National Water Mission Awards 2019

Date: 25th September, 2019
Venue: Plenary Hall, Vigyan Bhawan
New Delhi

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

Har Ek Kaam Desh Ke Naam

Let’s Love Water Together
National Water Mission (NWM) is one of the eight missions established by the Government of India to deal with the impact of climate change and issues arising out of them. NWM, with its 5 objectives and 39 strategies, focuses on issues related to water. For the first time, the National Water Mission Awards were given in 2019 to honour and celebrate the achievements of those individuals and organizations who have significantly contributed to goals of the mission. This book tells about these winners, their work and the processes involved in their selection.
In order to achieve the objectives of NWM in a holistic manner and to recognize the excellence in water conservation, efficient water use and sustainable water management practices, National Water Mission has initiated the National Water Mission Awards. The awards are given in ten categories defined under five goals of NWM.

This Award Ceremony is a celebration about recognizing the achievements and success of awardees and I am both delighted and honoured in recognizing the exceptional contribution of awardees in the field of water conservation, augmentation and preservation.

They are the water warriors of our nation who have contributed a lot in building the nation. It's time we learn from them so that our country can be a water efficient country. The creativity, innovation and efforts of our winners are a good inspiration for us to work in the right direction for water conservation.

(Rattan Lal Kataria)
Minister of State,
Jal Shakti, Social Justice and Empowerment
National Water Mission (NWM) was one of the eight missions set up in 2011 as part of the National Action Plan on Climate Change (NPCC) launched by the Government of India to meet the impact of Climate Change. The main objective of NWM is “conservation of water, minimizing wastage and ensuring to more equitable distribution both across and within States through integrated water resources development and management” and has five main goals and 39 strategies identified.

In 2019, NWM- for the first time- came out with “NWM Water Awards” to draw national attention to critical aspects of water and promote innovations that offer solutions in 10 categories defined under the goals of the mission. The rationale was to support and incentivize solutions and share them with a larger audience to generate awareness and inspire. Through these awards, National Water Mission wishes to highlight the need for sustainable initiatives in the management of water resources across segments and sectors.

The Awards were decided through a systematic process starting with nationwide advertisements in 81 newspapers-national and regional-inviting entries for the awards in a specified format for standardized, objective evaluation by Screening and Jury Committees constituted by the Government. Ground-truthing of the entries were done by central government agencies before finalizing the awards. The NWM Water Awards, 2019 were presented by Shri Gajendra Singh Shekawat, Hon’ble Minister for Jal Shakti on 25th September 2019 at a function in the Plenary Hall of the Vigyan Bhawan which was also graced by Shri Rattan Lal Kataria, MoS, Jal Shakti.

This compendium is an attempt to celebrate the efforts of the award winners and document the whole processes that went into the invitation, short-listing and ground-truthing of entries; finalization and distribution of the awards.

G. Asok Kumar
Additional Secretary & Mission Director
National Water Mission
Ministry of Jal Shakti
Contents

About National Water Mission 10

NWM Awards 2019
• An Overview 16
• Jury Committee 18
• List of Award Winners 20

Category-wise Award Winners and their Projects
• Comprehensive Water Database in Public Domain 28
• Assessment of the Impact of Climate Change on Water Resource 34
• Promotion of Citizen and State Action for Water Conservation 40
• Augmentation and Preservation 50
• Increasing Water Use Efficiency by 20% (Local Individuals/Farmers/Citizens) 58
• Increasing Water Use Efficiency by 20% (WUA, SHGs, RWAs) 64
• Increasing Water Use Efficiency by 20% (Public Agencies- ULBs/Cities, Govt. Organisations etc.) 68
• Increasing Water Use Efficiency by 20% (Industries/Corporate) 76
• Promotion of Basin Level Integrated Water Resources Management 84

The Background Processes & Efforts 94
To know more about National Water Mission
Please scan QR code
National Water Mission (NWM) was set up as per the National Action Plan on Climate Change (NAPCC) which was approved by the Government of India and released by the Hon’ble Prime Minister on 30th June 2008. NAPCC laid down the principles and identified the approach to be adopted to meet the challenges of impact of climate change through institutionalization of 8 national missions, one of which was the ‘National Water Mission’. On 6th April, 2011, Union Cabinet approved the comprehensive Mission Document for National Water Mission (NWM).

The main objective of NWM is “conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management”.

The 5 goals identified by the comprehensive mission document for National Water Mission are:

(i) Comprehensive water database in public domain and assessment of the impact of climate change on water resources;
(ii) Promotion of citizen and state actions for water conservation, augmentation and preservation;
(iii) Focused attention to vulnerable areas including over-exploited areas;
(iv) Increasing water use efficiency by 20%;
(v) Promotion of basin level integrated water resources management.

39 Strategies for achieving these goals were also identified. These strategies are meant for integrated planning for sustainable development with active participation of the stakeholders. In pursuance to the approval accorded by the Union Cabinet to the National Water Mission, a Mission Directorate was established in the Ministry of Water Resources, River Development & Ganga Rejuvenation.

Strategies identified under each goal

Strategies under Goal 1 - Comprehensive water database in public domain and assessment of the impact of climate change on water resources.

i. Review and establishment of network for collection of additional necessary data.
ii. Development of water resources information system.
iii. Development / implementation of modern technology for measurement of various data.
iv. Developing inventory of wetland.

Strategies under Goal 2 - Promotion of citizen and state actions for water conservation, augmentation and preservation.

i. Empowerment and involvement of Panchayati Raj Institutions, Urban Local Bodies, Water Users’ Associations and primary stakeholders in management of water resources with focus on water conservation, augmentation and preservation.
ii. Promote Participatory Irrigation Management (PIM).
iii. Sensitization of elected representatives of over-exploited areas on dimensions of the problems and to orient investment under MNREGP towards water conservation.
iv. Provide incentives for water neutral and water positive technologies in industry.

Strategies under Goal 3 - Focused attention to vulnerable areas including over-exploited areas.

i. Expeditious implementation of water resources projects particularly the multipurpose projects with carry over storages benefitting drought prone and rain deficit areas.
ii. Promotion of traditional system of water conservation.
iii. Physical sustainability of groundwater resources.
iv. Intensive programme for groundwater recharge in over-exploited, critical and semi-critical areas.

Strategies under Goal 4 - Increasing water use efficiency by 20%.

i. Research in the area of increasing water use efficiency and maintaining its quality in agriculture, industry and domestic sector.
ii. Incentives for recycling of water including waste water.

Strategies under Goal 5 - Systematic approach for coping with floods.

i. Research and development of flood mitigation technologies.
ii. Intensive programme for addressing the quality aspects of drinking water particularly in rural areas.
iii. Promotion of water purification and desalination.
iv. Systematic approach for coping with floods.

NATIONAL WATER MISSION
Promotion of water efficient techniques and technologies.

4. Undertake pilot projects for improvement in water use efficiency in collaboration with States.

5. Promote water regulatory authorities for ensuring equitable water distribution and rational charges for water facilities.

6. Incentive through award for water conservation & efficient use of water.

7. Incentivize use of efficient Irrigation practices and fully utilize the created facilities.

Strategies under Goal 5 – Promotion of basin level integrated water resources management

1. Review of National Water Policy.

2. Review of State Water Policy.

3. Guidelines for different uses of water e.g., irrigation, drinking, industrial etc. particularly in context of basin wise situations.

4. Planning on the principle of integrated water resources development and management.

5. Inter-basin integration particularly augmenting water by converting surplus flood water into utilisable water.

6. Ensuring convergence among various water resources programmes.

Recent initiatives of NWM

- “National Water Mission Awards” were instituted to encourage and incentivize organisations and individuals to conserve and manage water. The first NWM awards were given on 25/09/2019 to 22 winners.

- “Water-Talk” – A seminar series to promote dialogue and information sharing among participants of water related topics was started on 22nd March 2019 and is being held on third Fridays of every month since then. Domain experts like Mr Mihir Shah, Mr Tushar Shah, Mr Himanshu Kulkarni, Mr Shashi Shekhar, Mr Sachin Ojha, Mr Alok Sikka, Mr Nayan Sharma etc and practitioners from the field like Mr Anil Joshi, Mr Sonam Wangchuk, Mr Popat Rao Pawar, Mr Pushpendra bhai, Mr Umakant Umrao, Mr Hiralal, Sant Balbir Singh Seechewal etc were invited to talk on their subject and experiences. Its aim is to stimulate awareness, build capacities of stakeholders and encourage people to become active participants to sustain life by saving water on earth.

