Jal Shakti Application

Enabling seamless monitoring of countrywide campaign through Portal and Mobile App

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In a countrywide effort to enhance water security, especially in water-stressed districts, the Centre initiated Jal Shakti Abhiyan (JSA) in all states of the country. JSA Portal and JSA Android Mobile App are designed with an aim to track several activities and tasks related to the campaign at various levels effectively.

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Jal Shakti Abhiyan (JSA) is a countrywide campaign inspired by Shri Narendra Modi's, the Hon'ble Prime Minister, impetus to Jal Sanchay. It is time-bound and primarily focused towards water conservation measures in 1592 water-stressed blocks in 256 districts spread across the country. Prior to the launch of this campaign, the Hon'ble Prime Minister's letter addressed to all Sarpanches was sent to 2.5 lakh Gram Panchayats with a call for initiating water conservation drives during the ensuing monsoons. The vision of the Hon'ble Prime Minister for this 'Jan Andolan' was realized through triggering of the communities and their contribution in several events related to the campaign.

The campaign is being executed in two different phases. First phase (1st July to 15th September 2019), is during monsoon for all States and Union Territories. Further, Second phase (1st October to 30th November 2019) has been assigned for States and UTs receiving the retreating monsoon. The five key interventions decided for the campaign, along with people's participation, are shown in *Fig. 1.*

Workflow

To administer these interventions, a central team consisting officer of one Additional/ Joint Secretary level, one Deputy Secretary/ Director level and one Technical Officer of Central Ground Water Board/ Central Water Commission have been deputed for each District/ Block. For successful execution of the campaign with measurable results from the participating districts and blocks, NIC cell of the

Department of Drinking Water & Sanitation has developed an online portal and a dedicated Mobile Application. Both the products are operable on role-based criterion to render information pertaining to the jobs allocated to them. Pre-defined roles given with the appropriate authority and access to the portal as well as the Mobile App are shown in *Fig. 2.*

Jal Shakti Abhiyan Portal

A unified platform to manage all the activities related to the campaign, Jal Shakti Abhiyan portal *(https://ejalshakti.gov.in/jsa)* receives data continuously from all over the country, and the reports are refreshed and updated every 30 seconds. A scoring methodology has been devised for evaluating ranking of the districts and generating a competition among them. The ranking list is refreshed every half an hour. The portal provides status report of various param-

Fig. 1: Key Intervention Areas shown on the portal

eters at a single page such as details of registrations done, field visits, meetings, plan preparations, people's participation, activities and interventions.

The portal captures and displays details for ongoing and completed activities in each intervention area, uploaded by the teams deployed on ground. The central level authorities and Deputy Commissioners/ District Magistrates as well as other District level functionaries review this uploaded data and the status of water conservation activities undertaken by various government departments and citizens. The portal also unveils details related to people's participation in all the States and Union Territories.

Two National-level Conferences chaired by Shri Pradeep Kumar Sinha, Cabinet Secretary, were held to brief the Chief Nodal Officers, Block Nodal Officers and Technical Officers about the Abhiyan. The NIC team gave a detailed presentation on the features of the portal and the registration process for the functionaries at various levels.

Integration with Other Applications

JSA Portal is interoperable with the applications of various organizations, namely MNREGA portal of Ministry of Rural Development, Ministry of Agriculture Cooperation and Farmers Welfare, Ministry of Environment Forests & Climate Change, and Ministry of Housing and Urban Affairs.

Technical Specifications

JSA portal is designed and developed using the following technologies:

- **Back-end:** MS SQL Server 2016
- **Front-end:** ASP.NET 4.7, IIS Server 10

It also uses SMS and email services to immediately intimate users about any updates related to the campaign. In some cases, these services can also be pre-scheduled for sending messages to the concerned users.
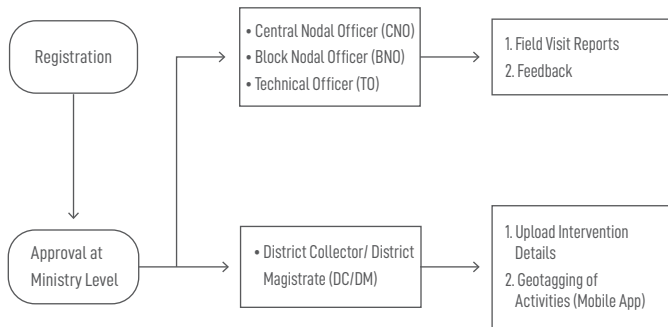
Key Features
JSA Portal:

- Captures details of officials' visits and progress of all JSA activities.
- Receives general and activity-wise feedback.
- Monitors people's participation.
- Generates daily reports for the Cabinet Secretary.
- Maintains details for outcome interventions reported.
- Exports real-time status updates of reports in word, pdf and excel formats.
- Calculates dynamic ranking of top 10 performing districts during the campaign.

JSA Android Mobile Application

JSA Android Mobile App has been developed to increase participation in the campaign. It is well designed for teams on the field to report about the works being carried out under JSA. It emerges as a convenient option where

Fig. 2: Jal Shakti Abhiyan Workflow

NIC Officers at JSA Conference, Vigyan Bhawan, New Delhi

Top 10 District Ranking

⦿ Other State ○ UT/NE & Hilly States

Rank	District	State
1	KASGANJ	UTTAR PRADESH
2	MAHABOOBNAGAR(14)	TELANGANA
3	BANAS KANTHA	GUJARAT
4	TIRUVANNAMALAI	TAMIL NADU
5	DHANBAD	JHARKHAND
6	TIRUNELVELI	TAMIL NADU
7	GAYA	BIHAR
8	BALOD	CHHATTISGARH
9	THANJAVUR	TAMIL NADU
10	SANGRUR	PUNJAB

JSA top 10 district rankings

Ministry of Jal Shakti | Ministry of Rural Development | Ministry of Agriculture & Farmers Welfare | Ministry of Environment, Forest and Climate Change | Ministry of Housing and Urban Affairs

Interoperable applications within JSA Portal

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Jal Shakti Abhiyan (JSA), a countrywide campaign for water conservation, is conceptualized as a commencement of a Mission Mode Project "Jal Jeevan Mission" of providing tap connection in every rural household by 2024. The development of portal for JSA and Mobile App was entrusted with the NIC Division of the Department and has been launched well in time for capturing the important data related to JSA activities. The portal has been widely appreciated due to the ease of use and intuitive design. The ranking of districts made them competitive in achieving the goals of the campaign. The portal is interoperable with the applications of various ministries like Rural Development, Housing and Urban Affairs, Environment, Forest & Climate Change etc., with a real-time Dashboard.

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some other devices such as desktop and laptop are difficult to be deployed. It automatically fetches the latitude and longitude of a user's location and is designed to work in offline mode as well. The teams/ officials can capture activity and then report the data once the Internet is available to the user.

It features geotagging options for the activities (photographs) being carried

JSA Mobile App

out in the districts and captures general/ activity-wise feedback from senior nodal officers deputed by the Central Government. The App also comprises of an option that redirects the link to fill in the information pertaining to the adoption of five sites for intervention.

Key Features

- Offline data sync to server
- Geotagging of activities
- General and activity-wise feedback
- Easy data updation from any remote District/ Block

The App is available on:

- Google Play Store *(https://play.google.com/store/apps/details?id=nic.jsa)*.

- Jal Shakti Portal *(https://ejalshakti.gov.in/jsa/jsaContent/JalShaktiAbhiyan.apk)*.

Summary

The data recorded under JSA campaign will act as a foundation for assisting the subsequent water related programs, namely "Jal Jeevan Mission" announced by the Hon'ble Prime Minister to ensure piped water supply to all the rural households by 2024. It is budgeted around Rs. 3.5 trillion and is focused towards the implementation of various water conservation measures and grey water management techniques. The statistics, rankings and reports generated with JSA portal and Mobile App help define a blueprint to specify tasks and activities for accomplishing Jal Jeevan Mission. ∎

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