%)   |

# Background

## Rationale

**National Water Policy, 2012**

**Increasing water demand due to growing population, urbanization & industrialization**

**Intensive and unregulated ground water pumping for irrigation**

**Decline in ground water levels**

**Major threat to sustainability of ground water resources**

## Past Endeavors

**Several initiatives undertaken by Centre & States**

**Top-down approach**

**GW as collateral beneficiary**

**Emphasis on Supply side measures**

**Several promising attempts by the Community towards Groundwater Management in the Country**

## Measure Initiated

**Atal Bhujal Yojana**

**Implemented in seven States w.e.f. from 01.04.2020**

**Paradigm shift from Development to Management of Ground Water through community participation**

# Features of Atal Bhujal Yojana

Central Sector Scheme with an outlay of INR 6000 cr

3000 crore from Department of Water Resources, River Development and Ganga Rejuvenation,

**Ministry of Jal Shakti,  
Government of India**

3000 crore as a loan from  
**the World Bank**

## Components

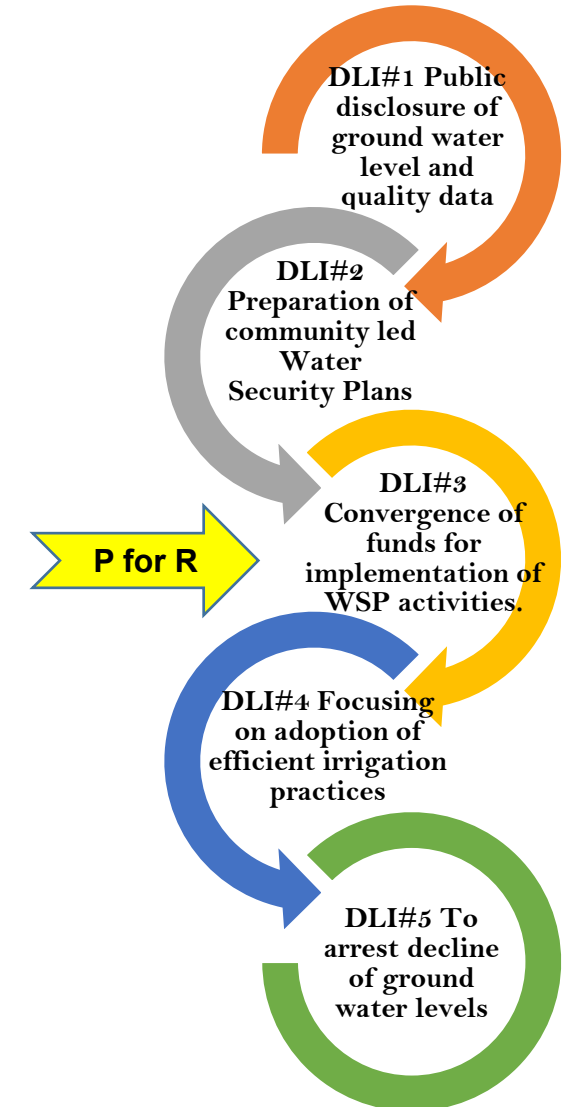
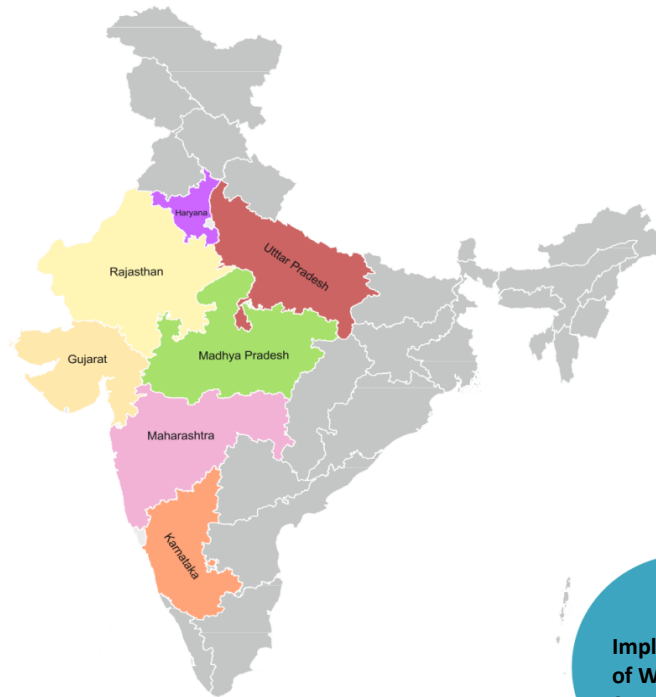
**Institutional  
Strengthening &  
Capacity Building –  
(Rs. 1400 Cr.)**