- "Sahi-Fasal" – a campaign to nudge the farmers to grow crops which are less water intensive and use it efficiently; have nutritional quality and are remunerative to the farmers was launched on 14th November 2019 in Amritsar with workshop attended by 850 farmers. This was followed by a technical workshop in New Delhi on 26th and 27th November, 2019 where Mr Walter Jehne a renowned micro-biologist and water expert gave the key note address. The 3rd workshop at Aurangabad on 13th January 2020 was attended by 1200 farmers, the 4th workshop was held at Kunukhetra on 14th February 2020.

- Jingles (‘Kal ki suraksha ke liye’ & ‘Ye shaharshahar’) on water conservation were composed and aired in FM Radio channels.

- Issued circular requesting Ministries & Departments to install “aerators” in office toilets & Rain Water Harvesting Systems at their office premises.

- State and UT Governments are supported to formulate a State Specific Action Plan (SSAP) on water at basin level for sustainable development & management of its water resources linking it with their State Action Plan for climate change.

- NWM has taken an initiative to popularize the concept of state water budgeting on lines similar to that of financial budgeting. NWM has developed a common template for water budgeting for preparation of State Specific Action Plan for water sector.

- For developing standards in respect of improving water use efficiency in domestic appliances, NWM, in collaboration with Bureau of Indian Standard (BIS), is working on efficiency labelling standards for house-hold appliances like washing machines, sanitary wares & fittings.

- Has awarded 26 Base Line studies covering 6 States for improving water use efficiency in irrigation sector, to North Eastern Regional Institute of Water and Land Management (NERWALAM), Assam. Water and Land Management Training and Research Institute (WALATARI), Hyderabad, Water and Land Management Institute (WALMI), Aurangabad and Centre for Water Resources Development & Management (CWRDM), Kerala.

- Bureau of Water Use Efficiency on the lines of Bureau of Energy Use Efficiency is being planned.

- Taken up scoping studies through TERI by undertaking comprehensive water audits/ benchmarking in two industrial sectors i.e. thermal power plants & textile industries for enhancing industrial water use efficiency in India.
National Water Mission Awards 2019
The first National Water Mission Awards, 2019 were presented on 25th September, 2019 at the Plenary Hall of Vigyan Bhawan, New Delhi. The event was held along with India Water Week organized from 24th-28th September, 2019.

Shri Gajendra Singh Shekhawat, Hon’ble Union Minister, Ministry of Jal Shakti gave the awards to the winners. Shri Rattan Lal Kataria, Hon’ble Minister of State, Ministry of Jal Shakti was the ‘Guest of Honour’. Shri U.P. Singh, Secretary, Department of Water Resources, RD & GR, Ministry of Jal Shakti and Shri G. Asok Kumar, Mission Director, NWM graced the function.

National Water Mission Awards

The awards were given in the following ten categories defined under five goals of NWM:

2. Assessment of the impact of Climate Change on Water Resources.
3. Promotion of citizen and state action for water conservation, augmentation and preservation.
4. Focused attention to vulnerable areas including over-exploited area.
5. Increasing Water use efficiency by 20% (Local Individuals/Farmers/Citizens).
8. Increasing Water use efficiency by 20% (Industries/Corporate).
9. Increasing Water use efficiency by 20% (Small and Medium Enterprises).
10. Promotion of basin level integrated water resources management.

The NWM Awards

First prize Rs. 2 lakh, a Trophy and Certificate
Second prize Rs. 1.5 lakh, a Trophy and Certificate
Third prize Rs. 1 lakh, a Trophy and Certificate

Total Cash Awards : Rs.45 Lakhs
Mr. Shashi Shekhar is an Indian Administrative Services officer of the Tamil Nadu Cadre, 1981 Batch. He retired as Secretary of Ministry of Water Resources, River Development and Ganga Rejuvenation. Mr. Shekhar has also served as an Additional Secretary of Ministry of Environment and Forests, Government of India.

Dr. Kapil Kumar Narula is the Executive Director & CEO of CII-Triveni Water Institute, which aims to transform water conservation and management in India resulting in more effective and sustainable water management practices at the grassroots level. Prior to this, he was Adjunct Associate Research Scientist at the Columbia Water Center of the Earth Institute, Columbia University, USA and served as Founder Trustee and Country Director of Columbia Water Center India office.

Mr. Anshuman, Associate Director, Water Resources Division of TERI (The Energy and Resources Institute) has been working in the water sector for the last 23 years. He specializes in Integrated Water Resources Management (IWRM); water use efficiency; urban water supply & demand management studies; water audits; water conservation; watershed management; climate change and water security and other critical areas of water.

Mr. Suresh Babu SV is the Director Rivers, Wetlands & Water Policy at WWF-India since 2011. With about 20 years of experience in the water sector, Suresh leads a multidisciplinary team working on issues around wetland conservation, integrated river basin management, environmental flows, habitat and aquatic species conservation, urban and industrial water stewardship. Currently geographical focus of this work is the Ganga, Ramganga, Beas and Bhawani basins.

Mr. Joydeep Gupta, South Asia Director of The Third Pole and India Climate Dialogue writes, commissions and edits articles on climate change, water, biodiversity, pollution and sustainable development. He currently teaches environmental journalism at Jindal Global University and was previously teaching the subject at Jamia Millia Islamia.
After a rigorous evaluation process, comprising of several meetings by the Screening and Jury Committees, the following list of winners under various categories were decided and approved by the Ministry:

<table>
<thead>
<tr>
<th>Name of the Organisation</th>
<th>SI No.</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Resources Department, Govt of Andhra Pradesh for its Andhra Pradesh Water Resources Information and Management System (APWRIMS)</td>
<td>01</td>
<td>1st</td>
</tr>
<tr>
<td>Irrigation and CAD Dept, Govt of Telangana for its Telangana Water Resources Information System (TWRIS)</td>
<td>02</td>
<td>2nd</td>
</tr>
<tr>
<td>Environmental Planning &amp; Coordination Organisation (EPCO), Department of Environment, Bhopal for Climate Change Vulnerability Assessment(CCVA) Study of Madhya Pradesh</td>
<td>03</td>
<td>1st</td>
</tr>
<tr>
<td>Water Resources Department, Govt of Andhra Pradesh for its work on Impact of Climate Change on Water Resources of Andhra Pradesh</td>
<td>04</td>
<td>2nd</td>
</tr>
<tr>
<td>Water Resources Department, Govt of Rajasthan for its work on Impact of Climate Change on Water Resources of Rajasthan</td>
<td>05</td>
<td>1st</td>
</tr>
<tr>
<td>Jalaposhan Trust for its work in Conservation and Preservation of 200 years old Jakkur Lake</td>
<td>06</td>
<td>2nd</td>
</tr>
<tr>
<td>Department of Soil and Water Conservation, Govt of Punjab for Utilisation of treated waste water for Irrigation from Sewerage Treatment Plant (STP), Phagwara</td>
<td>07</td>
<td>3rd</td>
</tr>
<tr>
<td>Pampa Purakshana Samithy for its efforts on Rejuvenation of Varanchal (flood plain wetland) and Pampa rejuvenation, Kerala</td>
<td>08</td>
<td>3rd</td>
</tr>
<tr>
<td>Water Resources Department, Govt of Rajasthan for Water Conservation, Augmentation and Preservation at Narmada Canal Project, Sanchore</td>
<td>09</td>
<td>1st</td>
</tr>
<tr>
<td>Shiganga Samagra Gramvikas Parishad for its Efforts on Water Conservation in Water Stressed Tribal District Jhabua</td>
<td>10</td>
<td>2nd</td>
</tr>
<tr>
<td>Department of Soil and Water Conservation, Govt of Telangana for its work on Users Centred Aquifer Level Groundwater management</td>
<td>11</td>
<td>3rd</td>
</tr>
<tr>
<td>Shri Bapu Bhueshaheb Salunke, Aurangabad for doing Water Management at farm level</td>
<td>12</td>
<td>1st</td>
</tr>
<tr>
<td>Dr S Sendur Kumaran, KVK Kundrakudi for Putting Efforts in Increasing Water Use Efficiency through Micro-irrigation for Vegetables in Sivaganga District of Tamil Nadu</td>
<td>13</td>
<td>2nd</td>
</tr>
</tbody>
</table>

