

Forestry Interventions in *Kandi Areas towards Jal Shakti Abhiyan-III*

***Catch the Rain: Where it falls,
when it falls***

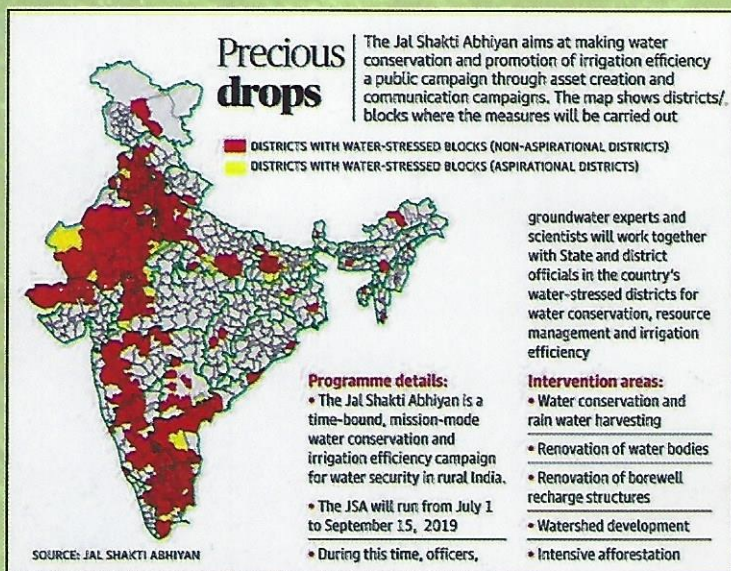


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Introduction

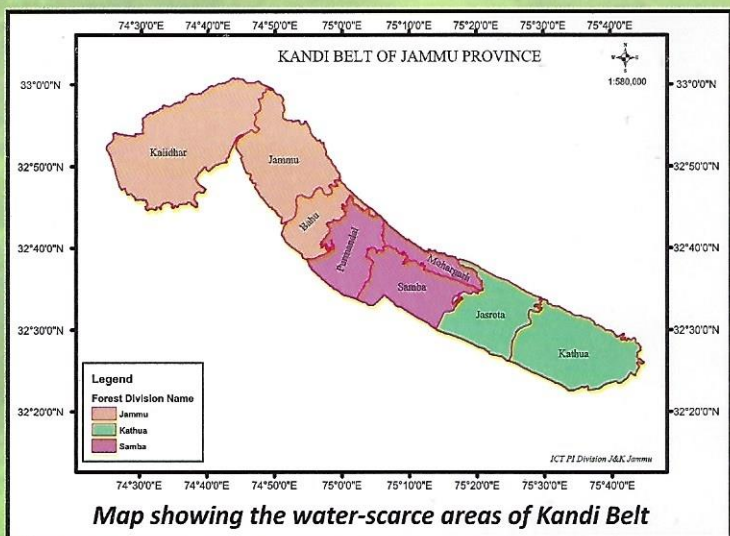
Sustainable Development Goal-6 envisages availability and sustainable management of water for all by 2030. India is



facing the challenge to serve 17% of the world's population with 4% of the world's freshwater resources. Presently designated as a water stressed Nation, India stores less than one-tenth of annual rainfall. Furthermore, disproportionate use of water for agricultural use, excessive ground water pumping and deficient monsoon in the last couple of years has made the demand-supply balance more critical. India is facing water crisis with around 50% population experiencing high-to-extreme water shortage.

In order to address water scarcity, Government of India has launched the *Jal Shakti Abhiyan* (JSA) with the underlying objective of making the concerted water conservation efforts, a *Jan Andolan*.

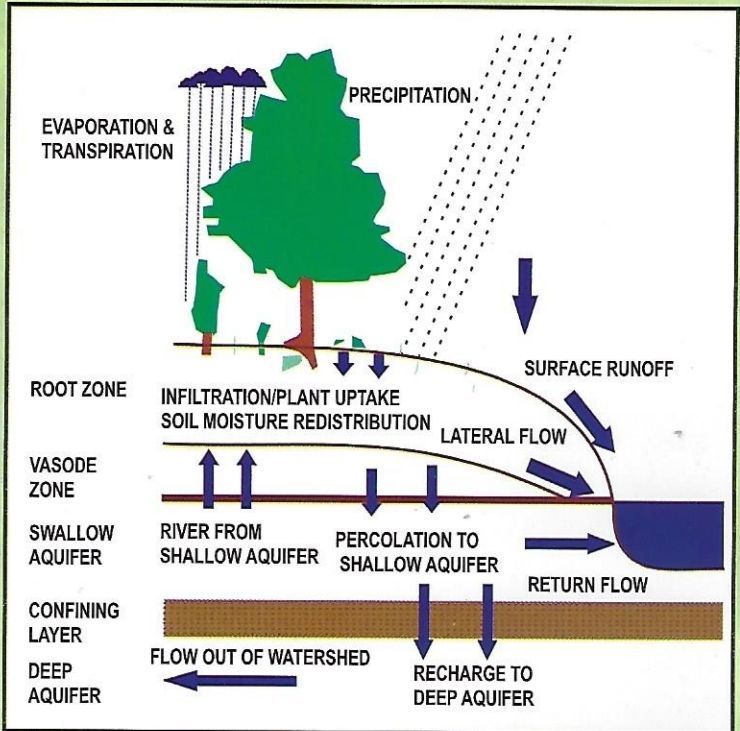
The UT of J&K is endowed with many perennial rivers and a sprawling forest and tree cover of 55%. At the same time,



