Government of Maharashtra

Maharashtra Village Social Transformation Foundation
An initiative of the People of Maharashtra

जल शक्ति अभियान
संचय जल, बेहतर कल

JAL SHAKTI ABHIYAN

Program to Make Maharashtra Drinking Water Secure

Outcome Report of
Jal Shakti Abhiyan Campaign
Under Jal Jeevan Mission
In
Maharashtra Village Social Transformation Foundation
An initiative of the People of Maharashtra

Report prepared by MVSTF team with support of UNICEF Maharashtra
VSTF - UNICEF Knowledge Partnership

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Mantralaya
Mumbai 400 032
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MESSAGE

Water is considered as the most critical resource for sustainable agricultural development.

However, the increasing population, and more erratic rainfall, is likely to reduce the water supply for agriculture. Water shortage also adversely impacts on other sphere of life like health, hygiene and nutrition. Therefore, time has come when we should understand that water should be conserved and used wisely.

Considering this, the Government of Maharashtra is implementing various programmes and schemes for water conservation apart from Chief Minister Rural Water Supply Program, Jalyukt Shivar Abhiyan. Besides this, Ministry of Jalshakti has also launched Jal Shakti Abhiyan under the wider mandate of Jal Jeevan Mission, a time bound campaign to improve conditions in around 20 blocks across 8 districts of Maharashtra that are drought affected.

On this backdrop it is praiseworthy that Village Social Transformation Foundation with the technical assistance of UNICEF Maharashtra and Water Supply and Sanitation Department has further scaled up this campaign in 850 villages of 96 blocks across 25 districts and built the capacities of 400 Chief Minister Rural Development Fellows (CMRDFs) on Jal Shakti Abhiyan and facilitated in implementation of 5 components of JSA at village level with informed community participation.

I hope that the report generated by VSTF on this Jal Shakti Abhiyan will give detailed updates on the activities those were carried out during this campaign and will also encourage village members to make the water conservation a mission.

Best wishes to VST Foundation and Development Partners to ensure drinking water security villages in Maharashtra.

(Devendra Fadnavis)

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Acknowledgement

After Swachh Bharat Mission, the newly elected Government at Central has decided to launch time bound and coveted Jal Jeevan Mission to provide Functional and Potable Household Tap Water Connection (FHTC) to every rural HH household by 2024. Water availability at door step is going to be a crucial element in this mission. With the formation of Jal Shakti Mantralaya at Central Level, the Ministry had launched the Jal Shakti Abhiyan (JSA) for creation, rejuvenation, augmentation of water bodies along with grey water management and other water harvesting measures for strengthening of water sources with a focus on mass movement on water conservation. It was a time bound campaign with a mission mode approach intended to improve conditions of water bodies/sources in selective blocks that are drought affected, water stressed or over-exploited pockets across India. It has received praiseworthy response from Government Departments, PRI, agencies and philanthropists, Corporates, NGOs, Development Partners and Technical Agencies working in the water sector. This is the report of Maharashtra's JSA campaign.

This report contains impact of the JSA campaign carried out in 480+ VSTM GPs and by development partners across 25 districts in Maharashtra. Line departments in coordination with VSTF stakeholders, Development Partners, functionaries have carried JSA activities in the field. In this context, VSTF and UNICEF would like to acknowledge the contribution and support of GoM, agencies like Reliance Foundation, Tata Trusts, Axis Bank Foundation, ATE Chandra Foundation, D-Mart, Swades Foundation, Mahindra Rise, SSP, Water Aid India, Piramal Sarvajal Foundation, and ACWADAM and across the levels who were involved in implementing JSA campaign in the state. While the team is indebted to all of them, exigencies of space and time constraints limit us from naming each one

We also extend our sincere acknowledgement to Water Supply and Sanitation Department, Ground water Surveys and Development Agency, Water Resources, Agriculture, Relief and Rehabilitation and other Departments of Government of Maharashtra for convergent programming as part of JSA campaign in last 90 days

Along with Government functionaries at district level, the team would also like to thank all block and village level functionaries as without their support it wouldn't have been possible. We would also like to extend our sincere gratitude to all PRI members and communities who have stood by the cause and made this campaign a successful one and this is the beginning to make rural Maharashtra resilient with functional and potable water supply throughout the year.

This report is an attestation of the efforts and progress by the community, Rural Development Fellows, District Executives, District Collectors, CEO ZP, State team, and VSTF and UNICEF team in spearheading the Jal Shakti Abhiyan.

Thanks to CEO, MVSTF and CFO, UNICEF Mumbai for their continued support and constant guidance throughout the campaign period.

Project Team of MVSTF and UNICEF Maharashtra

19th September, 2019

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Abbreviations

ACWADAM: Advanced Centre for Water Resources Development and Management

BJS: Bhartiya Jain Sanghathana

CCT: Continuous Contour Trenches

CEO: Chief Executive Officer

CFO: Chief of Field Office

CGWB: Central Ground Water Board

CM: Chief Minister

CRP: Community Resource Person

CSR: Corporate Social Responsibility

DDWS: Department of Drinking Water and Sanitation

DE: District Executives

DM/DC: District Magistrate/ District Collector

DWSM: District Water and Sanitation Mission Cell

GP: Gram Panchayat

GSDA: Ground Water Survey and Development Agency

HDI: Human Development Index

IEC: Information Education and Communication

JJM: Jal Jeevan Mission

JSA: Jal Shakti Abhiyan

MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act
PoCRA: Programme on Climate Resilient Agriculture
PRI: Panchayat Raj Institutions

R&R: Relief & Rehabilitation

RDF: Rural Development Fellows

RWS: Rural Water Supply

SBM: Swachh Bharat Mission

SDGs: Sustainable Development Goals

SDMA: State Disaster Management Authority

SSP: Swayam Shikshan Prayog

UNICEF: United Nations Children's Fund

VDP: Village Development Plan

VSTF: Village Social Transformation Foundation

VSTM: Village Social Transformation Mission

WASH: Water Sanitation and Hygiene

wSHARP: Women Led Water Sanitation Hygiene and resilience practices

ZP: Zilha Parishad

Executive Summary

The state government of Maharashtra declared 152 blocks and 286 revenue circles to be drought hit during the 2018-19 hydrological year. Thousands of villages across the state faced acute problems linked to drinking water, water for livelihoods etc. It has various social, economic and psychological repercussions on individuals, families and communities, especially to women and children. Although drought has various fall-outs, one of the most important one is lack of access to safe and potable drinking water. Drinking water safety and security is one of the important Sustainable Development Goal (SDG- 6) highlighted by the United Nations. Ensuring year-round supply of good quality of water is critical for various human development indicators like health, education, and livelihoods.

More than 90 per cent of rural water supplies in Maharashtra are dependent on groundwater. The parallel development of this invisible and fugitive resource for agriculture had led to increasing vulnerability of groundwater availability for drinking purposes. Local governance institutions like Gram Panchayat and Village Water and Sanitation Committee play a key role to ensure year-round good quality water supply based on groundwater. Studies in the past have highlighted that poor capacities of these institutions often lead to failure or mismanagement of water supply schemes.

Department of Drinking Water and Sanitation under newly formed ministry had launched Jal Shakti Abhiyan, a time-bound campaign to increase and intensify the water conservation efforts in 1592 blocks spanning 256 districts across India. It had five targeted interventions, targeted communication campaign, farmer/Community mobilization, and application of space technology for water resource management, and close monitoring and coordination. The focus of the campaign was on revival of traditional water conservation technologies, water reuse and recharge technologies, creation of rain water harvesting, watershed development and afforestation.

However, as per the JSA, it was expected that the campaign would be carried out in only 20 blocks in 8 districts in Maharashtra state as per the CGWB norms. However, Maharashtra state not only worked in these blocks but also scaled up this to entire state through its various departments, platforms and partners considering 16% of

drought prone blocks of India are from Maharashtra and more than 90% single village water supply schemes are ground water based and many of them are situated in critical and over exploited watersheds. The MGNREGA, Water Supply and Sanitation Department, PoCRA, Jal Yukt Shivar Abhiyan, Relief and Rehabilitation Department, Agriculture Department, GSDA, Water Resources, Soil and Water Conservation and Forest department and development organizations like Water Aid India, Piramal Sarvajal, Paani Foundation, BJS, ACWADAM and SSP come together in the State for JSA.

VSTF, with the technical support from UNICEF Mumbai has rolled out JSA campaign across all 850 villages covering 450 Gram Panchayats of 96 blocks across 25 districts of Maharashtra. Out of 450 Gram Panchayats 300 Gram Panchayat participated in implementing JSA campaign. During the JSA campaign period, predominantly water conservation works, construction of soak pits, and desilting besides intensive afforestation were implemented effectively in 366+ VSTF GPs. Around 11, 000 water conservation interventions are completed which includes CB, CCT, CNB, LBS, CD, Trenches, and Gabian structures etc. About 860 sites are desilted, 230 rainwater harvesting structures have been created. As many as 16,217 measures have been done to store, recharge and reuse. The total water storage capacity of these structures is 191.50 crore ltrs with expenditure of INR 22 crore benefitting 74,222 families covering 3,44684 people (124058 women and 106734 children). Total trees planted during JSA campaign were 14,08,414 across 24 districts across the state.

This report captures the planning, capacity building effort, partnership, convergence, processes followed, and interventions focusing on strengthening the drinking water sources and disseminate the concept of village water safety and security with informed community engagement and strengthening of PRI structures. The report also captures the case studies and good practices that can be replicated widely.