**Category 1A: Comprehensive Water Database in Public Domain**

- Water Resources Department, Govt of Andhra Pradesh for its Andhra Pradesh Water Resources Information and Management System (APWRIMS)
- Irrigation and CAD Dept, Govt of Telangana for its Telangana Water Resources Information System (TWRIS)

**Category 1B: Assessment of the Impact of Climate Change on Water Resource**

- Environmental Planning & Coordination Organisation (EPCO), Department of Environment, Bhopal for Climate Change Vulnerability Assessment(CCVA) Study of Madhya Pradesh
- Water Resources Department, Govt of Andhra Pradesh for its work on Impact of Climate Change on Water Resources of Andhra Pradesh

**Category 2: Promotion of Citizen and State Action for Water Conservation, Augmentation and Preservation**

- Water Resources Department, Govt of Rajasthan for its work on Impact of Climate Change on Water Resources of Rajasthan
- Shiganga Samagra Gramvikas Parishad for its Efforts on Water Conservation in Water Stressed Tribal District Jhabua
- Shri Bapu Bhueshaheb Salunke, Aurangabad for doing Water Management at farm level

**Category 3: Focused Attention to Vulnerable Areas including Over-exploited Areas**

- Jalaposhan Trust for its work in Conservation and Preservation of 200 years old Jakkur Lake
- State Ground Water Department, Govt of Telangana for its work on Users Centred Aquifer Level Groundwater management
- Shri Bapu Bhueshaheb Salunke, Aurangabad for doing Water Management at farm level

**Category 4A: Increasing Water Use Efficiency by 20% - (Local Individuals/Farmers/Citizens)**

- Dr S Sendur Kumaran, KVK Kundrakudi for Putting Efforts in Increasing Water Use Efficiency through Micro-irrigation for Vegetables in Sivaganga District of Tamil Nadu

**Category 4B: Strategic Investment for Water Conservation, Augmentation and Preservation in Public Domain**

- Irrigation and CAD Dept, Govt of Telangana for its Telangana Water Resources Information System (TWRIS)
- Ambuja Cement Foundation for Demand and supply side interventions in three districts: Gir Somnath of Gujarat and Pali & Nagaur districts of Rajasthan.
- State Ground Water Department, Govt of Telangana for its work on Users Centred Aquifer Level Groundwater management

**Category 5: Water Conservation, Augmentation and Preservation in Public Domain**

- Irrigation and CAD Dept, Govt of Telangana for its Telangana Water Resources Information System (TWRIS)
- Ambuja Cement Foundation for Demand and supply side interventions in three districts: Gir Somnath of Gujarat and Pali & Nagaur districts of Rajasthan.
- State Ground Water Department, Govt of Telangana for its work on Users Centred Aquifer Level Groundwater management
<table>
<thead>
<tr>
<th>SI No.</th>
<th>Name of the Organisation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Parmarth Samaj Sevi Sansthan for Water Conservation and Augmentation work in Sumerpur block of Hamirpur district, Bundelkhand region of Uttar Pradesh</td>
<td>1st</td>
</tr>
<tr>
<td>15</td>
<td>Department of Irrigation and Drainage Department, Govt of Telangana for its Mission Bhagiratha</td>
<td>1st</td>
</tr>
<tr>
<td>16</td>
<td>Water Resources Department, Govt of Rajasthan for its efforts in Increasing Water Use efficiency of Nageshwar Minor of Harishio Indira Ghar Project, Bikaner</td>
<td>2nd</td>
</tr>
<tr>
<td>17</td>
<td>Department of Horticulture, Govt of Andhra Pradesh for its Andhra Pradesh Micro Irrigation Project (APMIP), Kurnool District</td>
<td>3rd</td>
</tr>
<tr>
<td>18</td>
<td>Hindustan Coca Cola beverages Pvt Ltd, Guntur for Optimising Water Usage through Focused Water Stewardship Efforts in Bottling Plant</td>
<td>1st</td>
</tr>
<tr>
<td>19</td>
<td>Lalitpur Power Generation Company Ltd for its efforts in Water Conservation and Increasing Water Use efficiency</td>
<td>2nd</td>
</tr>
<tr>
<td>20</td>
<td>Raymond UCO Denim Pvt Ltd for Effective Water &amp; Effluent Management in their unit</td>
<td>3rd</td>
</tr>
<tr>
<td>21</td>
<td>Water Resources Department, Government of Andhra Pradesh for Integrated Water Resources Management</td>
<td>1st</td>
</tr>
<tr>
<td>22</td>
<td>Water Resources Department, Maharashtra for Integrated Water Resources Management in Upper Godavari Sub-basin using e-Source modelling framework to achieve equitable distribution of water in sub-basin</td>
<td>2nd</td>
</tr>
</tbody>
</table>
Category-wise Award Winners
Category -1 A

Comprehensive Water Database in Public Domain

(Goal-1)
Project: Andhra Pradesh Water Resources Information and Management System (APWRIMS)


Area of Implementation: Andhra Pradesh

Project Overview:
APWRIMS is a one stop web portal for water resource information and management by capturing the vital details of both the supply side and demand side of water resources of the entire state of Andhra Pradesh. Using these data and through hydrological modelling, data modelling and other scientific modelling techniques, diagnostic scenario based analysis is done to provide decision support to different stakeholders.

Project Details:
- Wide range of geospatial layers is used in both static and dynamic forms to translate data to information to decision support advisories.
- Innovative technologies are implemented for measurement of various water and allied data.
- Internet of Things (IoT) based sensors such as, Piezometers, Ultra-Sonic Level and Automated Weather Station and state of the art models such as VIC Hydrology Model, Network Flow Model, DEM etc. are deployed for recording real time data and for periodic upgrading and monitoring.
- A variety of data sources across the demand and supply side of water resources and inputs from the user department are integrated seamlessly through a software platform for near real-time visibility. This ensures seamless automation of inputs and outputs making the system self-sustainable.

Achievements:
- This initiative has helped the groundnut farmers to increase their yield by 23%.
- Real time monitoring of ground water levels across the State through APWRIMS has helped the Ground Water Department in planning the right interventions at right places that helped in rising of ground water levels by 2 meters.
- In Kharif 2017, an amount of Rs. 256.25 crore saved through reduction in consumption of pesticides over Kharif 2016.
- It is estimated that energy costs to the tune of Rs. 500 crore was saved during 2017-18 due to improvement in ground water level.
- NITI Aayog has also recognized this initiative in Composite Water Management Index 2017.
NATIONAL WATER MISSION

Project: Telangana Water Resources Information System (TWRIS)
Organization: Irrigation & Command Area Department, Government of Telangana
Area of Implementation: Telangana

Project Overview:
Irrigation Department, Govt. of Telangana has partnered with NRSC, ISRO to develop this system as an exclusive web-based geo-portal using state-of-the-art geo-spatial technologies for effective management of water resources in the State. The key objectives are: a) creation of geo-spatial database for the entire irrigation systems in Telangana; b) visualization and integration of data from various sources for comprehensive decision making; c) improve monitoring and reporting; d) effective management of water resources to reduce gap between irrigation potential created and utilized; e) impact assessment of projects; f) information dissemination to public; and g) single source of truth — to maintain data consistency.

Achievements:
• Comprehensive GIS based visual database of the entire state of Telangana available for use by public and government officials.
• Linking of chain tanks to major and medium irrigation projects.
• Informed decisions regarding cropping, project impact evaluation, promoting conjunctive use of ground and surface water, undertaking interventions to stop soil salinity and water logging, etc.

SECOND PRIZE

Project Details:
• The TWRIS is hosted on Bhuvan geo-platform and the irrigation department has digitized and overlaid state specific irrigation layers, viz. Major and Medium Irrigation Command Boundaries, Canal Network, etc.
• Data driven hydrological framework is created providing information on Reservoirs, Surface and Ground Water, Minor Irrigation and Tank Ayacut.

Category - I A
Category-1 B

Assessment of The Impact of Climate Change on Water Resource

(Goal-1)
Project: Climate Change Vulnerability Assessment Study of Madhya Pradesh

Organization: Madhya Pradesh State Knowledge Management Centre on Climate Change, Environment Planning and Coordination Organization, Department of Environment, Bhopal.

Area of Implementation: Madhya Pradesh

Project Overview:
Climate Change is set to pose significant stress on the already stressed ecological and socio-economic systems from increasing changes in rainfall and weather patterns. Moreover, with large population depending on the climate sensitive primary sectors, adaptation holds immense significance from the states’ perspective. Therefore, the MP Knowledge Management Centre on Climate Change organized a detailed Climate Change Vulnerability Assessment to analyze the future impacts of climate change on various sectors like Water Resources, Forests, Health and Agriculture. In this study, current climate variability and future climate change projections have been analyzed for temperature & precipitation in Madhya Pradesh. This study outputs are district vulnerability profiles analyzed using a set of 72 indicators categorized under Exposure, Sensitivity and Adaptive Capacity.