where there are vast areas with water opulence, it is not uncommon to come across areas which are facing extreme water shortages, especially the sub-montane region of the Himalayas fringing the Siwalik Hills extending between river Ravi in the East and Munawar Tawi on the west, commonly termed as 'Kandi Belt'.

Role of forests in Water augmentation

Humans and other living organisms depend on water for their survival as water is the elixir of life on earth. Forests have long been seen as important sources of provisioning clean drinking water, to mankind.



Forested catchments supply a large quantity of water used for domestic, agricultural and industrial needs. Trees and forests also recycle moisture in the atmosphere through the process of evapo-transpiration to increase rainfall.

The importance of forests and trees in rainfall and water supply include: improvement of water cycle, reduction of runoff, replenishment of water table, filtration of water pollutants and control of floods.

Forests regulate the flow of water by virtue of their leafy canopy that intercepts rainfall slowing its fall to the ground and the forest floor which acts like an enormous sponge absorbing considerable precipitation before gradually releasing it to the natural channels and recharging of ground water. Forests and forestry interventions like intensive afforestation and soil & moisture conservation works rejuvenate, restore and sustain water quality, water flow and watershed health besides feeding the downstream areas with sustained water supply.

Role and interventions of J&K Forest Department

The Jammu and Kashmir Forest department is one of the key departments involved with the implementation of *Jal Shakti Abhiyan-III* in Jammu and Kashmir by applying specific forestry interventions like intensive afforestation and soil & moisture conservation works help to seeking active support and participation from the PRIs and public at large (*Jan Bhagidari*), thereby making it a people's movement (*Jan Abhiyan*). The J&K Forest Department has, accordingly, taken up the following interventions under the different ongoing afforestation schemes:

1. Rainwater harvesting and Soil conservation works

Jal Shakti Abhiyan-III campaign "*Catch The Rain*" with the tagline "*Catch the rain: where it falls, when it falls*" is to nudge the states and stake-holders to create appropriate Rain Water Harvesting Structures (RWHS) suitable to the ecological conditions and sub-soil strata before monsoon.



Crates & DRSM Work at Seri Mooni Irrigation Canal in Co.36/Blr of Mahanpur Range of Basohli Forest Division



Pond (Khandrey Upper) at Dhardugnu in Co. 31/Blr of Mahanpur Range of Basohli Forest Division

The essence of this campaign has been well captured and strategically incorporated into the work programmes of the J&K Forest Department wherein interventions like construction of check dams; water harvesting pits; removal of encroachments and de-silting of ponds and *bowlies* to increase their storage capacity; repairs of old defunct ponds to facilitate water back to aquifers etc are being undertaken with the active participation of people.



Pond Kooper in Co. 31/J of Jasrota Range of Kathua Forest Division



Pond (Banne Di Talai) at Dhardugnu in Co. 32/Blr of Mahanpur Range of Basohli Forest Division



Dry Rubble Stone Masonry constructed in Co. 36/Blr of Mahanpur Forest Range

Check Dams in Dry Rubble Stone Masonry constructed in Co. 18/Blr of Billawar Range of Billawar Forest Division

Rainwater Harvesting by way of construction of check dams and undertaking of different soil and moisture conservation works will not only arrest soil erosion but also make surface runoff water to percolate and recharge the groundwater aquifers. Construction of new ponds and revival of old ponds and bowlies form an integral part of the Annual Plans of Operations under various schemes being undertaken by the Forest Department including CAMPA.

Detail of Soil Conservation works carried out by Forest Department in 'Kandi Belt'.