1. Background

Integrated Water Resource Management has become a National priority in the year of 2019 with the merging of different key ministries like Ministry of Water Resources and Ministry of Drinking Water and Sanitation ,River Development & Ganga Rejuvenation Department and central level. The institutional integration (formation of Jal Shakti Ministry) has led integrated water resource management a National priority. Department of Drinking Water and Sanitation under newly formed ministry had launched Jal Shakti Abhiyan, a time-bound campaign to increase and intensify the water conservation efforts in 1592 blocks spanning 256 districts across India. It had five targeted interventions, targeted communication campaign, farmer/Community mobilization, and application of space technology for water resource management, and close monitoring and coordination. The focus of the campaign was on revival of traditional water conservation technologies, water reuse and recharge technologies, creation of rain water harvesting, watershed development and afforestation. The campaign which has been run in two phases i.e. 1 July 8, 2019 to 15 September 2019 and second phase about to start from 01 October 2019 to 30th November 2019. It will run in i) blocks with critical/over-exploited groundwater levels and ii) for the states without critical/over-exploited blocks and districts with the least groundwater availability.

The Government of Maharashtra with its partners like MVSTM, ACWADAM and SSSP had run JSA phase-I in Maharashtra state with the technical support of UNICEF, MFO. The planning, capacity building, execution of interventions, etc. happened with jointly between Government and Development Partners.

1.1. About Village Social Transformation Mission (VSTM)

Maharashtra Government has taken up initiatives in putting the development on the fast track in selective villages. The state has incorporated Village Social Transformation Foundation (VSTF), a not for profit company under Rural Development Department to carry out interventions towards transformation of the villages under the leadership of Hon'ble CM towards integrated rural development focusing on localizing the SDGs. VSTF is a special purpose vehicle to ensure sustainable development in rural Maharashtra through Public-Private Partnership.

VSTF is working in village level to implement 'Village Social Transformation Mission' to reform villages affected by natural calamities like drought and other social, economic, livelihood and infrastructural challenges in Rural Maharashtra to create an inclusive growth model for scaling up and transforming villages towards self-sustainable development and a collaborative and focused effort to provide last mile service delivery and build infrastructure to empower the villages and to undertaking rural development1. The foundation has approach of holistic transformation in the villages of Maharashtra to achieve multiple developmental goals in the field of digital connectivity, housing infrastructure, affordable and clean energy, safe and potable drinking water and water security, skill development, environment protection and improved agricultural productivity, gender equality, healthy lives and well-being, quality education, health and sanitation, etc. Moreover, the main target of VSTF is to empower the villagers up to the level where they can sustain the changes by their self-initiative. For the sustainability of the changes, the foundation has initiated the Chief Minister's Rural Development Fellowship Programmer where highly qualified fellows have been recruited in each Gram Panchayat (GP) for ensuring localized planning, community participation and effective execution of the programme according to the planning. The commitment from corporate sector, foundations and individual philanthropist by earmarking technical and financial support for a range of activities is overwhelming. At present, 483 fellows are engaged in 483 GPs (855 villages) and in coming year the number will increase with more participation of corporates.

1.2. Partnership between UNICEF and UNICEF WASH on VSTF

UNICEF has been working closely with government of Maharashtra (GoM) for increasing the institutional capacities of the local governments and institutionalising community participation in local governance. UNICEF has given emphasis on delivery of equitable, gender responsive services on improved drinking water, quality hygiene and safe sanitation, health and nutrition, education, skill development and improvement of basic infrastructure at scale, for the most vulnerable and deprived communities in Maharashtra.

1 www.mvstf.org

UNICEF has been working as knowledge partner for various government departments and its agencies. As part of its mandate, UNICEF has been partnered with MVSTM to work on water, sanitation and hygiene. The partnership aims to build capacities of VSTF and its functionaries working on WASH. UNICEF Maharashtra has been extensively engaged in building capacities of RDFs on WASH and creation of conducive environment for implementation water sanitation and hygiene programs, Child Rights, Early Child Development and care for the Girl Child.

1.3. Journey toward building Capacities of Field Functionaries for Jal Jeevan Mission

1.3.1. Planning

Water being a State subject it is desirous to have State Departments to come together and work on the issue. The institutional integration at the National level brought desired response from various departments to work on the critical issue of water conservation in the state. To promote water conservation across the country ahead of the monsoon season, the Hon'ble Prime Minister, Narendra Modi reached out to all Sarpanches, urging them to undertake Rainwater Harvesting and Water Conservation activities in rural India to strengthen drinking water sources. Gram Sabhas were convened across the country which was read out publicly to all the residents of the village. The sitting of Gram Sabha was followed by *Shramdaan* for water conservation, as outlined in the Prime Minister's letter[2].

However, as per the JSA, it was expected that the campaign would be carried out in only 20 blocks in 8 districts in Maharashtra state as per the CGWB norms. However, Maharashtra state not only worked in these blocks but also scaled up this to entire state via its various departments and partners considering 16% of drought prone blocks of India are from Maharashtra and more than 90% single village water supply schemes are ground water based and many of them are situated in critical and over exploited watersheds. The MGNREGA, Water Supply and Sanitation, PoCRA, Jal Yukt Shivar Abhiyan, Relief and Rehabilitation

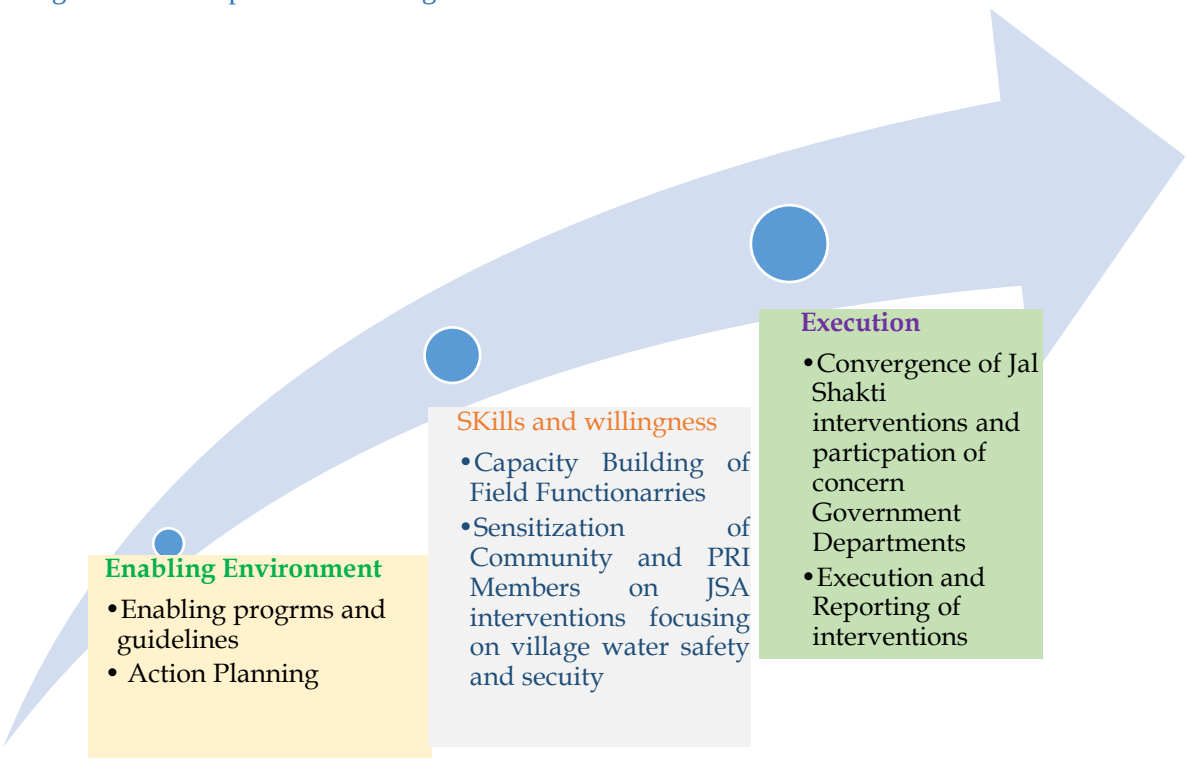
[2] https://pib.gov.in/newsite/PrintRelease.aspx?relid=190639

Department, Agriculture Department, GSDA, Water Resources, Soil and Water Conservation and Forest department and development organisations like Water Aid India, Piramal Sarvajal, ACWADAM and SSP come together in the state for JSA.

Departments like Water Sanitation, Agriculture and R&R or SDMA, and VSTM issued letters with detail action plan to concerned authorities at district, block and village level to take up JSA activities. This helped in scaling up the JSA beyond just 20 blocks of 8 districts in the State. The letters of SDMA and VSTF have targeted entire Auragabad Division (8 districts, 79 blocks with 1.9 million population) and state as whole under JSA.

As a standard operating process, following steps were followed for implementation of JSA Campaign.