**Incentive- 5  
Disbursement  
Linked Indicator  
(Rs. 4600 Cr.)**

**Scheme implemented in 7 States 80 Districts, 229  
Blocks & 8203 Gram Panchayats**

**Aimed at “Sustainable ground water Management  
through community participation”.**

**State were incentivized for achievement of results  
against pre-defined indicators**

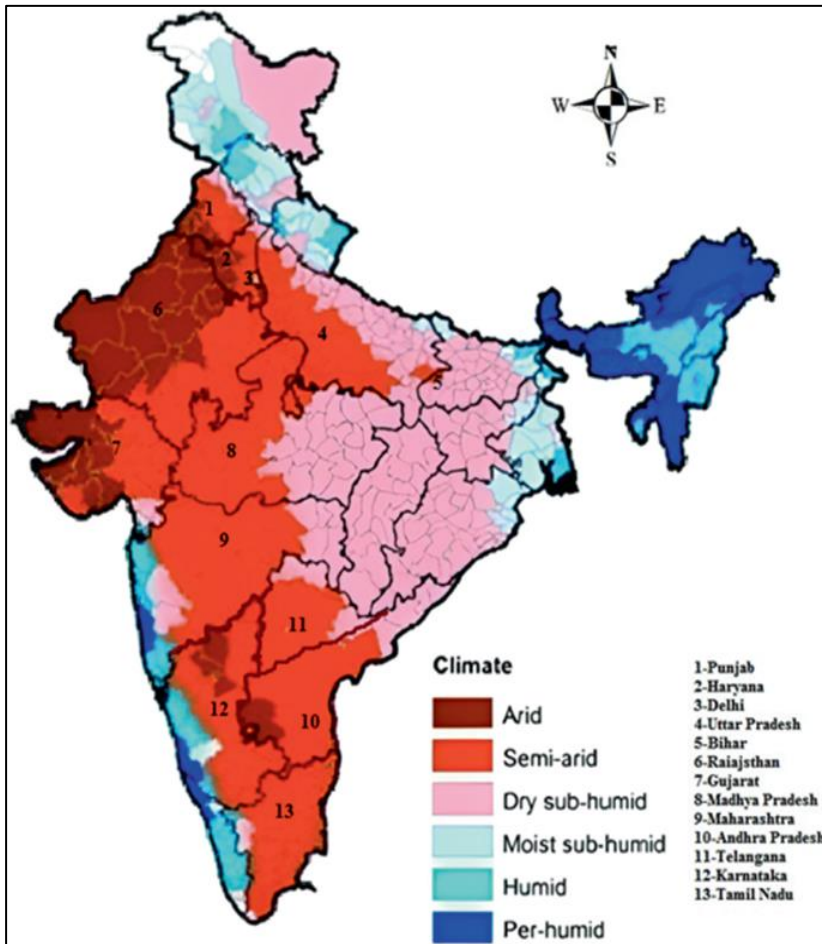


**Disbursement Linked Indicators**

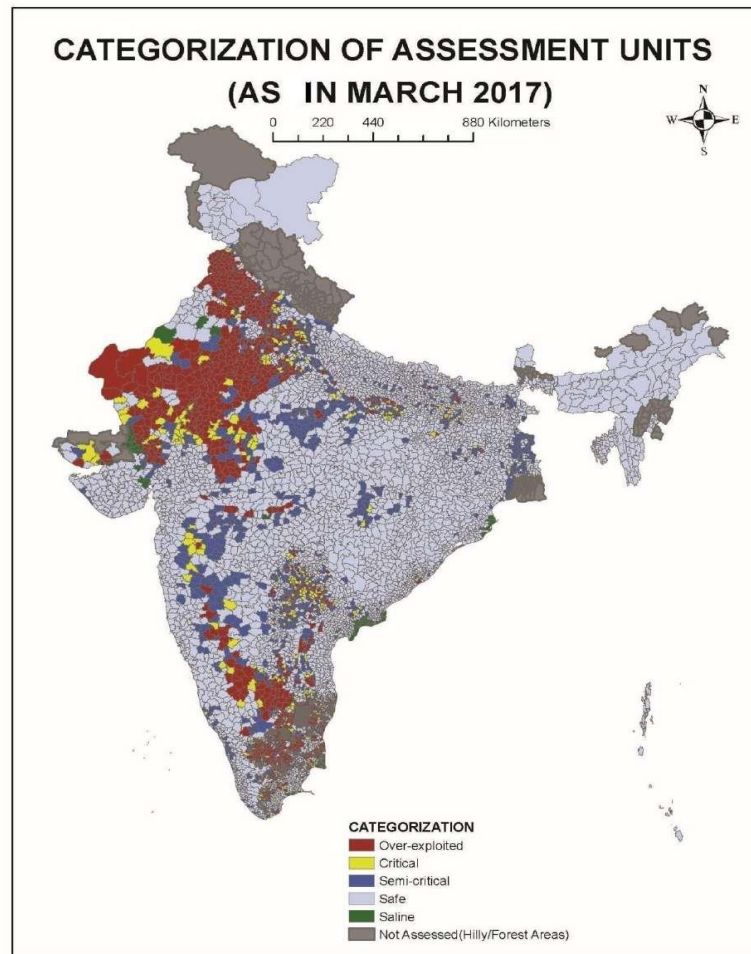


# Atal Bhujal Yojana coverage

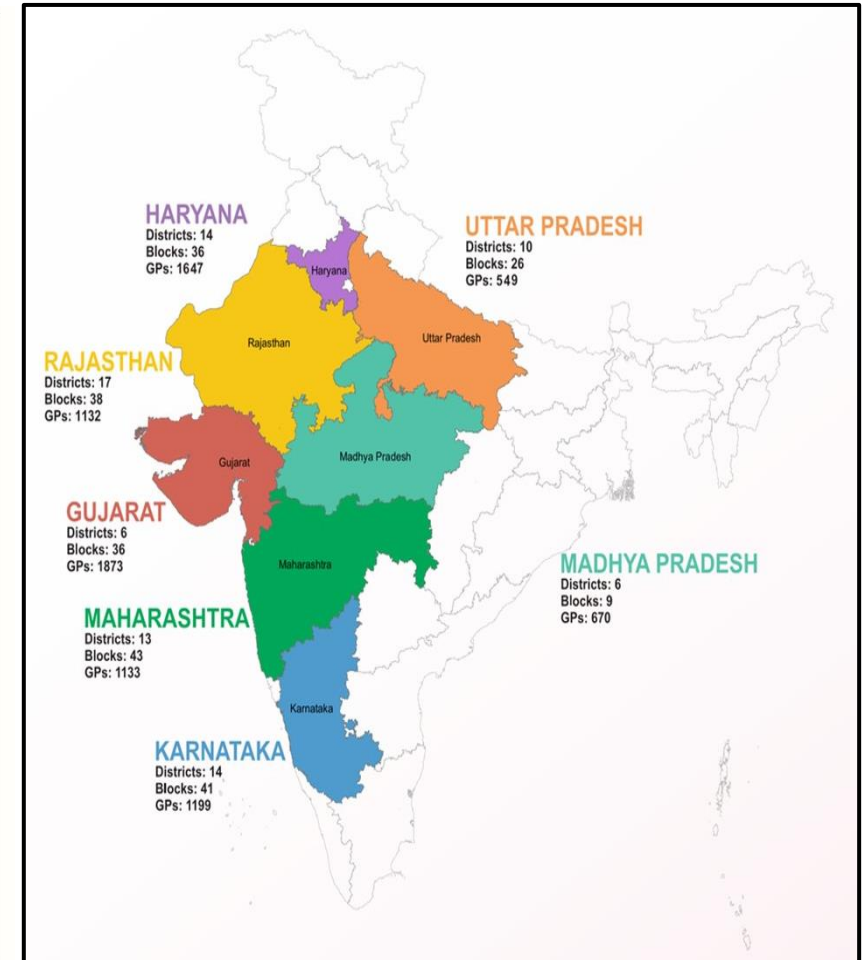
The Atal Jal scheme was implemented as a pilot in Selected Water-stressed States as per report of the Dynamic Ground Water Resource Assessment (CGWB, 2017), aligning closely with India's arid and semi-arid zones



Source: [https://link.springer.com/chapter/10.1007/978-3-031-43348-1\\_2#citeas](https://link.springer.com/chapter/10.1007/978-3-031-43348-1_2#citeas)



Source: Central Ground Water Board



Source: Atal Bhujal Yojana

# Components of Atal Bhujal Yojana

## Institutional Strengthening & Capacity Building (Rs. 1400 cr)

- **For improving capacity of States for ground water governance**
  - Strengthening of Institutional Mechanism for GW governance.
  - Strengthening of GW monitoring network
  - Upgradation of water quality laboratories
  - Awareness creation & Capacity building
  - Operational Expenses.

## Incentive (Rs. 4600 cr)

- **For incentivizing States for improving GW management practices based on achievement of pre-defined results**
  - User monitoring of GW related information & dissemination of data in public domain (10%).
  - Preparation of community-led Water Security Plans (15%).
  - Convergence of public funding under ongoing schemes for supply & demand side measures (20%).
  - Adoption of practices for efficient water use (40%).
  - Rise / improvement in declining trend of ground water levels (15%).