During 2018-19:-

COMPONENT	ACHIEVEMENTS	
	Phy.	Fin
Fencing (rft)	142515	119.239
Planting (nos)	102350	33.291
Patch Sowing (nos)	9600	0.703
Grass Slips (nos)	2500	2.050
Beat up Causalities (nos)	57350	16.800
Lantana Clearance (nos)	30.5	7.981
SMC Works		
(a)DRSM (cum)	90	0.978
(b)WHS (nos)	5	18.234
(c)Crates (nos)	5	0.600

During 2019-20:-

COMPONENT	ACHIEVEMENTS	
	Phy.	Fin
Fencing (rft)	167130	122.515
Planting (nos)	171370	48.471
Patch Sowing (nos)	33615	2.036
Beat up Causalities (nos)	39095	11.472
Lantana Clearance (nos)	67.5	15.347
SMC Works		
(a)DRSM (cum)	1370	11.088
(b)WHS (nos)	8	6.270
(c)Crates (nos)	38	4.360

During 2020-21:-

COMPONENT	ACHIEVEMENTS	
	Phy.	Fin
Fencing (rft)	310422	316.285
Planting (nos)	367940	96.077
Patch Sowing (nos)	92200	15.684
Grass Slips (nos)	24660	1.318
Beat up Causalities (nos)	77943	21.361
Lantana Clearance (nos)	140	31.164
Tending Operation	23500	1.232
SMC Works		
(a)DRSM (cum)	3866	30.957
(b)WHS (nos)	44	47.782
(c)Crates (nos)	168	15.497

2. Intensive Afforestation

Forests and plantations play an important role in absorption of storm and rainwater for maintenance of ground water table, prevention of soil erosion and run-off and encouraging growth of natural habitat for flora and fauna. "The **Green J&K Drive**", a public outreach programme with the involvement of village panchayats is augmenting the concerted efforts for water conservation by active participation from these grass-root democratic institutions. Under the ambitious "**Green J&K Drive**", the Forest Department has planted 102 lakh saplings during last year and is aiming to plant 1.30 crore saplings during 2021-22 which will not only increase the forest cover but also

support the *Jal Shakti Abhiyan-III* thereby mitigating the water scarcity in water-stressed areas especially in *Kandi Belt* of Jammu region.



Seed Balls Distribution and Intensive afforestation involving PRIs under the "One Beat Guard, One Village Programme" in Basohli & Billawar Forest Divisions

3. Low cost greening initiative using Seed Balls :

The forest and tree cover of J&K is 55%, however as per the National Forest Policy, 1988, a mountainous state /UT should have two-thirds of its geographical area under green cover. Hence, there is need for exploring low cost interventions for greening within and outside forest areas.

The Forest Department has initiated low cost innovative methods like use of seed balls, seeds broadcasting and other afforestation techniques like patch sowing, dibbling and naked root planting to cover large barren areas and inaccessible sites in a cost effective manner.

Seed balls are being used for greening of degraded forest areas like landslides and other inaccessible areas, stabilized muck dumping sites as well as supplementing the existing closures. Seed balls of grass and shrub species have also been utilized for slope stabilization and augmentation of fodder on village common lands.

Measures like this, help in creating a sustained people's movement for achieving objectives like conservation of forests and biodiversity, rehabilitation of degraded forests and also assist in checking denudation and soil erosion and maintenance of forest vegetation for augmenting water provisioning and improving the moisture regime of forest floor.

4. One Beat Guard-One Village Programme (OBG-OVP) to augment “Jal Shakti Abhiyan”

The 'OBG-OVP' programme launched by the Govt. in the current year is a low cost innovative method of greening with the involvement of the stakeholders especially the Panchayats, BMCs and Joint Forest Management Committees. It envisages covering 1000 villages under low cost greening interventions wherein one revenue village is being adopted by one beat guard, for greening of non forest lands.

The programme will not only increase the tree cover outside forest area but also ensure long-term supply of small timber, fuel-wood, fodder and grasses as well as augmenting the water conservation and availability at the micro-catchment level with the active involvement of PRIs, thereby making it a *Jan Bhagidari* programme.

This unique greening initiative aims to scale up the greening efforts of the J&K Forest Department on suitable lands outside forest.



Plantation prog. under “One Beat Guard-One Village Prog” involving locals, NGO and PRIs in village Rajwalta, Ramkot Range of Billawar Forest Division

The programme is being received with great enthusiasm by the Panchayats especially from the water-scarce areas of Kandi belt and is substantially supporting the *Jal Shakti Abhiyan-III*.

Conclusion:

Role of forestry sector through its various people centric afforestation measures in conservation of water and recharge of depleting water aquifers is immense and indispensable to make the *Jal Shakti Abhiyan* successful at the grass-root level. The “**One Beat Guard- One Village Programme**” which has already taken the form of a *Jan Bhagidari* movement has the potential to scale new heights in years to come.



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