Achievements:
• Study has helped the Government to identify the impacts of climate change on State’s water resources and the inferences are drawn for mid and end century period.
• Findings have also informed the State Action Plan on Climate Change.
• Further, these findings have also helped State Government in formulating and implementing water conservation projects, viz. ‘enhanced adaptive capacity to climate change through conservation of traditional water supply sources (wells and bawdies) of Indore city’ funded by M/oEF&CC under Climate Change Action Programme.

Project Details:
• Madhya Pradesh was divided into four river basins viz. Ganga, Narmada, Tapi and Godavari. The study generated district-wise vulnerability profiles using SWAT (Soil and Water Assessment Tool) hydrological model to generate outputs for all the components of the water balance (spatial and temporal) under climate change scenarios (RCP 4.5 & 8.5).
• Project entailed following data sets for computation of vulnerability viz. digital elevation model, drainage network, soil maps and associated soil characteristics and land use. Further, the weather data used for modeling involved IMD gridded weather data(1961-2013) and climate change related data sets.
Project: Impact of Climate Change on Water Resources.

Organization: Water Resources Department, Andhra Pradesh.

Area of Implementation: Andhra Pradesh

Project Overview:
The State Specific Action Plan has been prepared along with the State and Individual District Irrigation Plans for the Thirteen Districts in AP. The task of collection of water resource data has been jointly taken up with the end users at the Mandal level and the data compiled for the individual district has been authenticated by the District Collector.

Achievements:
- Some of the flagship initiatives of AP Government include:
  - Modernization of Irrigation Projects with assistance from JICA.
  - Inter & Intra-linking of rivers.
  - Irrigation reforms management through Command Area Development and Water Management Scheme (CADWM) and District Scheme for Irrigation Benefit Programme (DBIP).
  - Neeru Chettu Programme for water conservation and watershed development.
  - Reuse of wastewater.
  - NTR JalaSiri for conjunctive use of ground water for irrigation of 10 lakh acre of CCA.

Project Details:
- The project has initiated the studies involving grassroots actors and dovetailing funds from the existing schemes.
- The data sets covered elements of demography, land cover, hydrology, water budgeting, domestic sewage generation, and total present water demand.
- The project has been scaled up to other states with the additional funding from the Ministry of Jal Shakti.

Water Consumption Management – Identification of Right Location

SECOND PRIZE
Category-2

Promotion of Citizen and State Action for Water Conservation, Augmentation and Preservation

(Goal-2)
Project: Narmada Canal Project, Rajasthan.

Organization: Water Resources Department, Rajasthan.

Area of Implementation: Jalore & Barmer Districts of Rajasthan

Project Overview:
This project was first to introduce micro irrigation techniques (Sprinkler & Drip) in an irrigation project with CCA of 2.46 Lac hectare in desert prone areas. This is a unique and single largest first major project in India having mandatory sprinkler irrigation system for CCA 2.46 Lacs hectares. In this project, the gravity conveyance channels as well as lift channels with on farm pressure irrigation system in command area is being adopted for optimum use of available water resulting into increase in CCA from 1.35 lac hectares to 2.46 lac hectares in parts of great Thar Desert and Luni River Delta.

Project Details:
• Project area is divided into 2232 diggies and Water User Association is formed at each diggies for proper O&M. The electric connection on these diggies are issued in the name of WUA and entire energy cost is born by WUA.

Achievements:
• The total water saving accrued to the tune of 71.24%
• The total irrigable area increased from 1.35 to 2.46lac hectares.
• Involvement of women became the cornerstone of the project. Rajasthan Government, vide its amendment dated July 2018, has granted the right to vote in WUA election to the wife of land holders.
• The success of the project encouraged adoption of pressurized irrigation system in 12 projects in Rajasthan.
• Project received accolades from Central Board of Irrigation and Power on 29.12.2015.
Project: Conservation and Preservation of Jakkur Lake, Bangalore.
Organization: Jalaposhan Trust, Bangalore.
Area of Implementation: Jakkur Lake, Bangalore, Karnataka.

Project Overview:
As Bengaluru city began to grow, the area around the lake became more concretized. The lake began to get sewage filled and the flora-fauna started to disappear. Dumping of solid waste directly into the lake led to the disappearance of exotic species of birds. To reverse the degrading condition of Jakkur Lake, a determined group of local citizens started a movement in 2014 and took the authorities in-charge into confidence. Calling themselves “Jalaposhaks” (protectors of water), individuals from all walks of life came together and founded Jalaposhan organisation with the objective of cleaning and beautifying the area around the lake in conjunction with the rejuvenation activities initiated by the Bengaluru Development Authority (BDA). Today the Facebook, Whatsapp and Google groups include over 1000 people who engage in 100 lake related discussions each day. Over 2500 people volunteer at the lake each year with dozens of schools, colleges, artist groups, performers making Jakkur Lake a true community space. Today the lake is well protected and problems identified and resolved in time. The water quality has improved and lake is a model for Integrated Water Management System. Constructed wetland and is a biodiversity Hot Spot with 200 species of birds, thousands of trees, medicinal, aromatic and nectar yielding plants.

Project Details: Key aspects of the project include:
• Involvement of urban local bodies, water user associations and other primary stakeholders.
• Conservation, source augmentation and preservation of water resources.
• Involvement of women, students, NGOs, farmers, youths, politicians and administration.
• Public awareness on water conservation, augmentation and preservation.
• Acceptance by local community, especially the marginalized.

Achievements:
Jakkur Lake’s pioneering success has been replicated by many lake communities across Bengaluru and India. Today there are many registered lake groups across Bengaluru, which have now come together to form the Federation of Bengaluru Lakes. The Federation is now an important lobbying force to ensure that laws are consistent, agencies and corporates are spending their money usefully and responsibly. An initiative to create lake groups for each lake in the lake chain and rejuvenate and conserve the lake chain.

Urban Water Management System: Constructed wetland and is a biodiversity Hot Spot with 200 species of birds, thousands of trees, medicinal, aromatic and nectar yielding plants.
Project: Utilization of treated waste water for Irrigation from Sewerage Treatment Plant (STP), Phagwara, Punjab

Organization: Department of Soil and Water Conservation (DSWC), Govt of Punjab

Area of implementation: Villages Plahi, Khangura, Kishanpur, Bura in Phagwara block, District Kapurthala, Punjab

Project Overview:

- Phagwara block is amongst the most highly over-exploited block with exploitation level reaching 369% as per Central Ground Water Board (CGWB). The average depth of ground water in the area is 150 feet. Absence of a source of surface water results in increase in farmers’ expenditure every year for deepening borewells.

- Underground pipeline (of about 12 kms) based conveyance system was laid from STP Phagwara, Punjab for irrigation of 420 hectares compressive of 260 farmer households.

- The irrigation project was commissioned on 15.08.2016 and extension completed during March 2017.

Project Details:

- Sewage treatment plants based on sequential batch reactors (SBR) technology adjacent to each other having capacity of 20 MLD and 8 MLD have been installed by Punjab Water Supply and Sewage Board (PWSSB). Due to lack of any infrastructure to utilize treated water, it was going into the drain. The Department utilized 28 MLD treated water for irrigation to the agricultural land in the vicinity of STP.

- All primary stakeholders, including the Panchayati Raj, Urban Local Bodies (ULB), Water-Use Associations, along with the women, students, farmers, NGOs etc. were involved. Public awareness on water conservation, augmentation and preservation was focused on since the vast urbanization in the state generates large quantities of waste water which can be used in agriculture the sector responsible for 80% of the state’s water consumption.

Achievements:

- Due to project interventions, availability of treated water has not only reduced ground water drawl thereby checking over-exploitation and reducing energy consumption but provides farmers an assured source of irrigation water.

- Availability of treated water with 220 tube wells installed in the area has reduced expenses of farmers on operations and maintenance of tube wells.