Figure 1: JSA implementation stages



1.3.2. District Level Planning:

After issuance of letters from state authorities to the districts, the district level stakeholders of VSTF and other development partners approached all the concerned departments for action planning. The purpose of the district level engagements from these three organisations was to sensitise and convey the JSA messages to all the concerned departments and take up the activities with accelerated efforts in their respective target areas. VSTF district teams exclusively reached out to their respective

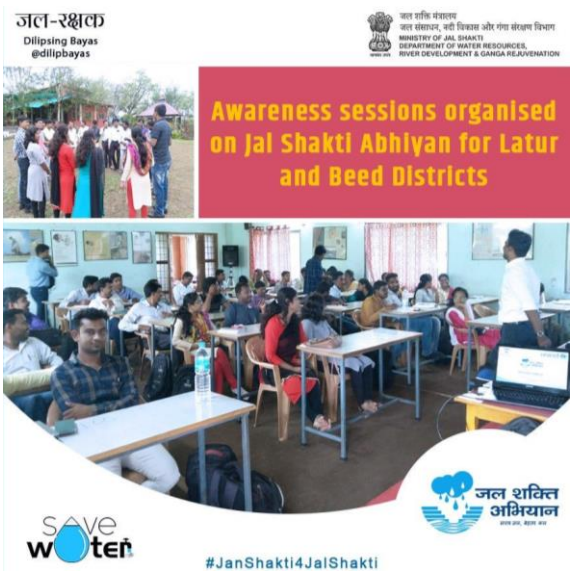
district HoDs and prepared action plans. Planning across the districts included the capacity building support and action plans for source creation, source strengthening and demand management activities. Districts like Jalna, Osmanabad and Solapur launched special drives for RWH and soak pit creation.

1.4. Process of district level training

Looking at the critical and extensive field engaging work in limited time period, it was necessary to enhance the capacities of all the VSTF, SSP and ACWADAM stakeholders along with sensitization of concerned line departments. With the limited time, it was challenging to sensitise and leverage support for execution of capacity building, proposal submissions, execution on the field and follow up with the districts again. This section explains the capacity building activities of VSTF, SSP and ACWADAM.

A. Village Social Transformation Mission

VSTF, with the technical support from UNICEF Mumbai has rolled out JSA campaign across all 850 villages covering 450 Gram Panchayats of 96 blocks across 25 districts of Maharashtra. Out of 450 Gram Panchayats 300 Gram Panchayat participated in implementing JSA campaign.



Village Social Transformation Foundation with UNICEF Mumbai team's supported in trainings to District Executive and RDFs (366) across 21 districts in campaign period and han holding support during implementation. The JSA training program has helped RDFs to assess challenges related to water availability and quality, improved

understanding about drinking water security, develop understanding about water conservation technologies and demand management interventions with reporting.

CMRDFs trained PRI members and community of 366 GPs. Sensitisation and reorientation on actions proposed under VDP were discussed again. A clear message of community ownership and completion of VDP targets for soil and water conservation and environment protection were imparted. The community was initially hesitant considering the beginning of monsoon period for them and most of them were occupied with the farm activities. However, strong rapport of CMRDFs strong report and presence in the field ensured maximum support from the community.

As an outcome, campaign reached out to 37,000 households, covering approximately 1.72 Lakhs population across 366 GPs in 25 districts. The campaign was successfully reached out to diversified stakeholders i.e. around 62,000 women also.

The community mobilisation resulted in timely response in districts like Akola, Amravati, Aurangabad, Beed, Chandrapur, Dhule, Gadchiroli, Hingoli, Jalna, Latur, Nagpur, Nanded, Nandurbar, Nashik, Osmanabad, Parbhani, Raigad, Wardha, Washim and Yavatmal.

Table 1: Training of CMRDFs

Jal Shakti Abhiyan: Capacity Building				
SN	**Date**	**Districts**	**Venue**	**Participants**
1	07 July, 2019	Osmanabad	Osmanabad	14
2	11 July, 2019	Parbhani and Hingoli	Gangakhed	27
4	12 July, 2019	Aurangabad and Jalna	Aurangabad	30
5	23 July, 2019	Latur and Beed	Ambajogai	50
6	11 July, 2019	Wardha and Nagpur	Wardha	45
7	12 July, 2019	Chandrapur	Chandrapur	40
8	19 July, 2019	Pune Raigad and Solapur	Pune	24
9	20 July, 2019	Nashik, Dhule and Ahmednagar	Nashik	41
10	08 August, 2019	Buldhana Akola Washim	Akola	38
11	09 August, 2019	Yavatmal	Yavatmal	35
12	10 August, 2019	Nanded	Kinwat	22
Remotely supported districts: Palghar, Nandurbar, Amravati and Gadchiroli				**366**

B. Swayam Shikshan Prayog

wSHARP is a women-led risk informed community-government partnership driven project implemented by Swayam Shikshan Prayog and supported by UNICEF, in Osmanabad & Latur districts of Marathwada region in Maharashtra, India.

The project aims to build community resilience in the lean period towards improving community & household water security for sustained and safe water, sanitation and hygiene and improved nutrition of women and children in convergence with Water, Sanitation and Hygiene (WASH) related National Flagship programs. Core to achieving results is cadre of motivated & hardworking community facilitators at the village level – *"A Cadre of Arogya Sakhis"*. They implement WASH interventions deeper in the villages and have the knowledge and potential to facilitate future government schemes in its implementation at the community level. The skilled Arogya Sakhis are trainers and in-house resource persons for the village to empower the communities on WASH, Nutrition, gender and other cross-cutting issues.

As part of JSA, the SSP has worked in three districts i.e. Osmanabad, Latur and Solapur as listed in table below

Table 2: wSHARP programme villages

Under JSA, SSP has implemented following capacity building initiatives,

Sr No	District	Blocks under JSA		No. of villages
		wSHARP Blocks	Scale-up blocks	
1	Osmanabad	Kallamb,	Washi, Tuljapur & Lohara	100
2	Latur	Deoni	-	50
3	Solapur	-	South Solapur, North Solapur	40

Block-level workshop on JSA

As part of JSA campaign, SSP with the support of block administration hold one day workshops at Kalamb and Deoni blocks of Osmanabad and Latur districts respectively. Arogya sakhis from both the blocks attended the block level workshops. Influenced from block workshops, the block administration instructed the PRI members to take up the JSA activities on priority. This helped Arogya Sakhis to mobilise community and GP members to initiate discussions with villagers. The block level workshops helped the community cadre and frontline workers of government in follow-up activities and leveraging of funds.

Community level meetings

Community level meetings were organised by frontline workers in the wSHARP villages. Arogya Sakhis facilitated the meetings in villages and shared information about

- soak pits creation, recharge pits, rooftop rainwater harvesting
- Bore-well and open well-recharge
- Kitchen garden
- Rejuvenation of traditional water bodies, tree plantation, etc.

Follow-up Meetings

As follow up actions, SSP has focussed on ten best villages to strengthen the JSA initiatives. The follow-up activities include facilitation of convergence intensively, technical support in making of structures, building capacities of the community on demand side management, conducting IEC activities, etc.

C. Drops of Hope Programme:

Under JSA, ACWADAM-JANA PRABODHINI- MANAVLOK organised district level workshops in Latur and Osmanabad which is supported by Bridgestone India and UNICEF. Objective of the workshops was to generate awareness about water conservation, participation ground water management and demand management.

The Drops of Hopes programme is currently implemented in 111 villages. CRPs from these villages participated in the district level workshops. The workshop helped participants to learn about time bound interventions and synergy between JSA and

Drops of hopes programme. District CEOs showed interest in implementation of JSA campaign in not only Drops of Hopes programme but also in entire districts as both the districts falls under water scarce region of Marathwada.

2. District-wise JSA interventions

The JJM aims to provide FHTC in every rural HH by end of 2024. Water availability throughout the year is going to be a crucial element in this mission. The JSA interventions targeted to increase the water storage capacity by various means.

The proposed interventions in JSA campaign ensures water capturing only. Albeit it has targeted interventions but all are in supply side with an assumption with water sources would capture more rain water after the JSA interventions. However, participatory ground water management, community participation and demand side management interventions were not clearly stated centrally run JSA campaign. The water captured is used for various purposes ranging from drinking water to commercial purposes. The groundwater that is being tapped by drinking water schemes is also used by millions of farmers. The irrigation needs are much higher than the drinking water requirements. The heavy extraction of ground water resulted in drying of sources. Hence, only by water conservation and reducing the number of over exploited blocks, would not result into source sustainability unless there is demand side management, participatory ground water and aquifer management and source strengthening. Maharashtra has >93 per cent of ground water based single village rural water supply schemes[3]. Hence, it was decided to scale up the JSA interventions beyond 20 blocks.

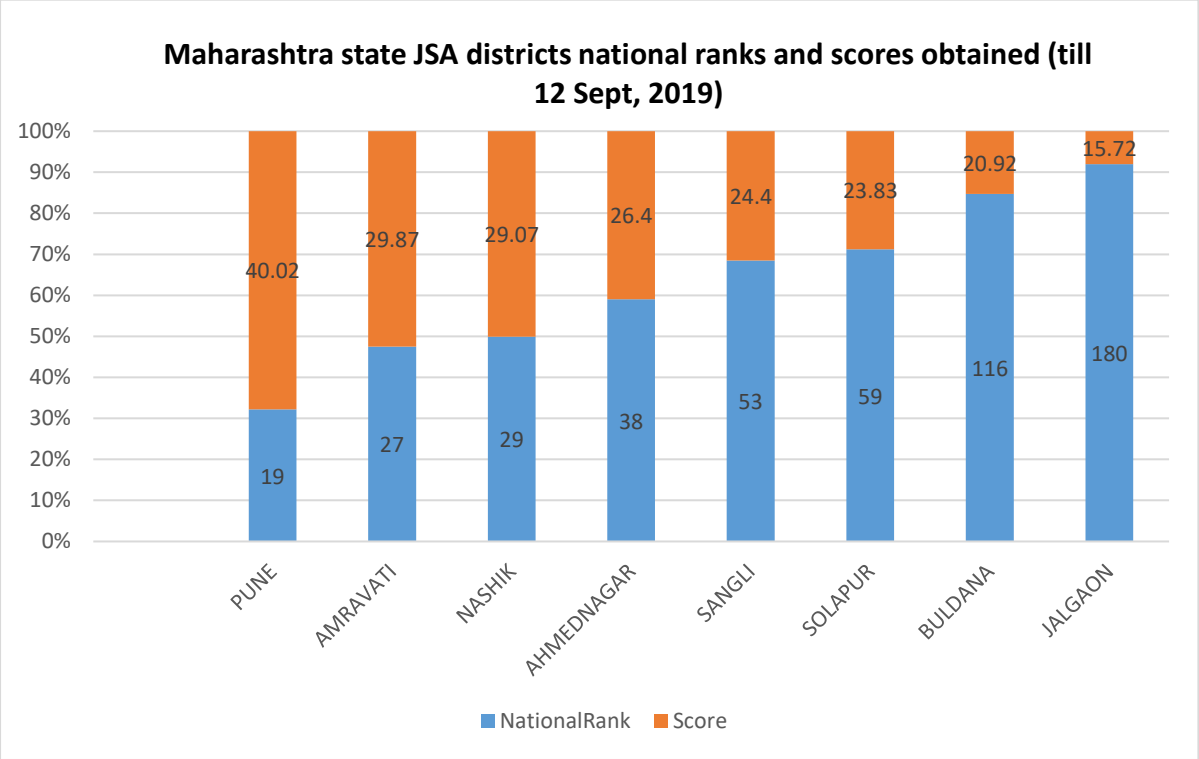
2.1. Interventions in 20 Blocks of 8 JSA districts