# INSTITUTIONAL ARRANGEMENT

**National Level Steering Committee (NLSC)** chaired by Secretary (DoWR, RD&GR)



**NPMU**

- **National Program Management Unit at Central level (NPMU)**

**State Level Steering Committee (SLSC)** chaired by the Chief Secretary in respective States.



**SPMU**

- **State Program Management Unit at State level (SPMU)**

**Headed by District Collector/ District Commissioner/ CEO Zilla Panchayat**



**DPMU**

- **District Program Management Unit (DPMU)**

**Team of experts and field level workers**



**DIP**

- **District Implementation Partner (DIPs)- NGOs/VOs/CSOs**

**Headed by Sarpanch of Gram Panchayat**



**VWSC**

- **G.P. level- Village Water and Sanitation Committee (VWSC)**



# Key activities under Atal Bhujal Yojana



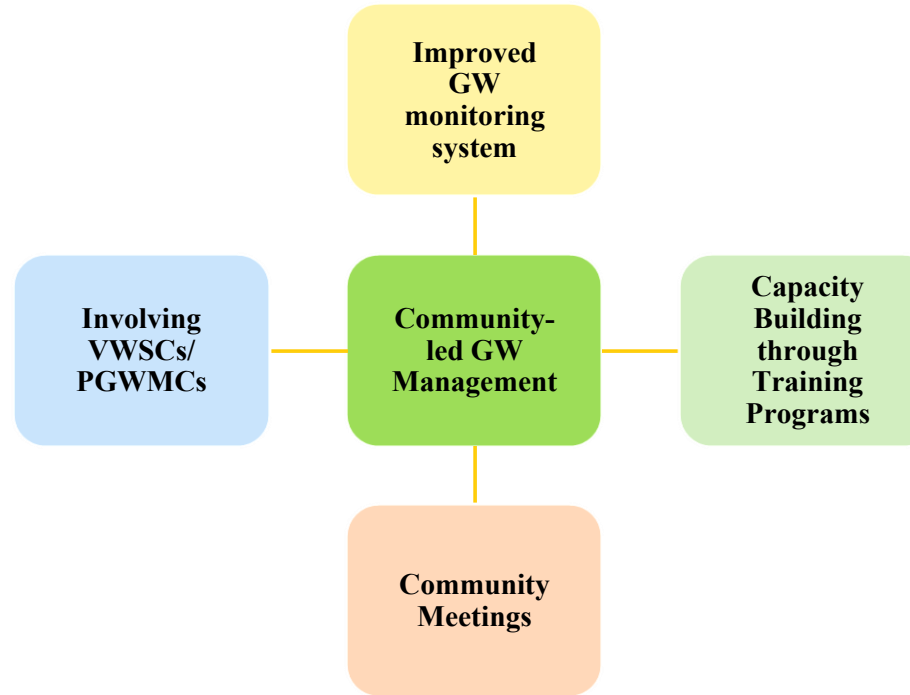
# Community-led GW Management

Existing VWSC roped in to facilitate community engagement at GP level

Rigorous awareness and sensitization drive taken in all GPs and for VWSCs in particular

Engagement of District Implementation Partners (DIPs) by the participating States

- Community participation in planning sustainable management of ground water
- Development of Gram Panchayat(GP) level water budgets
- Preparation of 8203 GP-level Water Security Plans (WSPs)



*Participation of Women & Vulnerable groups*



Preparation of WSPs – Deloli GP, Block & District Mahesana, Gujarat



Demonstration of water level measurement from Piezometer, Kotekere GP, Gundlupet Block, Chamarajanagara District, Karnataka



WSP Preparation Discussion – Dhanodi GP, Varud, Amravati, Maharashtra



Water Testing Kit Demo – Karkoli GP, Samalkha, Panipat, Haryana



# Engagement of local representatives/committees VWSC



Training at GP Sujaniipur, Block Patharia, District Damoh, Madhya Pradesh



Farmers' Camp at GP Ulumb Balkavadi, Block Vai, District Satara, Maharashtra



VWSC Meeting – Bhure ka Majra GP, Saraswati Nagar, Yamunanagar, Haryana



Social Audit at GP Kandhari Khurd, Block Talbehat, District Lalitpur, Uttar Pradesh