- The project has proved to be a benchmark as it has vastly been able to reduce reluctance for use of treated water from farmers mind. The project is already being replicated not only across the state but throughout the country. Given the success of this project, the department has installed such irrigation projects from about 30 STPs. The success of the project has led to creation of state vide plan for using treated water for irrigation.
Project: Rejuvenation of Varalchal (flood plain wetland), Pampa River, Kerala

Organization: Pampa Parirakshana Samithy

Project Overview:

- Varalchal is an important flood plain wetland of River Pampa in Pathanamthitta District, Kerala. Human intervention and the degradation of Varalchal degraded the area significantly, affecting the fishing and livelihoods as well as the agriculture. It affected the livelihood of the inhabitants of the bank of Varalchal.
- Samithy worked towards rejuvenation of Vananchal (flood plain wetland), Pampa River, Kerala and got successful results.

Project Details:

- Samithy conducted a detailed study on the environmental status of Varalchal and other tributaries and the flood plain wetlands of River Pampa. The Samithy organized workshops, seminars, awareness lessons for the Kudumbasree members, self-help groups and general public.
- About 1000 families dependent on this water resource for their daily water needs and livelihoods. People’s committee was formed under the Samithy for day to day supervision of the works ensuring participation of the Panchayat Raj and the people in the area.
- Samithy played a pivotal role in ensuring Govt. of India to accept the mega Pampa Action Plan under the River Conservation Plan that involved a financial commitment of Rs. 320 core in 2003.
- Research projects were carried out by the Samithy with the support of KSCSTE, the State Biodiversity Board and the D/o Environment and Climate Change of Kerala.

Achievements:

- The Varalchal was de-silted and rejuvenated resulting in considerable decline in the subsequent flood damages as it is a flood-escaping route.
- Successful results in the project have resulted in commencement of rejuvenation work of other flood plain wetlands.
- The Pampa Parirakshana Samity has been working relentlessly for the last 25 years for the rejuvenation and conservation of river Pampa and its tributaries and their flood plain lands. They prepared the draft for the Pampa Action Plan, a pollution abatement plan in the stretch from Sabarimala to Kuttanad, under NRCP.
- The Samity has been honored with many awards including the Parishthithi Mithra Award 2017 instituted by Dept. of Environment and Climate change, Haritha Institution Award 2012 from Kerala Bio Diversity Board and Vanamithra Awards 2017.
Category-3

Focused Attention to Vulnerable Areas Including Over-exploited Areas

(Goal-3)
Project: Water conservation in water stressed tribal district Jhabua, Indore
Organization: Shivganga Samagra Gramvikas Parishad
Area of implementation: Jhabua district, Madhya Pradesh

Project Overview:
• Jhabua, a tribal district of Indore faces acute water crisis. The undulating geography leads to high surface run off. The condition is further worsened by deforestation and global climate change.
• Recognizing the severity of problem of water scarcity, Shivganga started working with tribal people to look for a sustainable solution. It came to realise the potential of tribal traditions like ‘Halma’ and ‘Matavan’ which could be effectively employed for water conservation.

Project Details:
• Several projects that were carried out which included repairing of existing water structures as well as building new one. 55 water reservoirs that were constructed which included ponds and earthen dams. All these structures were completed through Halma. Shivganga worked with these tribals and provided them prerequisite training, financial and machinery support.

Achievements
• Shivganga has been organising a mass scale Halma on Hathipava-a local hill of Jhabua. This Halma also saw active participation of from students and professionals from different institutes of the country.
• 1 lakh 11 thousand trenches created on Hathipava. The visible changes can be observed in ground water level of villages at foothill as well as Jhabua town.
• Shivganga utilized the concept of Matavan to have a protected forest area in the villages. As many as 40 Matavan with 75000 trees had been made in different villages of Jhabua.
• Programs and trainings related to water conservation were carried out as well as awareness campaigns for the villagers to discuss their role and importance in water conservation in the area.

A sustainable model of water conservation has organically developed with the collaboration of native wisdom and professional skills.

Halma is a tribal solution to planetary problems like Global Warming and Water Crisis. The model can be easily replicated in any part of India with native wisdom and professional skill put together.
Project: Demand and supply side interventions in three districts of Rajasthan

Organization: Ambuja Cement Foundation

Area of implementation: Gir Somnath of Gujarat (around 200 villages) and Pali & Nagaur districts of Rajasthan (covering 45 villages).

Project Overview:
• Seeping salinity inland in Gujarat is found to be very high with situation worsening due to intensive agriculture patterns in the area. In Rajasthan, the drought had more pervasive impact on the socio-economic conditions - intensifying the vulnerability making even drinking water scarcer.
• High exploitation of groundwater in both the regions resulted in declining water level as well as deterioration in quality of available water.
• Water Harvesting & Storage in which watershed management approach was used to manage water resources usually using traditional methods.
• Adaptation of drinking water solutions to local conditions, promotion of micro irrigation techniques and the creation of local water use associations.
• Water Use Efficiency was introduced especially in agriculture as it consumes almost 80% of the available water (mostly owing to wide-spread flood irrigation practices).

Achievements
• More than 16575 wells and 151 villages from Gujarat were benefitted. An independent study reported a 13 times social return on investment.
• In Rajasthan an increased availability of potable water was observed within 3-4 months, reducing ‘women drudgery’, creating storage capacity and awareness, steps were taken to invest in pond renovation - increasing the ability to save groundwater and capture excess rainfall.

Project Details:
• Conducted Participatory Rural Appraisal (PRA) exercises in the target regions and thereafter undertook multi-pronged initiative to address water scarcity.
• Conducted awareness generation and capacity building programs for the locals.
• Undertook interventions on Water Harvesting & Recharge (Pond Renovation, RRWHS, Check Dams, Farm Pond, Interlinking Canal, Percolation Well, Soil & Water Conservation etc.), Water Use Efficiency (Micro Irrigation, SRI etc.) and for judicious use of water.
• Revival of tradition of water system and roof rainwater harvesting etc. Secondly, conversion of mined out pits into water reservoirs to increase local groundwater recharge.
NATIONAL WATER MISSION


Organization: State Ground Water Department, Govt. of Telangana

Area of implementation: Water stressed areas of the Chandur west basin from Nalgonda, in Telangana state covering 14 villages

Project Overview:
- In Telangana state 75% of the irrigation needs and 85% of the domestic needs is met with groundwater. Gradual increase in well density and over-exploitation of groundwater had resulted in decrease in groundwater levels. Hence there was a need to implement groundwater recharge measures in vulnerable areas.
- The main objective of the project was to develop an institutional model and develop procedures for the sustainable management of groundwater resources and test its viability as well as acceptability by the community at grassroot level

Project Details:
- In order to rejuvenate groundwater resources in vulnerable areas across the state, “The Users Centred Aquifer Level Groundwater Management” was implemented by State Ground Water Department, Government of Telangana

Achievements:
- There has been a reduction in paddy cultivation by 65% & 35% during kharif and rabi season to low water consuming Irrigated Dry crops like vegetables and horticultural etc.
- Developed a sustainable model/practice for the improvement in groundwater availability and/or quality in any of the vulnerable areas with scope of replication in other areas.
- On successful implementation of pilot project, Government of Telangana decided to implement construction of recharge shafts in all over-exploited villages of Telangana.
- Supply side interventions like construction of 23 Check dams with recharge shafts in the bed of check dams were constructed for direct aquifer recharge and demand side interventions include change in cropping pattern from paddy to Irrigated Dry (ID) crops, horticulture, pulses and micro-irrigation, were taken up.
- The supply side and demand side interventions resulted in sharp rise in groundwater levels and water levels are showing a rising trends with similar rainfall in both seasons @1.3 m/year. Reduction of overall water use through awareness, information, participatory groundwater management and training – for awareness and outreach on water intensive crops and micro irrigation.
Category- 4 A

Increasing Water Use Efficiency by 20% (Local Individuals/Farmer/Citizens)

(Goal-4)
Project: Water Management at Farm Level
Organization: Shri Bapu Bhausahab Salunkhe, Nashik
Area of implementation: Self Farms at Vadner Bhairav Nashik, Maharashtra

Project Overview:
• After understanding the importance of water use efficiency, undertook measures for ground water recharge, rainwater harvesting, watershed interventions, micro irrigation system etc. were undertaken in farms.
• Water use efficiency or Water productivity can be improved by increasing marketable yield of the crops for each unit of water transpired which combats the need for crop yield or by reducing the outflow/losses which intends to increase uptake of water or by enhancing the effective use of rainfall which aims to utilise available water resources more efficiently all of which this project has achieved.

Achievements
• Production of grapes increased from 15 to 17 tonnes per acre.
• Increase the annual income up to 3 to 5 times.
• Exporting 90% Grapes to Europe & Bangladesh.