National level ranks and scores obtained:

20 blocks of 8 districts (list in annexure) from Maharashtra were included in the JSA Phase-I campaign. The districts performed best at their levels

[3] https://ejalshakti.gov.in/IMISReports/Reports/BasicInformation/rpt_SchemesSourcesGWSW_D.aspx?Rep=0

Fig 2: Maharashtra state JSA districts national ranks and scores obtained



- Approximately 731,000 people participated in the various events organised by 20 blocks during campaign; Pune (more than 200,000) and Amravati, Ahmdenagar and Solapur combined (411,000)
- As many as 53,774 farmers were mobilized during the campaign
- More than 38,000 people participated in events such as Poster / Painting / Slogan / Essay / Debate competitions and >43,000 people participated in rallies and kind of IEC activities
- 21,267 people participated in Public awareness meetings

2.2. JSA interventions in SSP's wSHARP programme:

Under the wSHARP programme, more than 8362 soak pits of 305,213 cubic meter water recharging capacity and 1536 recharge pits for well and borewell recharging have been created. Approximately 97,000 mtr of Nala bunding and 96,300 mtr Nala deepening and widening work has happened with funding support from Government and other partners. More than 650 CCTs, estimated 35,100 cubic meter water storage capacities have been created. As many as 1382 LBS have been made to check the running water and help water infiltrate into ground.

Table 2: Structures created under wSHARP programme during JSA

Sr. No.	Structures/measures	Units
1.	Soak Pits	8362
2.	Well recharge, Bore well & other recharge pits	1536
3.	Tree Plantation (saplings)	191657
4.	Nala Bunding (mtr)	97491
5.	Nala deepening and widening (mtr)	96308
6.	LBS	1382
7.	Continuous contour Trenches (CCT)	650

2.3. JSA interventions in VSTF GPs

During the JSA campaign period, predominantly water conservation works, construction of soak pits, and desilting besides intensive afforestation were implemented effectively in 366+ VSTF GPs. Around 11, 000 water conservation interventions are completed which includes CB, CCT, CNB, LBS, CD, Trenches, and Gabian structures etc. About 860 sites are desilted, 230 rainwater harvesting structures have been created. As many as 16,217 measures have been done to store, recharge and reuse. The total water storage capacity of these structures is 191.50 crore ltrs with expenditure of INR 22 crore benefitting 74,222 families covering 3,44684 people (124058 women and 106734 children). Total trees planted during JSA campaign were 14,08,414 across 24 districts across the state.

Table 3: Impact of JSA intervention in VSTF GPs

Impact of JSA intervention in VSTF GPs		
Trees Planted		1692693
No of structures created		61954
Water Storage Capacity (Lakh ltrs)		59387.1571
Costs incurred (In Lakhs)		7530.67737
Beneficiaries	Families	130515
	Population	723011
	Women	221145
	Children	350945

Summary of District wise interventions:

i. Ahmednagar:

VSTF is working in 8 GPs in Jamkhed and Karjat blocks. All 8 CMRDFs had participated in the JSA training. Post training the team of CMRDF has executed JSA interventions in all VSTF villages. Each CMRDF then oriented their respective GP members about JSA and approved work proposed under their GP village development plans. As part of GP member sensitisation meetings and discussions, women and all water users were reached out. The meetings received mixed responses due to the monsoon season. Active community members ensured that the village would participate in the campaign. Along with UNICEF's technical support the villagers received support from Paani Foundation, BJS and Baramati Agro.

Table 4: Impact of JSA intervention in Ahmednagar VSTF GPs

District		Ahmednagar
No of structures created		23
Water Storage Capacity		19192610
Cost incurred ₹		1148003
Beneficiaries	Families	379
	Population	1776
	Women	90
	Children	42
Trees Planted		11,300

As many as 23 water conservation structures and recharge shafts of 1.92 crore litre water storage and recharging capacity have been created in the villages. The total cost incurred for creation of these structures is INR 11.48 lakh. Nearly 379 families will get benefits from these structures helping 1776 people to get water for various purposes.

While working, the district and village level functionaries updated each other with the help of WhatsApp group and social media. Coordination and planning at district level helped them to follow-up for funding and resource leveraging. The community took ownership of the interventions by collecting the community contribution for gap funding and services.

ii. Amravati:

There are total 34 VSTF GPs (95 villages) in Amravati district. Only 12 GPs out of 34 VSTF GPs participated in the JSA campaign. Total 155 water storage structures of 0.78 crore ltr water storage and recharging capacities have been created during JSA campaign in these villages. The departmental convergence and support from external agencies have helped the villagers to create soak pits, well and borewell recharge, rainwater harvesting, and desilting of nala. The total cost incurred was INR 11.44

crores which was leveraged from the MGNREGA and external funding agencies. Total 1648 families will get benefits from it. As part of intensive afforestation, total 59,262 trees have been planted in the 95 VSTF villages.

Table 5: Impact of JSA intervention in Amravati VSTF GPs

District		Amravati
No of structures created		155
Water Storage Capacity		7920000
Cost incurred ₹		11442142
Beneficiaries	Families	1648
	Population	7356
	Women	2998
	Children	383
Trees Planted		59262

iii. Aurangabad:

JSA campaign in Aurangabad started with hosting of JSA training at its headquarters. Team of UNICEF resource persons trained fellows from Aurangabad and Jalna. The training further accelerated the ongoing efforts of soil and water conservation and tree plantation drive. The training helped CMRDFs to enhance knowledge about water conservation, demand management and community facilitation. Post training, CMRDFs and district team prepared the plans to implement the campaign and started visiting the departmental heads to provide necessary support.

With the district governments support, funding and technical knowledge from resource agencies helped in creation of 86 water structures; soak pits, desilting, farm ponds and other structures of 54.64 crore ltr water storage capacity worth INR 1.94 Crore. Approximately 815 families will get benefits from these resources. The team has given impressive response to tree plantation drive under which 53573 tree saplings have been planted across the villages.

Table 6: Impact of JSA intervention in Aurangabad VSTF GPs

District	Aurangabad
No of structures created	86
Water Storage Capacity	546443000
Costs incurred ₹	19427440

Communities of 44 villages from Aurangabad have now resolved to continue this kind of efforts till their villages become water abundant. They will continue to hold Community meetings and sensitisation sessions. GP involvement in the process has helped the community to take note of the interventions and scale up the process. JSA activities were carried under supervision of technical experts from GSDA to check water level in wells now and will be observed after every 3 months.

Beneficiaries	Families	815
	Population	3960
	Women	1531
	Children	123
Trees Planted		53573

iv. Beed:

There are total 29 VSTF GPs (33 villages) in the Beed district. It falls in the frequently drought affected area. Entire economy of the district is based on the agriculture and labour work. Due to water unavailability, most of the labours travel to nearby districts for work. The district government along with organitations working in the water sector as put several efforts to capture the water and make it available for various purposes. However, due the less rainfall and heavy extraction of ground water, the community faces drought like situation for almost six months.

Table 7: Impact of JSA intervention in Beed VSTF GPs

District		**Beed**
No of structures created		242
Water Storage Capacity		6923000
Costs incurred		423200
Beneficiaries	Families	419
	Population	1852
	Women	358
	Children	44511
Trees Planted		59810

In the district, the MGNREGA department took lead in making of soak pits (164) and community in installation of RWH structures (58) and others in well recharging. Hence the costs of incurred in the districts are very less than other districts. Total 59,810 tree saplings have been planted in the VSTF villages.