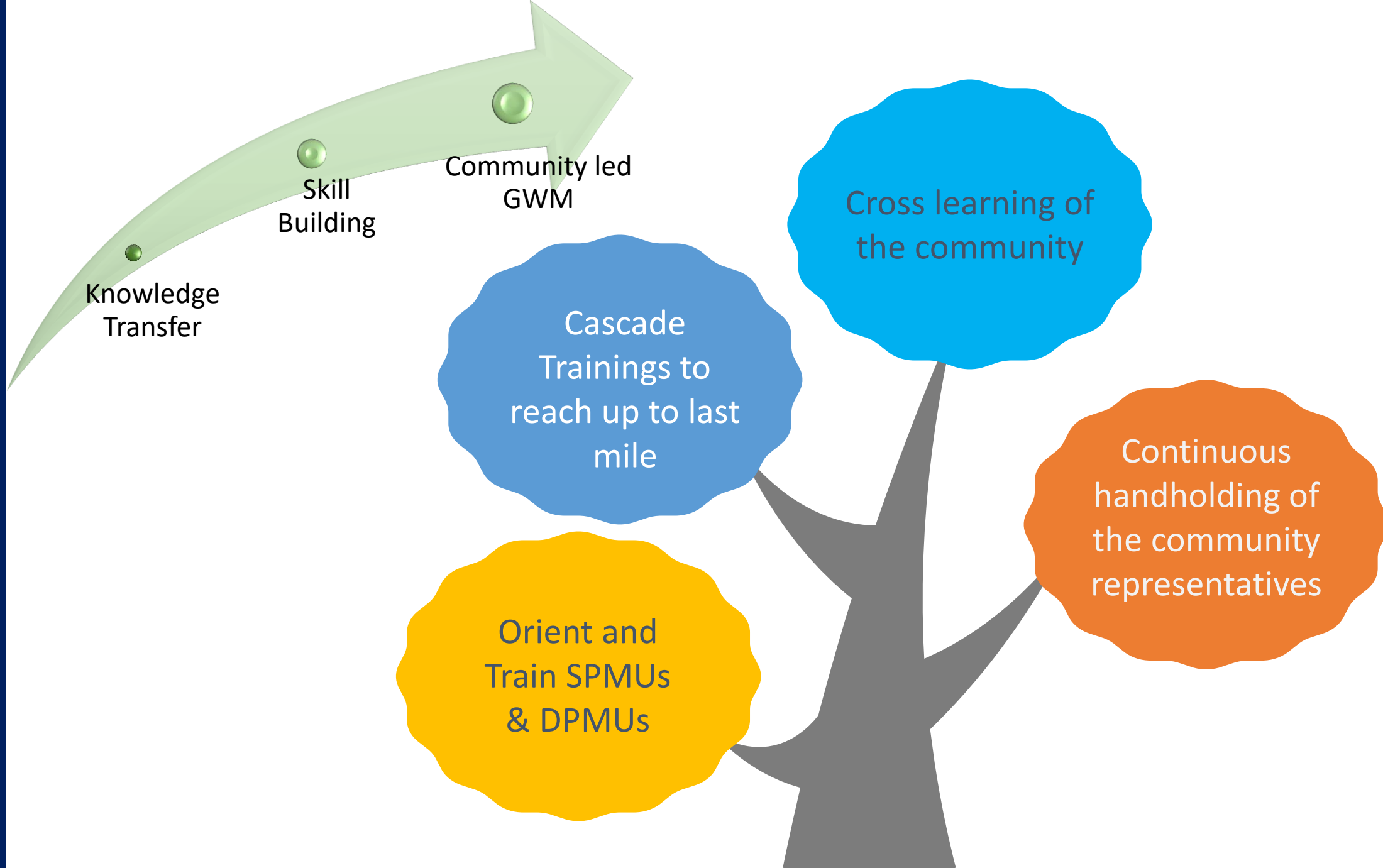
PRA at GP Kotda, Block Nakhtrana, District Kutch, Gujarat



PGWMC meeting in Kodosoge Gram Panchayat, Gudlupet Block, Chamaranagara District Karnataka



# Strategy adopted for Capacity Building



Strategy was to create support system for Community

# Cascading Model of Training and Capacity Building



State Level



District Level



Block Level



Panchayat Level

## What they learnt

**Water Budgeting:** Understanding inflow/outflow, water use components, and identifying deficit/surplus.

**Water Security Planning (WSP):** Designing balanced plans with demand/supply measures, crop shifting to low water-use crops, and promoting conservation practices.

**Groundwater Monitoring:** Measuring depth-to-water levels, using sounders, and applying field kits for water quality testing.

## Trainings Conducted

(GP level: 1,27,764)