Project Details:
• Farms of Mr. Salunkhe situated at the bottom of hills are now with trenches all along the farm of 4 X 4m size to arrest the flowing rainwater resulting in reduction in soil erosion and raising the groundwater level due to percolation. Trenches are connected to nearby wells through pipelines which result in direct recharge of wells. At present, six wells are being recharged this way. It is also helping recharge borewells and help with watersheds in the area.
• Two farm ponds of the capacity of around 150 and 75 lakhs litres, accumulate water during monsoon and provides water during summers to irrigate 22 acres of grapes farms.
• Farm has been installed with drip irrigation system which resulted into reduction of almost 75 to 80% of fresh water. It also resulted in increase in production of grapes.
• Shed nets and poly house techniques were also used to protect his crops from hail stone and cyclone.
Project: Increasing water use efficiency through micro-irrigation for vegetables
Organization/ Individual: Dr S Sendur Kumaran, KVK Kundrakudi
Area of Implementation: Sivaganga district of Tamil Nadu

Project Overview:
• Before 2008-09, the awareness on water use efficiency among farming community was very poor in Sivaganga district of Tamil Nadu. Farmers practiced flood irrigation resulting in wastage of lots of water.
• Keeping this in view a micro-irrigation plan was formulated for increasing water use efficiency. Dr. S. Sendur Kumaran had been given the task to increase water use efficiency through micro-irrigation structures among farmers by creating awareness to use water most effectively and efficiently.
• As this has been recognised as a successful method, demonstration for increasing water use efficiency was further carried through NADP (National Agricultural Development Programme) /NHM (National Horticultural Mission) and Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

Achievements
• Productivity per hectare doubled from 10 -15 tonnes to 20-30 tonnes in chillies and 20-25 tonnes to 40-50 tonnes in brinjal.
• Marketable produce received through this technology up to 90%.
• Received 30% premium price for the produce in the market.
• Water saving up to 40%.
• Electricity saving up to 33%.

Project Details:
• Awareness programmes viz., campaigns, seminars, method demonstration, front line demonstrations and on farm testing were organised for increasing water use efficiency.
• He conducted 27 campaigns, 125 off campus training and 5 district level seminars. Besides, 120 on farm testing and 120 front line demonstrations at farmer’s field to disseminate knowledge on increasing water use efficiency through micro-irrigation system.
• Water use efficient technology implemented in 3652 hectares in Sivaganga district of Tamil Nadu.
Category-4 B

Increasing Water Use Efficiency by 20% (WUA, SHGs, RWAs)

(Goal-4)
Project: Water Conservation and Augmentation Work

Organisation: Parmarth Samaj Sevi Sansthan

Area of Implementation: Sumerpur block of Hamirpur district, Bundelkhand region of UP.

Project Overview:
- Annual rainfall of the area was 662 mm, only 56% land irrigated, 0.62% land cultivated fallow and 42% land un-irrigated due to unavailability of irrigational water. The key challenges - water scarcity and drought, high rate of migration, risky and vulnerable agriculture and continued feudal system.
- The Parmarth Samaj Sevi Sansthan helped the farmers/villagers to organise themselves as Water User Association named “Pani Panchayat” with the objective of facilitating community based approach for promotion of conservation & management measures of natural resources (especially water & land) towards ensuring long-term water security in the area.

Achievements:
- 2256.379 hectare of agriculture land treated through construction & revival of water harvesting structure.
- 10.121 billion litre water harvested due to various project intervention.
- 3.288 billion litre water saved due to intervention adopted to change in cropping pattern.
- 0.385 billion litre water saved through demand side interventions.
- 26330 person days generated due to project work.
- 8867 person days generated due to enhancing water availability and adoption of improved agriculture practices and or allied activities.
- Additional 1194.60 tonnes agriculture and bio mass production achieved.

Project Details:
- Farm Bunding was done in 152.50 hectare land which benefitted 132 small & marginal farmers by increasing the fertility by 1.5 times.
- Constructed 11 earthen bunds, 04 check dams, 10 spillways, 16 outlets to extend irrigation facilities and checking soil erosion and renovated 07 ponds.
- 48 small & marginal farmers used 07 sprinkler sets extending irrigation to 37.71 hectare land which contributed 35% water saving.
- Water Security Plan was prepared for all villages in the area.
- Project facilitated the community level processes in preparation of water user groups in every structure level. The project also provided technical inputs about water conservation techniques and operation & maintenances of water bodies/structures WUAs.
Category-4 C

Increasing Water Use Efficiency by 20%
(Public Agencies-ULBs/Cities,
Govt. Organisations etc.)
(Goal-4)
Project: Mission Bhagiratha

Organisation: Department of Telangana Rural Water Supply & Sanitation, Govt of Telangana

Area of Implementation: 4 villages - Toopran, Datarpally, Erravelly in Gajwel Constituency and at Pamapuram of Wanaparthy constituency in Telangana.

Project Overview:
• Government of Telangana has taken up “Mission Bhagiratha” as one of the flagship programmes of the State with a commitment to provide safe, adequate, sustainable and treated drinking water for the entire rural and urban areas of the State except Hyderabad.
• It is a unique programme under which all households are being provided with piped water supply with a tap connection in a saturation mode. Within the record time of three years of declaring the programme the bulk water supply has been delivered to all rural areas and Urban Local Bodies.

Project Details:
• It is quite common in urban and rural areas that the municipal water supply is basically ON/OFF and there is uneven pressure distribution throughout the network. To maintain uniform pressure throughout the network and ensuring each household gets same quantity of water with same pressure, tamper proof flow control valves (FCV) with design discharge capacity of 5 to 6 LPM have been utilised first time in public water distribution system under Mission Bhagiratha (Drinking water supply scheme) in Telangana.
• This FCV innovation implemented in 4 villages, Toopran, Datarpally, Erravelly in Gajwel Constituency and at Pamapuram of Wanaparthy constituency in Telangana State.
• The implementation of FCVs improved water supply system in four villages and each and every house hold is getting prescribed water with sufficient pressure.

Achievements:
• After the implementation of the innovative systems, all the 4 pilot villages the water supply distribution was almost in equal quantities and hence 100% water use efficiency achieved by avoiding the wastages in curtailments of excess water withdrawals.
Project: Increasing Water Use efficiency of Tejpura Minor of Indira Gandhi Nahar Project (IGNP), Stage II, Bikaner

Organisation: Water Resources Department, Govt of Rajasthan

Area of Implementation: Command area of Tejpura Minor off-taking from Dr. Karni Singh Lift System of Indira Gandhi Nahar Project, near Kolayut area of Bikaner District.

Project Overview:
- It increasingly became difficult to irrigate the entire area by flood as the net water demand in other sectors increased. Hence, a pilot study of micro irrigation was conducted on the Tejpura Minor randomly selected from Kolayut Lift Canal System which covered 24779 hectares of lift command area.

Project Details:
- IGNP had two types of water application methods, in the flow command simple flooding is adopted and in the lift command it was decided to incorporate pressure irrigation by developing complete infrastructure such as Diggis, sump well, pump house, pipeline, pumps, motors and hydrant points.
- Water User Associations (WUAs) were active in this command area and took electricity connection on their names and farm water distribution was done these WUAs.

Achievements:
This resulted in the increase of water use efficiency by 99.71% from 12.92% post micro irrigation era, which was huge achievement.
As the natural conditions in the district were not very conducive for agricultural growth and appropriate interventions were needed to mitigate the effect of drought. Given the poor ground reserves and the lack of regular rainfall, it was important to restore the balance availability of water table and implementing sustainable irrigation practices in place that would use as little water, with as little wastage and a more extensive reach than before.

Andhra Pradesh Micro Irrigation Project was introduced during 2003 with the objective of precise farming with precise irrigation for productivity enhancement with a slogan “Every Drop Counts”. Counselling inputs led to reduction in the exclusive dependence on heavily water dependent traditional crops like, Paddy, Bengal gram, Cotton, Groundnut, Sunflower, Sugarcane and Sericulture.

- Integration of micro irrigation system with mulching for retaining and enhancing soil moisture conservation.
- Integration of micro irrigation system with farm ponds (water storage tanks) to increase the efficacy in the water management.
- After sales services organized by doing demonstrations at farmers’ field level on acid treatment, fertigation and other MI system maintenance for better functioning.

Achievements:
- These interventions in true sense set a Green Revolution in the district. With the advent of APMIP, small and marginal farmers with no access to abundant water resources could self sustain and this has led to social equality.
- Approximate savings in water consumption upto 50% due to micro irrigation and due to which additional 10 - 15% of the cultivable area brought under horticulture plantations this year.