Table 8: Impact of JSA intervention in Buldhana VSTF GPs

District		Buldhana
No of structures created		430
Water Storage Capacity		205400000
Costs incurred		27182203
Beneficiaries	Families	4373
	Population	18107
	Women	7416
	Children	1408
Trees Planted		15658

v. Buldhana:

MGNREGA and GSDA in Buldhana district has worked remarkably on ground water recharge. Buldhana district alone has created 356 recharge shafts, 60 unlined farm ponds and soak pits in across 22 VSTF GPs. The water storage or recharging capacity of these structures is 20.54 crore litres and cost incurred for this is INR 2.71 crore. More than 4374 families comprising 1408 children and 18107 people will get benefits from these interventions. The district has shown remarkable performance by planting 15658 saplings in the VSTF GPs.

vi. Chandrapur:

Chandrapur district authority has successfully created enabling environment for creating the momentum in the district by issuing letters and instructions to the block and village functionaries. The district Collector and CEOs joint appeal letters also played a crucial role in departmental ownership in making of 905 water storage structures in 82 VSTF villages (44 GPs) worth 22.69 lakhs. The water storage capacity of these structures is 1.41 crore litres per year. Chandrapur district alone has desilted 779 water sources and created 114 soak pits. Villagers have also planted 48,548 trees as part of the campaign. Total number of reported beneficiaries from these villages are; 1126 households, 6939 people, 750 women and 159 children.

Table 9: Impact of JSA intervention in Chandrapur VSTF GPs

District		Chandrapur
No of structures created		905
Water Storage Capacity		14179430
Costs incurred		2268462
Beneficiaries	Families	1126
	Population	6939
	Women	750
	Children	159
Trees Planted		48548

vii. Dhule:

Dhule district is in Nashik division of Maharashtra. VSTF is working in 16 GPs in Dhule, Sakri and Shirpur blocks. Team Dhule has worked on all five JSA interventions with the support of district administration and technical support from line departments like agriculture, revenue department and various other non-governmental organisations. As many as 47 structures have been created in the district. The water storage and recharging capacity of these structures is 14.5 crore litres and costs incurred for erecting these structures is INR. 16 lakh rupees. As part of intensive afforestation, total 3,48,500 trees have been planted in the 16 VSTF villages.

Table 10: Impact of JSA intervention in Dhule VSTF GPs

District		Dhule
No of structures created		47
Water Storage Capacity		134999000
Costs incurred		1694065
Beneficiaries	Families	1019
	Population	4503
	Women	1047
	Children	139
Trees Planted		348500

viii. Hingoli:

There are total 09 VSTF GPs (12 villages) in Hingoli district. Total 90 water storage structures of 6 lakh ltr water storage and recharging capacities have been created during JSA campaign in these villages. The departmental convergence and support from external agencies have helped the villagers to create various structures across the villages. The total cost incurred was INR 90,000 which has been leveraged from the MGNREGA and external funding agencies. Total 516 families will get benefits from it. As part of intensive afforestation, total 8100 trees have been planted in the 95 VSTF villages

Table 11: Impact of JSA intervention in Hingoli VSTF GPs

District		Hingoli
No of structures created		90
Water Storage Capacity		600000
Costs incurred		903324
Beneficiaries	Families	516
	Population	2705
	Women	388
	Children	83
Trees Planted		8100

ix. Jalna:

Jalna has uniquely run a RWH campaign during JSA in all the villages in the district. The Education Department has played crucial role in making of RWH structures at all government buildings in the district. Total 31 RWH structures have been created in the 14 VSTF GPs. The water recharging capacity of these structures is 21.10 lakh ltrs. The 14 VSTF GPs have spent INR 1.58 lakh rupees for making of these structures (for detailed information, please refer case study on Jalna RWH competition)

Table 12: Impact of JSA intervention in Jalna VSTF GPs

District		Jalna
No of structures created		31
Water Storage Capacity		21.10 lakh ltrs
Costs incurred		158000
Beneficiaries	Families	0
	Population	0
	Women	0
	Children	0
Trees Planted		23800

x. Latur:

Latur is well known for water scarcity in the state. In water scarce Latur district, VSTF is working in 29 GPs and 34 villages in Ahmedpur, Chakur, Ausa, Deoni and Latur blocks.. Post training, the team has executed JSA interventions in all VSTF villages. Latur being one of the successful implementers of JSA campaign has built 1636 structures worth INR. 10.69 lakh. The water storage capacity of these structures is 50.54 crore ltrs. More than one lakh trees have been planted in all VSTF villages. The JSA interventions will help 20,864 people (with 2434 women and 1045 children) across the villages.

Table 13: Impact of JSA intervention in Latur VSTF GPs

District		Latur
No of structures created		1636
Water Storage Capacity		505400000
Costs incurred		1068260
Beneficiaries	**Families**	4170
	Population	20864
	Women	2434
	Children	1045
Trees Planted		107900

xi. Nagpur:

There are total 17 VSTF GPs (64 villages) in Nagpur district. Total 146 water storage structures worth INR 1.34 crores have been created in Nagpur. The water storage, recharge and checking capacity of these structures is estimated to be 29 crore ltrs. The departmental convergence and support from external agencies have helped the villagers to create various structures across the villages. The entire expenditure has been leveraged from the MGNREGA and external funding agencies. Total 1515 families will get benefits from it. There are 46,042 tree saplings have been planted in VSTF villages.

Table 14: Impact of JSA intervention in Nagpur VSTF GPs

District		Nagpur
No of structures created		146
Water Storage Capacity		289670000
Costs incurred		13730087
Beneficiaries	Families	1515
	Population	6321
	Women	2103
	Children	436
Trees Planted		46042

xii. Nanded:

Nanded district is in Aurangabad division of Maharashtra. VSTF is working in 26 GPs in Kinwat, Loha, Mukhed, Himayatnagar, and Kandhar blocks. Team Nanded has hosted JSA training in Kinwat block for CMRDFs working in the district. Dynamic leadership of DE and all district HODs had helped the VSTF district team in making of 496 structures across 34 villages. The water storage and recharging capacity of these structures is 0.38 crore ltrs.

Table 15: Impact of JSA intervention in Nanded VSTF GPs

District		Nanded
No of structures created		496
Water Storage Capacity		3805800
Costs incurred		300000
Beneficiary	Families	4418
	Population	22919
	Women	8822
	Children	1053
Trees Planted		70750

xiii. Nashik:

Nashik is one of the champion districts of JSA campaign. Nasik has hold workshop and taking inspiration from the workshop itself the district VSTF has worked very hard on the targeted interventions of JSA. Total 354 water storage and recharge structures have been created in 16 VSTF GPs. The water storage capacity of these districts is 6.34 crore ltrs. District has spent INR 1.98 crore from various sources on creation of these structures; soak pits and various other cumulative structures. The district has planted almost 88,000 tree saplings. Total 411 households will get benefits directly from these sources.

Table 16: Impact of JSA intervention in Nashik VSTF GPs

District		Nashik
No of structures created		354
Water Storage Capacity		63828000
Costs incurred		19770945
Beneficiary	Families	411
	Population	1265
	Women	411
	Children	0
Trees Planted		87764

xiv. Osmanabad:

Osmanabad has uniquely run a Soak pit construction campaign during JSA in all the villages in the district. The DWSM, MGNREGA departments along with the community have played crucial role in making of soak pits in all VSTF GPs across the district. Total 374 soak pits have been created in the 14 VSTF GPs. The water recharging capacity of these structures is 37,400 ltrs daily (for detailed information, please refer case study on Osmanabad Soak Pit campaign)

Table 17: Impact of JSA intervention in Osmanabad VSTF GPs

District		Osmanabad
No of structures created		374
Beneficiary	Families	801
	Population	2209
	Women	1055
	Children	195
Trees Planted		30005

xv. Palghar and Raigad:

Palghar and Raigad are two of the champion districts of JSA campaign. Fellows from both these districts have worked on JSA campaign by their own with limited resource and remote support from VSTF and UNICEF team. There are 72 structures created in tribal habitations in Palghar district. Total cost required for making of these structures is INR 5.2 lakhs.

Table 18: Impact of JSA intervention in Palghar and Raigad VSTF GPs

District		Palghar	Raigad
No of structures created		26	46
Water Storage Capacity		0	0
Costs incurred		350300	273700
Beneficiary	Families	1099	10464
	Population	4488	43301
	Women	2205	21132
	Children	220	2310
Trees Planted		1000	59365

xvi. Solapur:

Solapur district is well known for its Soak pit (Magic pit) construction campaign in the state. Solapur district has alone created 9602 water recharging and storage structures in only seven villages. The water recharging capacity of these soak pits is estimated to be 27 crore ltrs annually. The MGNREGA cell has spent INR 2.4 crore for making of 9602 soak pits. Total 1895 HHs are beneficiaries of this campaign with 6784 population.

Table 19: Impact of JSA intervention in Solapur VSTF GPs

District		Solapur
No of structures created		9602
Water Storage Capacity		269278000
Costs incurred		24005000
Beneficiary	Families	1895
	Population	6784
	Women	3124
	Children	627
Trees Planted		5700

xvii. Wardha:

There are total 23 VSTF GPs (42 villages) in Wardha district. Total 327 water storage structures worth INR 10 crores have been created in Wardha. The water storage, recharge and checking capacity of these structures is estimated to be 35.11 crore ltrs. The departmental convergence and support from external agencies have helped the villagers to create various structures across the villages. The entire expenditure has been leveraged from the MGNREGA and external funding agencies. Total 91 families will get benefits from it. There are 49,200 tree saplings have been planted in VSTF villages.

Table 20: Impact of JSA intervention in Wardha VSTF GPs

District		Wardha
No of structures created		327
Water Storage Capacity		351134000
Costs incurred		100390760
Beneficiary	Families	91
	Population	550
	Women	99
	Children	80
Trees Planted		49200

xviii. Washim:

Washim district is in Amravati division of Maharashtra. VSTF is working in eight GPs and 10 villages in Karanja block. All seven CMRDFs had participated in the JSA training. Post training the team has executed JSA interventions in all 10 villages. Each CMRDF fellow then oriented their respective GP members about JSA and approved work proposed under their GP village development plans. As part of GP member sensitisation meetings and discussions, participation from women and all water users were invited. The meetings received mixed responses due to the monsoon season. However, some active community members ensured that the village would participate in the campaign. Total 262 structures worth INR. 1.43 crore and 1.70 lakh ltrs have been created.