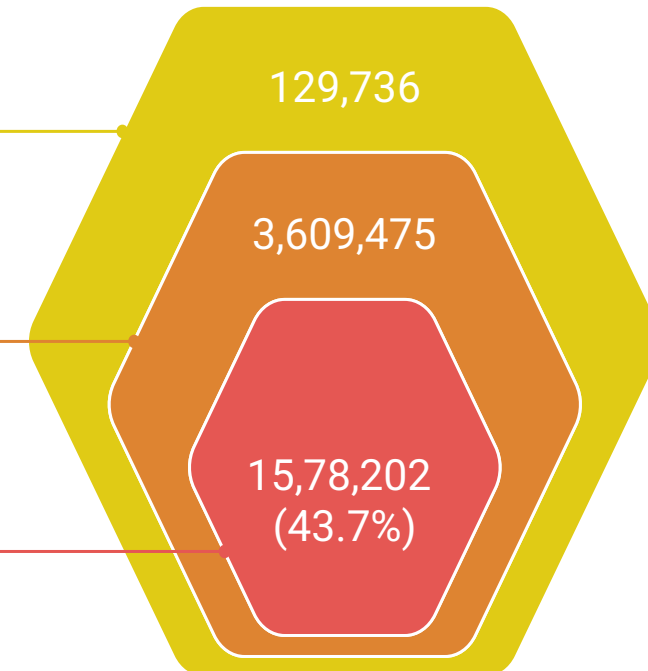
## Persons Trained

Total persons who are trained



## Women Participation

Women participating in the training

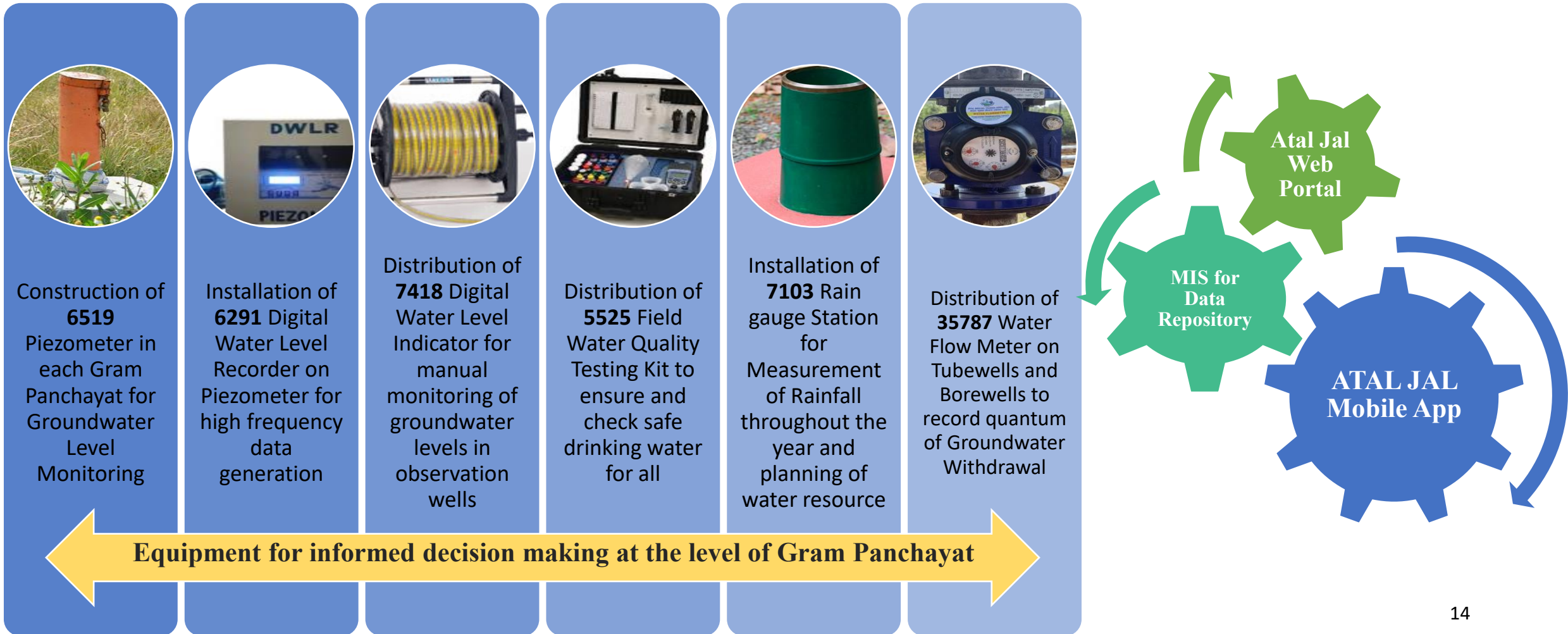




# Strengthening the Monitoring Mechanism

- Monitoring mechanism- Field level workers of District Implementation partners.
- Sustenance- Through creation of local cadre of volunteers i.e., one “Community Resource Person (CRP)” per Gram Panchayat (8203).

## Information Dissemination



# Utilization of Equipment



Piezometer constructed for ground water level monitoring



>1 lakh samples monitoring by Water Quality Field Testing Kit



>60,000 wells monitored through Water level Indicator and >13 lakh dynamic data entries recorded