Project Details:
- Farmer-wise survey the farmer fields having bore wells.
- Registration of farmers by visiting the eligible farmers door to door by campaigning mode using bio-metric devise, laptop and smart phone.
- Publicity & mobilisation of farmers to adopt micro irrigation.
- Training on micro irrigation techniques.
- Fertigation system was introduced to avoid indiscriminate use of fertilizers and wastage of fertilizers by designing more scientific fertigation scheduling for each crop.
- Introduced geo tagging for location of borewells and fields to be installed with Micro Irrigation.
- To achieve maximum benefit out of the investments made by both Government and farmer well planned training programmes were organized with different stake holders.
Category - 4 D

Increasing Water Use efficiency by 20% (Industries/Corporate)

(Goal-4)
Project: Optimising water usage through focused water stewardship efforts in bottling plants

Organisation: Hindustan Coca Cola beverages Pvt Ltd, Guntur, Andhra Pradesh

Area of Implementation: Bottling plant at Atmakuru village, Mangalagiri mandal, Guntur district, Andhra Pradesh

Project Overview:
- HCCBPL is a part of The Coca-Cola Company’s Bottling Investments Group (BIG) and responsible for the manufacture, package, sale and distribution of beverages under the trademarks of The Coca-Cola Company.
- As a responsible user of water, HCCPL’s approach of water stewardship transcends its operations and extends to all communities.

Achievements:
- Reduced water requirement to prepare one litre of beverage from 2.15 to 1.63, i.e., 24% reduction in water consumption over last 4 years.

Project Details:
- Plant installed ZLD to treat RO reject water and supply treated water for process usage. This has led to improve in Water Usage Ratio, Saving 400 m3/day.
- Plant initiated CIP optimization case study in CSD & Juice CIP sections to optimize time, water consumption, Energy and chemical Consumption by CIP PLC upgradations to prevent interface and conducted validation for Physical, Chemical & microbiological parameters and found satisfactory results.
- Plant is improved water use efficiency through 4R Strategy (Reduce, Reuse, Recycle & Recharge) and implementing New Innovations / Technologies on Water Optimization and effective treatment & recycling of wastewater and reusing this treated water back to the process.
- Many CSR activities to augment and conserve water in the Atmakuru village are undertaken by the plant.
Project: Water Conservation and Increasing Water Use Efficiency

Organization: Lalitpur Power Generation Company Ltd., District Lalitpur, Uttar Pradesh.

Area of implementation: The Lalitpur Thermal Power Plant (3 x 660 MW) site is located about 37 km from Lalitpur town in Lalitpur District in Uttar Pradesh.

Project Overview:
- The program is basically conceptualized under CSR (Corporate Social Responsibility) of the company with major objective to harvest and recharge rainwater, improve water footprint of company against its consumption and benefit surrounding community and farmers with increased groundwater availability.
- The water management activities carried out under CSR are in terms of revival of ponds, deepening of nallas/streams, traditional farm ponds, construction of check dams, and creation of storages.

Project Details:
- The Lalitpur Thermal Power Plant (3 x 660 MW) site is located about 37 km from Lalitpur town in Lalitpur District in Uttar Pradesh. Most of the Blocks of District Lalitpur are diverse, risky, under invested, vulnerable, socio-economically heterogeneous, ethnically unique, agrarian and backward in nature. It is a hard rock area with limited or inadequate ground water resources, lacks infrastructure, access to improved technologies, markets and inputs with low Low rainfall and droughts are common features of the area. Sometime long dry spells during rainy season are also experienced which adversely affect the crops.
- The industrial plant undertook few measures to increase the water use efficiency of the plant and reduction water consumption. Reutilizing the waste water from different area like boiler, cooling tower, blow down and ash pond optimize the specific raw water consumption per MW and also to meet the Zero discharge goal. In addition, throughout the block revival of traditional ponds, rivers and streams and constructing of check dams.

Achievements:
- Benefited 2308 families in 13 nearby villages.
- 5336 acres of rain-fed land covered under irrigation.
- 234 irrigation/farms wells benefited leading to an increase in the yield from 4 quintal per acre to 6 quintal per acre (wheat).
- Net income also increased to Rs. 2400/-acre.
- Due to its success, it was proven through CSR activities that large area of farming got benefited with the establishment of organization and round the year availability of water.
Project: Zero Liquid Discharge Unit at Raymond UCO
Organisation: Raymond UCO Denim Pvt LTD
Area of implementation: Yavatmal, Maharashtra

Project Overview:
- Yavatmal, Maharashtra is a water scarce area and only dam water is available for industrial projects. Ground water level is very low.
- No discharge point was available for effluent discharge by the industries.
- Being a textile industry and an intensive water usage, this unit was planned with the objective of Zero Liquid Unit & minimizing water consumption by recycling entire effluent.

Project Details:
- Earlier, at Raymond UCO the waste water was treated with physico-chemical treatment process which had high chemical cost, discharge large amount of highly toxic physico-chemical sludge.
- Effluents from textile manufacturing, dyeing and finishing processes contained high concentrations of biologically difficult-to-degrade or even inert auxiliaries chemicals like acids, waxes, fats, salts, binders, thickeners, urea, surfactants etc.
- Furthermore, earlier solid waste generated from ETP process was disposed of to an authorized vendor only for land filling. Solid waste generated from ETP process was the most neglected area of Solid Waste Management and the current practice of land filling was grossly unscientific.
- Landfill sites also released landfill gas (Methane) with 50 to 60% methane by volume.
- To combat ecological degradation & achieved the status of ‘Zero Liquid Discharge & Zero Solid Sludge Disposal’ Unit followed by 100% recycling of ETP sludge & Salt.
- They installed 100% biological effluent treatment plant followed by RO Units & Multiple Effect Evaporator Unit to upgrade the current physico-chemical treatment process with advanced cost effective, economic, eco-friendly biological effluent treatment process followed by sludge dryer & salt reusing technique process.

Achievements:
- Achieved a status of ‘Zero Liquid Discharge with Zero addition of Chemical’ and ‘100% recycling of ETP Sludge at Sludge Dryer’ with 100% in-house reuse of salt generated from multiple effect evaporator. This technology also helped to solve the water crisis in the surrounding industry and communities by letting them with around 2000 KLD.
- ZLD and other measures toward water management helped the facility to reduce the specific water consumption to 24 litre/metre which is best in denim industry. The entire ETP process is connected to CPCB and MPCA through on line Effluent Quality Monitoring System (EQMS).

Furthermore, earlier solid waste generated from ETP process was disposed of to an authorized vendor only for land filling. Solid waste generated from ETP process was the most neglected area of Solid Waste Management and the current practice of land filling was grossly unscientific.

• Landfill sites also released landfill gas (Methane) with 50 to 60% methane by volume.
• To combat ecological degradation & achieved the status of ‘Zero Liquid Discharge & Zero Solid Sludge Disposal’ Unit followed by 100% recycling of ETP sludge & Salt.
• They installed 100% biological effluent treatment plant followed by RO Units & Multiple Effect Evaporator Unit to upgrade the current physico-chemical treatment process with advanced cost effective, economic, eco-friendly biological effluent treatment process followed by sludge dryer & salt reusing technique process.
Category- 5

Promotion of Basin Level Integrated Water Resources Management

(Goal-5)
Project: Integrated Water Resources Management in all the basins of AP
Organisation: Water Resources Department, Government of Andhra Pradesh
Area of Implementation: 13 districts of Andhra Pradesh

Project Overview:
- Andhra Pradesh Government has been proactive towards implementing the various IWRM activities at a basin level with a view to provide water security to all and to make the state drought proof. Towards the State’s vision of providing equitable distribution of water resources and to provide right amount of water at the right place, a structured approach towards the promotion of Basin level Integrated Water Resources Management was adopted.