Table 21: Impact of JSA intervention in Washim VSTF GPs

District		Washim
No of structures created		262
Water Storage Capacity		1690000
Costs incurred		14317500
Beneficiary	Families	1952
	Population	16443
	Women	6066
	Children	553
Trees Planted		7448

2.4. SBCC and Community approaches Matrix

Type and Approach	Participants	Key Message	Roles/Activities	Communication channels
Primary Stakeholders: **those who will take up JSA activities in the villages**	Individual HH, village level institutions/groups working on water	- Knowledge on water harvesting and conservation - Conjunctive and conservative use of water - Protection and maintenance of water sources - Safe storage and handling of water - Participation a significant mantra for water conservation	- Demand creation - Supporting each other to take up activities - Participation in community activities - Reducing nuisances	- WhatsApp groups - Mass media - Village level gatherings - Social media - Local/folk medias - Competitions - FM Radi0
Secondary Stakeholders: **Those who influence the behaviour of primary participants**	PRIs, School teacher, frontline workers like Anganwadi Workers, ASHA, Jal Surakshaks, SHGs, community leaders, volunteers, religious leaders, local NGOs (including NSS/NCC)	- Boosting the efforts of communities on water - Intensifying the actions for longer duration - Sharing importance, roles responsibilities, - Awareness on low cost, locally available and accurate technological options - Suggestions for course correction	- Take active participation in - community level activities - Passing information and knowledge on water related activities - Distribution of leaflets and dissemination of information	- Rallies and mass mobilization - Leaflets, groups, CBO meetings, etc. - FM Radio
Media Stakeholders	Print, AV-TV and online media broadcasters	- Awareness creation - Sharing information - Screening of best actions and practices with general public	- Advocacy and influencing the people and decision makers	- Print and electronic broadcasting - FM Radi0
Tertiary Stakeholders: **Those who takes decisions at block and district level**	Block govt administration, District govt administration, influencers, etc.	- Long time campaign for water conservation and conjunctive use of water - Increased number of rainwater conservation and groundwater recharge structures - Reduced water contamination - Operation and maintenance of public water distribution systems	- Planning and strategizing various programmes - Running campaign from apex level - Issuing necessary guidelines, circulars and inputs	- Instructions and letters - Mass media - FM Radi0 - Articles on print media

2.5. Case Studies

I. One hand does not tie a bundle – An inspiring story of Satephal, Osmanabad!

Satephal, a village of 350 families in Osmanabad district, faced the consequences of severe water crisis just like their other neighboring villages. They received water once in ten days. Despite their bad conditions, the village's local governance was not adequately functional. An inactive local government system and lack of unity in the community aggravated communal fights over water. After several awareness meetings and home visits, along with IEC activities to resolve the daily struggles on water availability, the women in the stressed community, took a lead to change the picture.

The collector was going to cross the village on one of those days. As an opportunity to meet the collector, to put forward their problems, about 100 women stepped out of their homes on that day and block the road. A group of women representing the village approached the Block Development Officer (BDO) of the area. They raised their concern on the water crisis, Satephal was facing.

The unity in the community created by regular meetings and taking social leadership, both men and women, mutually decided to fight for their needs for a long-term solution instead of resorting to tankers. It was their will to unite and their effort that encouraged many other women to support them. It was then, when they gained confidence through their efforts that they were recognized by the local panchayats and government officials. Almost three hundred women united to contribute in physical labour for more than one month to dig trenches, bunds, and other water structures. Together, they achieved a target of 65 soak pits out of which 10 of them were built with an extra mile of effort by digging cement roads.

II. Women & water conservation – A story of Ekurga village, Osmanabad

"Drinking water is very valuable to us, we don't get it every day" said an old man in Ekurga, a small village in Osmanabad, during one of the village meetings.

The words of the man described the situation that was a reality 300 families in the same village, until a few months back, when the Arogya Sakhi (CRP, wSHARP) took lead to mobilize the other women in the community to approach the local government to raise their concerns over the issue. In the scorching summers, Ekurga united to resolve the water deficit when it was the most needed. Together, they succeeded in constructing 60 soak pits, out of which ten of them were built with an extra mile of effort by digging cement roads. The women began to speak on public platforms which boosted their confidence and also generated awareness in them.

Today, women no longer peek from the window when village meetings are held. It was the start of an attitudinal change among women that was followed by other physical changes. The village showed a significant change in water availability from being a water scarce village, through efficient water conservation techniques and involvement of women in decision making at the local panchayats with strong demand side management work. An inspiration to other neighboring villages, they are among the first villages in the cluster to construct ten household rainwater harvesting structures.

Ekurga set an example of how a community can resolve climatic challenges like acute water shortages, by approaching problems collectively.

III. Jalna Rainwater Harvesting competition

Natural resources like water are always on demand especially for drinking and domestic use, agriculture, livelihood, health, etc. The increased water demand and reduced water availability induced by increasing climate variability is putting extra burden on the poor households. Varied measures have been taken to supply drinking water in every village. For the drinking water, villagers are dependent on the sources which rely on rainfall. Lack of initiatives to increase groundwater level added with over extraction of the sources. Daily water requirement and drinking water needs are not met.

लोकप्रश्न

गुरुवार दि.०८ ऑगस्ट २०१९

राज्यातील पहिले 'रेन वॉटरहार्वेस्टिंग स्पर्धेचे' जिल्ह्यात आयोजन

In this regard, strengthening of water sources is indispensable and this has to happen on massive scale supported by proper scientific evidence. Capturing the rainwater and recharging the groundwater bodies is one of the effective measures to strengthen the water sources. Jalna district government has uniquely started rainwater harvesting competition across the district. This is earned praises and appreciation from experts working in the water sector. This has become one of the best and innovative campaigns in the Maharashtra's water conservation history. The time bound, month long competition kicked off on 15 August 2019 and concluded on 15 September, 2019. District administration issued detailed guidelines about the competition with technological illustrations and costing details. The Jalna district CEO and the team promoted locally viable and cost effective RWH model.

The competition was organized at two levels i.e. installation of RWH structures at government buildings and at individual level. The district announced cash prizes for best RWH models in these two categories as below,

Level	Government offices and staff			For Villagers		
	1st	2nd	3rd	1st	2nd	3rd
Block level	20000	10000	5000	20000	10000	5000
District level	40000	20000	10000	40000	20000	10000

Alike other campaigns, VSTF has also supported this campaign in its 14 VSTF GPs. VSTF allocated budgets from its special programme fund for this purpose. JSA

training conducted with the technical support of UNICEF helped the district to prepare a competition plan. All CMRDFs helped the village government in installation of RWH structures at their respective GPs. VSTF allocated INR. 50,000 for this purpose. Total 31 RWH structures of 20.11 lakh liter water recharging capacity have been installed at 14 VSTF GPs.

Campaign outcome in VSTF GPs

VSTF GPs - Rain Water Harvesting (RWH) - Completed Works

Sr No.	Taluka	Gram Panchayat	Community Locations and catchment area covered in sq ft				Individual HHs catchment area covered in sq ft			Total Catchment area (sq ft)	Catchment area covered (sq m)	Runoff coefficient	Approx. Annual Rainfall (mm)	Capacity for Ground Water Recharge (in Lakh Lit)
1	Manha	Ambhora Jahagir	GP building 1200	ZP School 1,800		Kitchen-shed 1,920				4,920	457	0.9	600	2.47
2		Devagaon Khavane		ZP School 1200	Mandir 4,000		Rameshwar Khandare 1100			6,300	585	0.9	600	3.16
3		Vaidya Vadagaon		ZP School 1,600		PHC 1,000				2,600	242	0.9	600	1.30
4		Waghala		ZP School 1,200			Gajanan Kangane 1,000	Dattarao Kangane 1,000	Haribhau Kangane 1,000	4,200	390	0.9	600	2.11
5		Vidolli Kh.		ZP School 1,500						1,500	139	0.9	600	0.75
6		Vidolli Bk.		ZP School 1500						1,500	139	0.9	600	0.75
7		Arda Tolaji	GP building 1,200		Mandir 4,000					5,200	483	0.9	600	2.61
8		Georai		ZP School 1,200						1,200	111	0.9	600	0.60
9	Partur	Hatadi	GP building 594	ZP School 1,000	Mandir 1,240	Anganwadi 621				3,455	321	0.9	600	1.73
10		Aamba					Subhash Kamate 264			264	25	0.9	600	0.13
11		Khandaviwadi	GP Building 1250							1,250	116	0.9	600	0.63
12		Takli Rangopant		ZP School 1500	Mandir 800							0.9	600	0.00
13	Badnapur	Bazar Wahegaon		ZP School 1,200	Charch 1,500					2,700	251	0.9	600	1.35
14		Malegaon		ZP School 1,200	Mandir 1,800	Anganwadi 1,000	Mahendra Thombare 1,000			5,000	465	0.9	600	2.51
Total			**4244**	**14900**	**13340**	**4541**	**3364**	**1000**	**1000**	**40089**	**3724**			**20.11**
			4	11	6	4	4	1	1	sq ft	sq m		mm	lakh lit

3. Way Forward

One of the big learning from JSA is to create a balance between supply and demand side management and focus should be on strengthening and protection of drinking water sources while bringing the technical knowledge of participatory ground water management, tapping the potential of surface water and defining the scope and opportunities of VWSC's/Pani Samitis based on the capacity and mandate. The second phase of JSA II should be integrated with overall JJM goal and vision and find out potential solutions and way forward towards community managed water supply schemes. In addition to this, in JSA II phase, Ministry may consider going beyond the CGWB ground water estimations as it does not capture the real situation on the ground, while estimating the utilizable groundwater resources and it misses out the critical and over exploited watersheds, aquifers.