DWLR data integrated with WIMS



>3 lakh data entries recorded through Water flow meters installed on wells

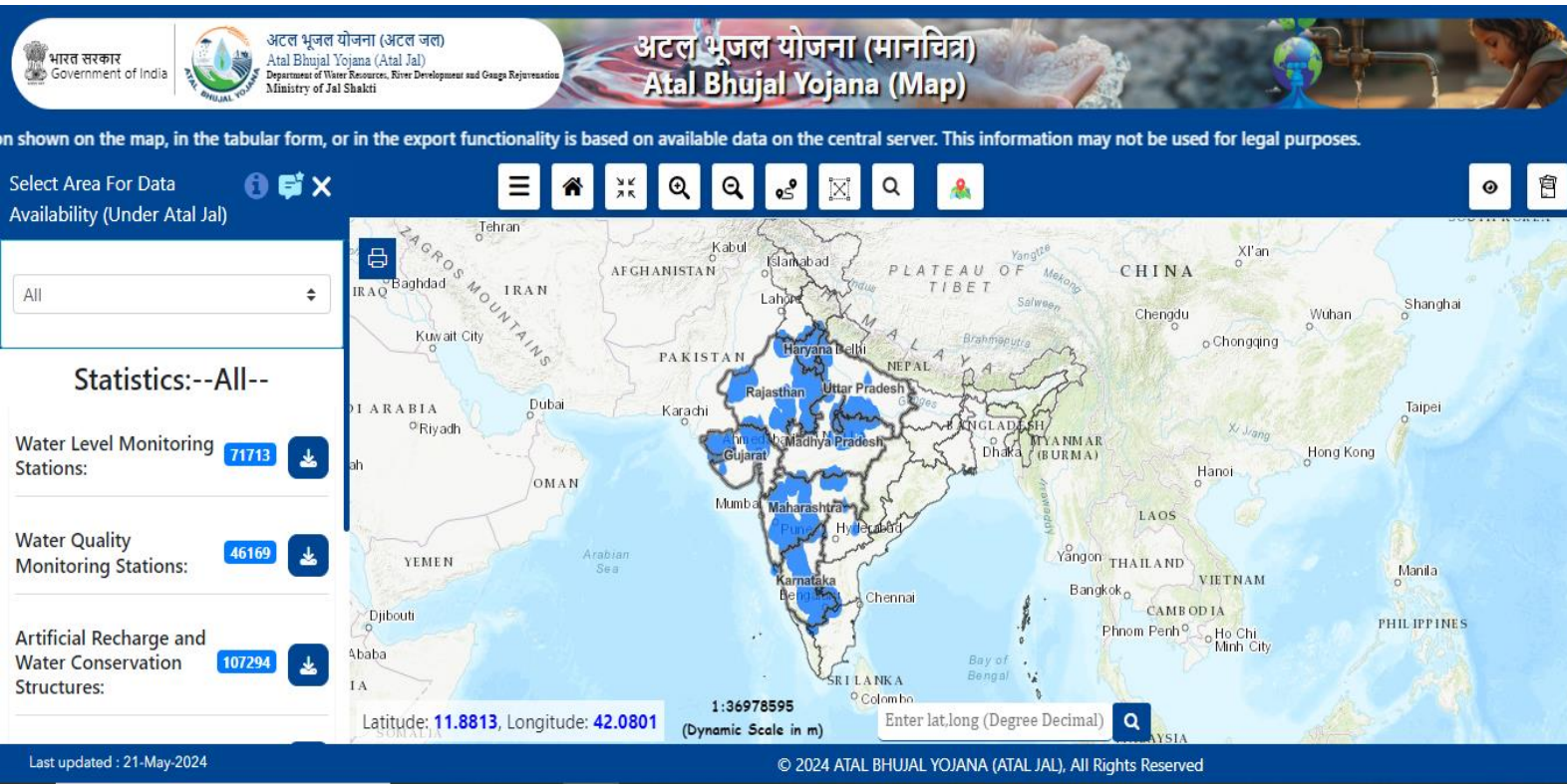


~10 lakh dynamic data collected through Rain gauge installed for rainfall monitoring



# Technology Adoption

- Atal Web portal
- Management Information System (MIS)
- Atal Jal Mobile App



'Atal Jal' App for Public Disclosure of  
Groundwater Data/Information



# Preparation of community-led Water Budgets & Water Security Plans

A plan to improve GW management practices in the GPs

Plan of the community, by the community, for the community

Incentivizes bottom-up participatory groundwater planning process

Participation of women & vulnerable groups in planning process

## Steps involved in preparation of Water Budget

### Gram Panchayat Information

- Collection of basic information of Gram Panchayat like name, total geographical area, water level and water quality, location, aquifer and watershed map etc.

### Water Availability

- Estimation of total water available from rainfall, availability of surface water and groundwater

### Water Utilization

- Estimation of total water utilized in domestic, livestock, irrigation, industries

### Water Budget

- $\text{Water Availability} - \text{Water Utilization} = \text{Water Budget (surplus or deficit)}$



# WATER SECURITY PLAN (WSP)

## Process flow for Preparation of WSP

1

Capacity building & creating awareness amongst the community, Gram Panchayat members, VWSC members through various IEC & training activities

2

Strengthening of Participatory Groundwater Management Committees (PGWMC) to ensure representations of all communities available in the concerned Gram Panchayat;

3

Presentation of GP level information to the community members as well as committee members

4

Updating the committee members on water availability and water utilizations in the concerned GP.

5

Discussions with the community on the suitable demand and supply interventions considering the water budgeting and water balance for sustainable groundwater resource management;

6

Approval of Water Security Plan (WSP) by the community members, and updation of the same every year

7

Implementation of all the interventions proposed in the WSP through convergence of the ongoing schemes of the State and Central Government.

One of the critical outcome of the water budgeting activity is community led Water Security Plan (WSP). WSP is a plan that specifies demand & supply side activities and tentative investments to meet water demands of a community in a specific Gram Panchayat (GP), tailored to reduce the water deficit in the GP based on the water budgeting.





# Demand & Supply side interventions





# Supply-side interventions

- ❖ Traditional supply-side recharge measures such as check-dams, trenches, and percolation tanks, while beneficial, are largely limited to recharging shallow aquifers and often fall short in hard-rock terrains, deep aquifer zones, or areas with erratic rainfall.
- ❖ Recognizing this challenge, the Atal Bhujal Yojana (Atal Jal) has supported a set of innovative, scientifically designed, and community-supported supply-side interventions that enhance groundwater recharge and ensure long-term aquifer sustainability.
- ❖ These practices are tailored to specific hydrogeological zones, integrated with local water security plans, and backed by monitoring and institutional convergence.

