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DEPARTMENT OF CIVIL ENGINEERING

JAL SHAKTI ABHIYAN

Why water conservation is important?

Sustainable Development Goal 6 (SDG 6) envisages availability and sustainable management of water for all by 2030. India is facing the challenge to serve 17% of the world 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 make the demand-supply balance more critical. As per NITI Aayog, India is facing water crisis with around 50% population experiencing high-to-extreme water shortage. In order to address water scarcity, it is important to undertake efforts for conservation, restoration, recharge and reuse of water. In this pursuit, Ministry of Jal Shakti (MoJS), Government of India is launching Jal Shakti Abhiyan (JSA) from 1st July, 2019. Ministry of Housing and Urban Affairs (MoHUA) is participating actively in the Jal Shakti Abhiyan (JSA) along with States/UTs/ Urban Local Bodies (ULBs) to make water conservation measures a Jan Andolan.

Thrust areas

i. Rain Water Harvesting (RWH)
ii. Reuse of Treated Waste Water
iii. Rejuvenation of Water Bodies
iv. Plantation

2. Interventions

2.1 Rain Water Harvesting (RWH)

Rain Water Harvesting (RWH) is collection and storage of rainwater from roof tops, roadside, open areas, etc. which can be stored for further usage or recharged into ground water to augment water resources.

A Rain Water Harvesting system comprises of:

i. A system or catchment from where water is captured for storage;
ii. A system of pipes/ducts to carry the harvested water to the storage facility;
iii. Filter unit for removal of dirt that comes with rain water; and
iv. Storage tank or ground water recharging structures.

Reuse of Treated Waste Water

2.2.1 Considering the growing need of water demand in urban areas and depleting water resources, there is a need to explore alternatives to fresh water. To optimize the use of water, it is important to undertake treatment of waste water and reuse it. Reuse of treated waste water provides an alternative to fresh water where water is required for non-potable use. The water reclaimed from waste water can be used for toilet flushing, agriculture/horticulture, fire hydrants, industries, construction activities, power plants, etc.

2.2.2 National Urban Sanitation Policy 2008 mandates reuse of at least 20% of treated waste water

Rejuvenation of Urban Water Bodies

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Plantation

Plantation plays a significant role in absorption of storm and rainwater for maintenance of ground water table, prevention of soil erosion and run-off and encourages growth of natural habitat for flora and fauna. ULBs should undertake plantation near water bodies, public spaces, parks and on roadside to improve green cover and water cycle.

Measures to be taken by ULBs:

i. Such places where plantation could be done during the rainy season like roadside, around water bodies or vacant public spaces should be identified at the earliest.
ii. Water hardy indigenous variety of trees should be identified for plantation and preferably tall plants (4-6 feet) may be used.
iii. In collaboration with District Forest Department/Horticultural Department, special drive needs to be taken up during JSA to plant such trees in identified areas.
v. Adequate measures need to be taken up to protect and nurture such plants to ensure their survival.
vi. Special drive may be taken up to motivate Resident Welfare Associations (RWAs), Civil Society Organizations (CSOs), NCC, NSS, NYK, etc to plant trees at large scale in the resident colonies, schools, public buildings etc, in the city during JSA.
vii. Every year students along with the garden staff plant trees. Subsequent care is taken by the gardeners. Due to this program over the years the campus has become lush and green. Also, a herbal garden consisting of plants with medicinal values is cultivated in the college campus.

viii. E-waste management -E waste generated is disposed off by board of officers to authorized vendors

ix. Various activities such as are conducted by our NSS team

S.no	Activity	Expert Details	Participants
1.	Tree Plantation Program at Nallampatti Village,Dindigul	Dr.S.Chandrasekar,Principal,SSM Mat Hr,Sec,School	SSMIET NSS Students
2.	NSS Camp at Sirumalai Village,Dindigul	VAO and Public of Nallampatti Village	SSMIET NSS Students
3	Tree Plantation at Kannivadi Village	Dindigul Government Hospital Blood Bank team	SSMIET NSS Students
4.	Tree Plantaion at SSMIET Campus	Public and SSMIET NSS Students	SSMIET NSS Students
5.	Tree Plantation at SSMIET Campus	SSMIET Students	SSMIET NSS Students
6.	Tree Plantation at SSMIET CBSE Campus	Dr.A.Appusamy,Principal SSMIET,CBSE,School	SSMIET NSS Students

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Awareness Campaign

There is need for public awareness regarding water conservation. Jal Shakti Abhiyan has been designed to achieve greater public participation in the efforts being undertaken by Centre/States/UTs/ULBs in this regard. Local communities need to be mobilized to play a vital role in efforts being undertaken under JSA. ULBs should undertake measures to encourage collective ownership in management of water available locally.

ULBs should engage RWAs, schools, businesses, Civil Society Organizations (CSOs), Nehru Yuva Kendras (NYKs), NSS volunteers, NCC cadets, SHGs formed under DAY- NULM, elected representatives, Swachhagrahis to organize door to door outreach, community events, workshops, flyers, banners, wall paintings, street plays, social media, etc. for dissemination and building awareness for all four enlisted Water Conservation measures in urban areas. Leading personalities in films, sports, social work or public life may be invited to the campaigns.

Monitoring

In order to ensure effective monitoring, it is important to establish a clear baseline and benchmark for State/UT/ULB level performance on implementation of Rain Water Harvesting, Rejuvenation of Water Bodies, Reuse of Treated Waste Water and Plantation. The progress needs to be monitored on a real-time basis to ascertain the progress of ULBs and gaps therein in each of the thrust areas under JSA.

5.2 Following measures of monitoring will be undertaken:

i. State/UT/ULB level reporting

ii. Video Conferencing with State/UT governments at the Centre level and ULBs at the State/UT level

iii. Uploading of progress and photographs on the websites and dashboards of Ministries of Jal Shakti and Housing and Urban Affairs.

Documentation

ULBs are encouraged to document their experiences and innovative practices which have led to successful implementation of water conservation measures and upload the same on the websites of Ministries of Jal Shakti and Housing and Urban Affairs. Such documentation may be used in future workshops, consultations, cross-learning and replicating best practices within and outside the States/UTs with/without local adaptive modifications.

Summary

In brief, States/UTs/ULBs are requested to carry out focused activities during two phases between 1st July, 2019 to 15th September, 2019 and 1st October 2019 to 30th November 2019 to promote and develop the culture of water conservation in urban areas which have been identified as water stressed. The crux of this drive is building large scale awareness campaign so that conservation of water becomes a Jan Andolan. For this purpose, suggested activities and other innovative activities on these lines may be undertaken by the States/UTs/ULBs during the JSA period.

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