Institutional Structure

- Create dedicated front like incentivized cadre like ASHA integrating Jaldoot and Swachhagrahis
- On the institutional structure of DMU/DWSM and PRI capacity building approach, there is a possibility to integrate the field trainers trained under Sujal & Swachh Gaon @4 person from each district under SBM
- At PMU level, Government may initiate work on setting up a strong procurement and technical appraisal committees, create a system of empanelment NGOs and Contractors, orientation of the NGO and contractors on some non-negotiable part and create a third-party system of quality assurance of DPRs and handing over phase.
- There is need for strong IEC required on demand side management and management of Grey water as supply norms have increased. Hence the IEC experts under DWSM are going to play a critical role
- Follow both mixed approach of decentralized and centralized one on case to case basis and source strengthening measures will also differ as per agro climatic zones

- Establish "Single Window Facility" at decentralized level for building large schemes, Introduce gradual metering of water supply—from bulk metering at village level and then to HH level

Governance:

- It says about involving Pani Samiti and VWSC's which a welcome decision. However, capacity varies immensely. They can be strengthened for O&M and preventive maintenance, but we need to understand their scope and use them more like water utility service providers than contractors
- Gram Panchayat may work as Pani Samiti and if any subcommittee gets constituted then also, Sarpanch can be chairperson.
- The most frequently suggested instrument for controlling groundwater draft was metering and pro-rata pricing of electricity. Realizing the limited role of energy pricing only as a tool to achieve higher efficiency of use of groundwater and not to reduce abstraction and as a result individual bores will always compromise the water for drinking and largely it is owned by rich people and there is strong disparity. Jal Jeevan Mission may need to converge with water regulatory authorities or make it a mandatory claw to implement JJM and align with Ministry of Energy and can promote the concept of State Water Board bringing all the water related line departments under single roof like central ministry. Though, it requires larger constitutional debate considering water is a state subject

Implementation Strategy:

- Seven pronged strategies
    - Mapping of habitations and creating detail database of all different water supply schemes including the private household level wells and tubewells / borewells implemented with a focus on identifying the present supply norms in one single data base
    - Identification and mapping of water sources both for surface and ground water potential

    - Water purchasing and sharing regulation for industries located in rural belts
    - Clustering of zones for decentralized storage facilities
    - Bulk water transfer under regional schemes / MVS
    - Creation of an intermediate entity for bulk water transfers
    - Special plan for rural growth centers
    - RWSS data base updation on quarterly basis and monitoring the same
- There is a strong need to work with agencies working on ground water management like GSDA in Maharashtra to understand the participatory ground water management, source identification to map the influence zone of drinking water source and protect the source
- To make water recycling compulsory for water-intensive industries, especially 'red category industries', by a minimum of 20% of the consumption
- Reduce NRW to 25% (from approximately 35%-40% at present
- As we move towards regional water supply schemes tapping imported surface water from rivers and reservoirs in these regions, we would require new techno-institutional model for managing rural water supply
- Any source strengthening or integrated water resource management effort under JJM should focus on drinking water source strengthening.
- Though PPP is over used word, still it can be explored in following lines
    - The policy must ensure security of tenure for investments from private entities to develop infrastructure
    - Advocacy to create state regulatory body that also looks after pricing issues (like MWRRA at Maharashtra)
    - Shortlisting of projects for sustainable PPP mode
    - Seek private players' role in the execution of the projects (BOT/BOOT)
    - Extended govt. support for financial structuring, Risk analysis and mitigation jointly by private and public agencies,

Monitoring / Database:

- Establish a common Database Management System (DBMS) and inter departmental sharing of data like Irrigation, Water Resources, etc.

- Professional civil society organizations (may be Engineering Colleges and social welfare colleges) for third party audit of agencies (like Unnat Bharat Abhiyan or dedicated Water Engineering colleges or KRCs). Jalswaraj I structure of Maharashtra can be reviewed

Operation, Maintenance and IEC:

- 10% community contribution or popular contribution can be used also as revolving fund
- Studies have shown repeatedly, including UNICEF study of E&Y done in 2011-12, if community get the assurance of sustained water supply throughout the year, they are ready to pay and maintain. IEC is only successful where community is sure on receiving potable water for 12 months @ 40-55 LPCD. Hence IEC should be more on identifying and sustaining the source
- Districts and corporate bodies are promoting RO plants in water stressed areas without proper knowledge of water quality and at-least 30 per cent of ground water is going to waste everyday (as reject water from the plant) in the absence of any regulations, there is need to be a strong regulation for installation of RO plats referring to NGT orders or using 15th FC money
- Water conservation effort under JJM should focus on drinking water source strengthening.
- Preparing village water safety and security plan approved by Gram sabha should become a non-negotiable component and schemes like Swajal should be promoted for scattered habitations

Household and Institutional Water Supply:

- In JJM single village water supply schemes will be largely dependent on Ground Water and also state need to augment the existing PWS schemes from 40 lpcd to 55 lpcd while using the same source of water or finding new source and there is need to include functional water supply for school and anganwadis too.
- Continue Swajal for smaller habitations and clusters.
- In water-stressed and quality affected areas, water-grid is to be developed with strong demand side management

Annexure

1. Outcome under VSTF JSA campaign

Sr No	District	Trees Planted	No of structures created	Water Storage Capacity	Costs incurred	Beneficiaries			
						Families	Population	Women	Children
1	Ahmednagar	11300	23	19192610	1148003	379	1776	90	42
2	Amravati	59262	155	7920000	11442142	1648	7356	2998	383
3	Aurangabad	53573	86	546443000	19427440	815	3960	1531	123
4	Beed	59810	242	6923000	423200	419	1852	358	44511
5	Buldhana	15658	430	205400000	27182203	4373	18107	7416	1408
6	Chandrapur	48548	905	14179430	2268462	1126	6939	750	159
7	Dhule	348500	47	134999000	1694065	1019	4503	1047	139
8	Hingoli	8100	90	600000	903324	516	2705	388	83
9	Jalna	23800	31	0	158000	0	0	0	0
10	Latur	107900	1636	0	1068260	4170	20864	2434	1045
11	Nagpur	46042	146	289670000	13730087	1515	6321	2103	436
12	Nanded	70750	496	3805800	300000	4418	22919	8822	1053
13	Nashik	87764	354	63828000	19770945	411	1265	411	0
14	Osmanabad	30005	26	0	0	801	2209	1055	195
15	Palghar	1000	46	0	350300	10464	43301	21132	2310
16	Raigad	59365	1313	0	273700	1099	4488	2205	220
17	Solapur	5700	9602	269278000	4446500	1895	6784	3124	627
18	Wardha	49200	327	351134000	100390760	91	550	99	80
19	Washim	7448	262	1690000	14317500	1952	16443	6066	553
20	Akola	52623	**16217**	**1915062840**	**219294891**	**37111**	**172342**	**62029**	**53367**
21	Gadchiroli	85496							
22	Nandurbar	60530							
23	Parbhani	31800							
24	Yavatmal	84240							
	Total	1408414							

Number of Structures created:

SN	Interventions	No. of interventions
1	Water conservation and Rain Water Harvesting Various Structures	10946
2	Desilting	860
3	Rain Water Harvesting: Roof top	236
4	GW Artificial Recharge Shafts	666
5	Unlined Farm Ponds	270
6	Soak Pit	3239
	Total	16217

2. Synergies of JSA and VSTF transformation indicators

SN	Jal Shakti Abhiyan Intervention Areas	Activities to be Undertaken	VSTF Transformation Indicator	Activities that can be promoted and VSTF Transformation sub indicators
Output	No. of water conservation structures constructed			
1	Water conservation and rainwater harvesting	- Rooftop rainwater harvesting structures (Public, Private)	3. Soil and Water Conservation and Jalyukt Shivar Abhiyan	- Awareness program to promote rooftop rainwater harvesting and using local resources. - 100 % Public institutional buildings can be covered with rooftop rainwater harvesting by using local various resources
		- Check Dams - Trenches - Farm Ponds	3. Soil and Water Conservation and Jalyukt Shivar Abhiyan	- Preparation of Water budget (3.1) - Preparation of DPR (3.2) - Activities planned and executed (3.3) (CB, CCT, CNB, LBS, CD, Trenches, FP etc.) - Structures under Jalyukt Shivar Abhiyan/SWC can also be promoted for ground water recharge
Output	No. of structure renovated			
2.	Renovation of traditional and other water bodies/tanks	- No. of traditional water bodies/tanks restored(includes individual household units) - No. of other water bodies restored	9. Community Infrastructure and MGNREGA 12. Social Behaviour	- At least one public work/year with 100 labours covered. (9.1) - Individual Beneficiary schemes (9.2) - Min 5Lakh rupees in one year to be spent (9.3) - Promote Shramdan (12.1)
Output	No. of structure constructed			
3.	Reuse, borewell recharge structures	- No. of borewell recharge structures - Soak pits (Community and individual) - Greywater* treatment ponds constructed	13.2. Sanitation	- Strengthening of public drinking (13.1.3) water sources and ensure drinking water safety and security for the villages - 100% soak pits/ household level (13.2.2) waste water management - Solid Liquid Waste Management units installed as per SBM GR (13.2.3)
4.	Watershed development	- Area under Watershed Development		District team, RDFs and IWMP, JYS team can jointly develop plan for VSTF Villages.