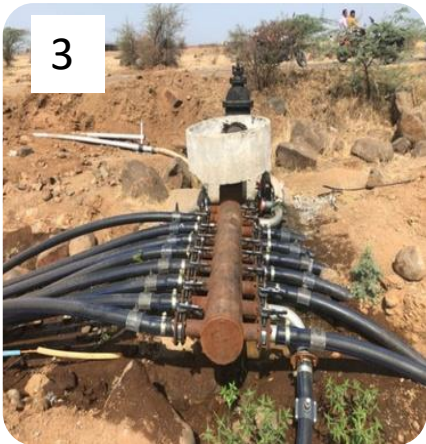


## Key innovative practices, implemented and scaled

1. Recharge Tubewells-Gujarat model



2. Injection Wells with Wire Screen Filtration – Karnataka



3. Pressurized Irrigation Project – Maharashtra



4. On Farm Water Tank with Solar Pump and MI System-Haryana



# Artificial recharge and water conservation structures constructed under Atal Jal

## Pond deepening, Khodla GP, Banaskantha district



## Basin percolation in Belgaum District, Karnataka



## Check Dam in Solapur District, Maharashtra



## Farm Pond, Jaisalmer District, Rajasthan





# Climate-resilient agricultural practices under Atal Jal

- Climate-resilient agriculture is closely aligned with the objectives of Atal Jal. The scheme promoted several demand-side interventions that simultaneously improved groundwater sustainability and strengthen resilience to climate variability, such as:

• **Adoption of micro-irrigation systems (30-40% water saving):** around 5.8 lakh ha covered through MI

• **Crop diversification away from water-intensive crops:** in 0.29 lakh ha area shift from banana, cotton, paddy, sugarcane etc to less water intensive crops like sorghum, maize, millets, black gram, green gram, red gram, wheat, vegetables, soyabean dragon fruits etc.



Sprinkler irrigation, Karnataka



Use of drip irrigation in Dragon fruit cultivation ,Kachchh Gujarat



# Climate-resilient agricultural practices under Atal Jal

- **Promotion of water-saving agriculture techniques (20-40% water savings)** : 3.13 lakh ha covered through mulching, laser land levelling, DSR, Conservation tillage or zero tillage, polyhouse/ green house/ shade net , vermi composting etc.
- **Sensor based smart irrigation (20-40% water savings)** : Use of mobile-based agro-advisories based on weather & soil moisture content , seasonal climate forecasts, early warning systems for extreme weather events
- **High-Tech Rainfed Horticulture Model (40-60% water savings)**: Polyhouse for climate-controlled, protected cultivation, Farm Pond for rainwater harvesting and storage, Solar Pump for renewable, off-grid irrigation & Drip/Sprinkler System for precise low-water-use irrigation. This system enables year-round high-value crop production while drastically reducing water and energy inputs. This is mainly rain water-based irrigation using minimal groundwater, enabling higher income/acre with year-round production & reduced climate risk



**Laser land levelling, Haryana**



**Smart irrigation technology in Karnataka and Madhya Pradesh**



**High-Tech Rainfed Horticulture in Rajasthan**

# Key Achievements under Atal Bhujal Yojana

1

Community led Water Budget and WSPs prepared for all the 8203 GPs and updated on yearly basis.

2

Around 1.27 lakh Gram Panchayat level trainings conducted with 43% women participation.

3

Investment of around Rs. 8343 Cr by the States for implementation of Water Security Plans.

4

More than 83,500 water recharge/conservation structures constructed/renovated.

5

More than 60,000 wells monitored for water level at GP level and shared with community.

6

Water efficient agriculture practices widely adopted by the community in more than 9 Lakh Ha area.

7

4665 Gram Panchayats and 180 Blocks have shown improvement in ground water level.



# Innovative / Good Practices under Atal Jal



Farm level Crop Intelligence System  
KARNATAKA



Demonstration on water quality testing  
through Mobile Van  
GUJARAT



Groundwater Information Centre  
MAHARASHTRA



Know your Gram Panchayat - QR code  
UTTAR PRADESH



# Innovative / Good Practices under Atal Jal



**Narrowcasting – A group of like minded people to discuss about groundwater management, HARYANA**



**IEC Campaign for Mass Awareness, Madhya Pradesh**



**Ratri Choupal, Rajasthan**



# Key Learnings

1

## Community is the corner stone

Planning works when local institutions, farmers and VWSCs understand the aquifer, own the choices, and take active role in planning.

2

## Water budgets make groundwater visible

Availability, recharge and demand must be explained in simple village-level terms, in the context of local conditions.

3

## Data disclosure builds trust

Monitoring wells, rain gauges, apps, dashboards and public reports convert data into accountability.

4

## Demand management is non-negotiable

Recharge alone cannot solve over-extraction; efficient irrigation and crop choices must be central.

5

## Convergence is the delivery engine

WSPs become actionable only when line departments align schemes, funds and field priorities.

6

## Capacity building sustains change

CRPs, DIPs, NGOs, CSOs and women's groups turn scheme design into field adoption.

**Key takeaway: “No data, no trust. No community, no sustainability. No demand management, no groundwater security.”**





# Thanks