		- No. of staggered trenches constructed -No. of gully plugs constructed -No. of percolation tanks constructed		To be integrated with the Block and District Irrigation Plan
5.	Intensive afforestation	- Seedlings planted - Area under plantation	10. Environment and Biodiversity	- 10000 sapling to be planted with ensuring 80% survival (10.1) - Preservation of local species (10.2) - Awareness of biodiversity (10.3) As per Circular issued by Revenue and Forest Department dated 13th May, 2019 - Promote indigenous trees - Formation and strengthening of Forest Management Committees - Formation and strengthening of Eco Village Committees - Formation and strengthening of Biodiversity Management Committees - Maintain Peoples' Biodiversity Register - Promote Agro-forestry scheme - Create permeant physical asset under Jalyukt Shivar Abhiyan and Soil Water Conservation - Registration of Green Army and formation of Eco Clubs
Special Interventions				
1	Special Interventions	To promote efficient irrigation (Per Drop More Crop), and better choice of crops for water conservation	1.Sustainable Agriculture Development	- 100% Protective irrigation under drip irrigation - Structures under Jalyukt Shivar Abhiyan/SWC can also be promoted for ground water recharge
2	Special Interventions	3D village contour maps	9.2.2 Village Knowledge Centre	3D village contour maps to be created and made accessible for efficient planning of interventions with the help of JYS/GSDA/POCRA/Agriculture Department.

3. VSTF Jal Shakti Abhiyan: Training Agenda

Session	Content	Duration	Output
Inauguration and Introduction		10 Min	
Ice-breaker	Fill the bowl with water challenge	20 Min	Challenges in water availability and quality Importance of targeted interventions
Water Unavailability and its effects	• Drought • Impact on livelihoods, agriculture, health, education, etc.	30 Min	Understanding impacts of water unavailability
Basics of Water	• Water Security • Water Safety • Water Accessibility, Gender and equity	30 Min	Increased understanding about water availability, quality and accessibility
Jal Shakti Abhiyan	• Detailed campaign explanation - Objective - Duration - Areas of interventions and technologies for water conservation - Programme support - Govt schemes/pregrammes to implement actions suggested	50 Min	Programme understanding
Role of RDFs and DEs	• Coordination • Facilitation • Reporting	20 Min	Understanding accountability of each stakeholders
Group Activity	• Interventions • Target • Scheme/Convergence • Stakeholders	30 Min	Programme Planning
Reporting and Documentation	• Approaches/methods • Content • Mediums	20 Min	Understanding about JSA reporting and need of the reporting
QA and Closure			

4. Jal Shakti Abhiyan Reporting Format

Jal Shakti Abhiyan activities in VSTF GPs																					
		General Information			Activity/Intervention										Beneficiaries				Costs in INR		
Sr No	Grampanchayat	Village/Habitation/Pada/Vasti	District	Name of CMRDF	VSTF Transformation Indicator	If others (please mention)	Specific activity e.g. soak pit creation, roof top rainwater harvesting, well/borewell recharge	Total units (created, strengthened, recharged, etc.)	Water Storage capacity	Area of intervention from JSA	Start date	Status as on 15th August	Status as on 10th September	Follow up activities	Total no of families	Total population	No of women beneficiaries	No of children below 5 years benefitted	Estimated cost	Cost incurred	Source of fund
1																					
2																					

Involvement/Convergent actions with (explain)				Challenges/constraints		Information, Education and communication interventions carried out	Reports/Documentati	
Involvement of people (explain)	Involvement of PRIS (explain)	Involvement of government officials from Block and district level (explain)	Involvement of NGOs (explain)	Challenges faced and how they were addressed	Special remarks		Link to AV documentation	Link to write up if any mainly casestudies (At least two case studies /CMF

Glossary of terms

Rainwater harvesting

Rain water harvesting is the technique of collection and storage of rain water at surface or in sub-surface aquifers, before it is lost as surface run-off. The augmented resource can be harvested in the time of need.

Artificial recharge

Artificial recharge to ground water is a process by which the ground water reservoir is augmented at rate exceeding that under natural conditions of replenishment. In simple language, it is a process of augmenting the natural infiltration of precipitation or surface water into underground formations by some method of construction, spreading of water or by artificially changing natural conditions. It is the practice of increasing by artificial means the amount of water that enters the groundwater reservoir.

Check dams

Small engineering structures constructed across a stream/ water course to control the drain and stop the soil on the spot, which gets carried along with the rainwater from the small drains

Trenches

Constructed depressions of about 6 feet length, 2 feet width and 1 foot deep (sizes may vary across states) to impound the expected runoff .

Farm Ponds

Constructed depressions in a farm land occupying 6 to 8% of land with 2 to 3 meter depth. Ponds can retain water for long duration (up to 10 months), they provide excellent opportunity to promote composite fish farming besides providing irrigation

Jacket Well

This technique is to artificially create the fractures, joints etc. by carrying out blasting – Operations in the drilled bores. The new fractures are created in the vicinity of the source well and also existing fractures are interconnected. Due to this water storage and supply capacity of the well is improved

Bore Blast Technique (BBT)

The purpose of this technique is to artificially create fractures and improve storage capacity of the source well. This method is suitable for the areas where there is assured and heavy rainfall but the sources become dry because of the non-porous or less porous formation.

Safely Managed Drinking Water Source

Drinking water from an improved water source (Drinking water from protected sources) that is located on premises, available when needed and free from faecal and priority chemical contamination

Improved sources of water

Piped water, boreholes or tubewells, protected dug wells, protected springs, and packaged or delivered water

Aquifer

A geologic formation having structures that permit appreciable water to move through it under ordinary conditions; it is a water saturated geologic unit that yields water to wells or springs at a sufficient rate so that they can serve as practical sources of water supply.

Well and bore well recharge structures

Groundwater recharge structures constructed near an individual borewell/ tubewell used as a drinking water sources. A typical structure has a 3m x 3m x 3m pit with a borehole pipe having perforations installed at the centre of the pit and packed with filtering media (different sizes of stones). It has a lead drain to the pit and a masonry structure around the pit to protect the structure

Soak pits (Individual and community)

A soak pit is a pit technology option where pre-settled effluent from a collection and storage/treatment or (semi-) centralized treatment technology is discharged to the underground chamber from which it infiltrates into the surrounding soil. It can be for an individual household or for a community.

Greywater treatment ponds

Manmade ponds in which different types of wastewaters are treated by naturally occurring processes.

Staggered trenches

These are similar to trenches, but constructed in hilly areas staggered across the slopes for gradual percolation of water to soil mass.

Gully Plugs

Gully plugs are small check dams made up of loose rocks in a series across the gully. A gully plug is one of the erosion control measures in non-agricultural land. A gully plug is constructed in series along a gully to change a sloping bed to a series of flat beds.

Percolation tanks

An artifi cially created surface water body made of earth, submerging in its reservoir, a highly permeable land so that surface runoff is made to percolate and recharge the groundwater storage.

Majagi Works (Paddy pits)

A simple and low-cost rainwater harvesting structure developed for storing rainwater in upper terrace conditions in paddy cultivation areas

Confined Aquifer

The confined aquifer, also known as artesian aquifers, occurs where groundwater is confined under pressure greater than atmospheric by overlying relatively impermeable strata. In a well penetrating such an aquifer, the water level will rise above the bottom of the confining bed.

Consumptive use

All water, surface and subsurface released into atmosphere by process of evaporation and transpiration is consumptive use or evaporation.

Drawdown

Drawdown in a well means the extent of lowering of the water level when pumping is in progress or when water is discharging from a flowing well. Draw down is the difference, measures in meter, between the static water level and pumping level.

Groundwater Hydrology or Geohydrology

It is the science of the occurrence, distribution and movement of water below the surface of the earth.

Recharge Area

This is the area supplying water to a confined aquifer

Water Table

The upper surface of zone of saturation is called water table

Well Yield

Yield is the volume of water per unit of time discharged from a well either by pumping or by free flow. It is commonly measured as the pumping rate in liters per minute.

Catchment area or basin

The surface area composed of the intake areas of an aquifer and all other areas which contribute surface water to the intake.

Ground water

Groundwater is water that is found underground in the cracks and spaces in soil, sand and rock. The portion of the area below ground surface where groundwater is stored in--and moves slowly through--layers of soil, sand and rocks called aquifers. Aquifers typically consist of gravel, sand, of different sizes or mixture of sand and gravel in alluvial areas. In hard rock areas weathered parts of rocks at shallow depth and fracture and joined parts at deeper depth form aquifers. These materials are permeable because they have large connected spaces that allow water to flow through. The speed at which groundwater flows depends on the size of the spaces in the soil or rock and how well the spaces are connected

Water Cycle

The rain water falls on the surface some parts goes to sea through rivers and streams, and some percolates below, the water from sea evaporates and form clouds and during condensation it reaches to surface as rain. The process continues and what we call the "Water Cycle".

Watershed

A watershed is the drainage basin of a catchment area of a particular Stream or River including Glaciers.

CMRDF

Chief Minister's rural development fellows are young qualified professionals between the age group of 21-30 trained and placed in Gram panchayats to facilitate government convergence in under the MVSTF

Arogya Sakhi/CRP

A community resource person are those who actively engaged in facilitation of WASH interventions under wSHARP and Drops of Hopes Programmes run by SSP and ACWADAM respectively.

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