Project Details:
- The Govt. of AP embarked on solutions related to Integrated Water Resources Management across all 13 districts, all the basins present in the State of Andhra Pradesh covering 5 Basins, 40 Sub-Basins & 748 Micro Basins. The system comprises of various modules as listed below:
  a) Basin level Water status where the system provides the user with the real-time Surplus/Deficit situation:
    - If the amount of water released from Pattiseema was not well regulated, it posed threat of flood situation or deficit situation thereby failure of the lift scheme.
    - With the help of use of IoT devices, Hydrological models and Machine Learning, the situation about the Surplus/Deficit conditions was not only monitored but also a Decision Support System was created to ensure the balance between providing irrigation and avoiding of flooding in the command area.
    - The DSS provided a 48-hour advance monitoring and management system to help in deciding amount of water that was needed to be transferred to Prakasam Barrage.
  b) Supervisory control and data acquisition (SCADA) representation of the flow of water across the State via the Basins, Sub-Basins and Micro Basins to the last mile.
  c) Automation of the Groundwater Resource Assessment in all 748 Micro basins using the GEC – 2015 Methodology, for which a dedicated software (APGRACE) is developed which provides the status of a particular Sub/Micro Basin about over exploited, critical, semi-critical or safe.
  d) The Inter-basin transfer of water across i) Godavari Basin to Krishna Basin (Pattiseema), ii) Krishna Basin to Penna Basin (HNSS) and iii) Godavari Basin to Penna Basin.
    - The system helped Krishna-Delta region that was suffering from lower agricultural production due to deficit irrigation for the last many years. The monsoon river water was usually utilized by the upstream reservoirs before it comes to delta region, hence there was a need to regulate the irrigation for the area. The water was drawn from the Godavari Basin through Pattiseema Lift Irrigation Project into the Krishna basin via the Polavaram Project Right Main Canal thereby benefitting farmers in the Krishna river delta.
  
- If the amount of water released from Pattiseema was not well regulated, it posed threat of flood situation or deficit situation thereby failure of the lift scheme.
- With the help of use of IoT devices, Hydrological models and Machine Learning, the situation about the Surplus/Deficit conditions was not only monitored but also a Decision Support System was created to ensure the balance between providing irrigation and avoiding of flooding in the command area.
- The DSS provided a 48-hour advance monitoring and management system to help in deciding amount of water that was needed to be transferred to Prakasam Barrage.

Achievements:
- The schemes implemented above are movements for sustainable development of resources. Proper commitment of leadership and community will ensure their sustainability.
- The APWRIMS system comprised of various components that get data from various sources and is automated in such a way that no manual intervention was required to disseminate outputs. This ensures seamless circulation of inputs and outputs making the system self-sustainable.

Organisation: Chief Engineer and Chief Administrator, CAD WR Aurangabad, Water Resources Department, Government of Maharashtra

Area of implementation: Upper Godavari Sub-basin

Project Overview:
- Integrated Water Resources Management in Upper Godavari Sub-basin done by using guiding principles and e-source modelling framework towards to achieve equitable distribution of water in sub-basin.

Project Description:
- The operating strategy for reservoir operation was dependent on the specification of how much water to be stored and released each period, depending on the state of the water availability and water demands in the complex in that period.
- Different scenarios covering different conditions of probabilities of inflows in Jayakwadi dam including the bad year and good year were programmed.
- Six scenarios were analysed on the principles of the approximate equitable and judicious distribution of available water within the sub-basin so that the benefits were equally distributed to users.
- The deficit in the sub-basin were shared equitably in proportion with the demand in holistic manner.
- APWRIMS is a web application with dashboards showcasing information and analytics on water resources and helps in efficient management of water, covering both supply and demand side aspects. Since it’s a web-app and accessible across all platforms, the application is replicable for other states, by installation of sensors to track respective states water resources.

Achievements:
- As this project is developed with computer based modelling framework system, it is having a capability to accommodate the growth of sub-basin.
- It also having the capacity and facility of increasing its total output under an increased load when resources are added.
- This project is a decision support system, a process of change which seeks to shift water development and management systems from their currently unsustainable forms.
The Background Processes & Efforts
Advertisements calling for entries for “the first ever awards by the National Water Mission” were put-up in eighty-one (81) National & Regional Newspapers and on NWM’s website on 8th March, 2019. The last date to receive the applications was initially kept as 30th April, 2019, but was extended upto 31st May, 2019.

A standard proforma for filling the entries was prescribed to ensure uniformity and evenness in comparison for the selection process. These applications were to be submitted as email and its attachments. (though many had followed it with hardcopies).

The award finalization procedure comprised of different stages of formal evaluation of the entries, their ground-truthing, and involved a rigorous laid –out process. Ministry of Jal Shakti constituted a “Jury” comprising of experts and academicians from the water sector to finalize the awards and a “Screening Committee” comprising of officials from various arms of the Ministry and its subordinate offices to assist the Jury in short listing the entries received.

After the initial screening, de-duplication and rejection of incomplete applications, 140 eligible entries were shortlisted. The Screening Committee under the Chairmanship of Shri G Ashok Kumar, Mission Director, NWM held meetings on 3rd and 14th June 2019 to analyze the applications and make presentations to the Jury. Jury meetings were held under the Chairmanship of Shri Shashi Shekhar, Former Secretary, Ministry of Water Resources, RD & GR, on 11th June 2019, 11th July 2019 and 31st July 2019 in order to shortlist the applications for ground-truthing and further clarifications.

Ground-truthings of these 49 short-listed entries were then conducted by Regional officers from Central Water Commission and Central Ground Water Board. Following the verification process, Jury Committee meetings were held on 6th September 2019 and 11th September 2019 to select the winners of NWM Water Awards 2019.

The suggested evaluation criteria for the awards were as follows:

**Selection Procedure**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevance and significance of work done in creating a water data base in the public domain</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Developed a “Water Resources Information System” in any region of the country with a scope of replicability and suitability of transfer to other regions</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Comprehensiveness of Data: Number of parameters included in water database and whether classified (e.g. Surface water/ Ground Water/ Rain Water, Meteorological/ Hydrological/ Geo-Spatial, Quantity/ Quality, Economic/ Environmental/ Social etc)</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Implemented innovative technologies for measurement of various water and allied data, including remote sensing, mobile data collection and low cost sensing</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Application of standard procedure for monitoring and collection of data and should have developed ease of dissemination of dataset within the domain</td>
<td>25</td>
</tr>
</tbody>
</table>

Total Marks 100

**For Goal 1 (B): Assessment of the Impact of Climate Change on Water Resource**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conducted comprehensive studies on impacts of climate change on water resources including river basin assessments &amp; water availability under current and future scenarios of climate, land use, population etc</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Significance of the work done in public domain with adaptation &amp; mitigation strategies &amp; policy impact (if any)</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Should have relevant publications in the subject and whether publication /findings put on public domain</td>
<td>30</td>
</tr>
</tbody>
</table>

Total Marks 100

**For Goal 2 : Promotion of Citizen and State Action for Water Conservation, Augmentation and Preservation**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevance and significance of the work done in conservation, source augmentation and preservation of water resources</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated participatory management of water resources with focus on water conservation, augmentation and preservation with involvement of Panchayati Raj Institutions, Urban Local Bodies, Water User Associations and other primary stake holders; Water Conservation, Source Augmentation and Preservation should be related to one of these : Rain water/ Surface water/ Ground water/ Waste water treatment and reuse, repair, restoration &amp; renovation of water bodies or participatory irrigation practices</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Created public awareness on water conservation; augmentation and preservation water related issues for different stakeholders (women, students, teachers, NGOs, farmers, youths, politicians, administrators etc)</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Contributed to sustainability of water resources and its acceptance by local community</td>
<td>20</td>
</tr>
</tbody>
</table>

Total Marks 100
### For Goal 3 : Focused Attention to Vulnerable Areas Including Over-exploited Areas

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevance and significance of the work done in implementation of water resources project/s benefitting vulnerable areas including over-exploited areas.</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Implemented intensive programmes for ground water recharge in over-exploited, critical and semi - critical areas.</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Instituted programmes for reduction of overall water use through awareness, information, participatory groundwater management, trainings (including for e.g. less water intensive crops or micro irrigation)</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>Developed sustainable models/practice/innovation for improvement in ground water availability and/or quality. In any of the vulnerable areas with scope of replicability to other areas</td>
<td>20</td>
</tr>
</tbody>
</table>

**Total Marks 100**

### For Goal 4 (A) : Increasing Water Use Efficiency by 20% - (Local Individuals/Farmers/Citizens)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Promoted innovative/replicable practices/model of water use efficiency through communication, training and awareness building</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated the economic viability of the innovative technique/practice/plots including sustainability advantages and sustainability</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated pilots/projects for increasing water use efficiency (e.g. through water conservation interventions like ground water recharge, rainwater harvesting, wastewater recycling/reuse, watershed interventions, micro-irrigation system (MIS) etc).</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Demonstrated measurable impacts in improvements in water -use efficiency</td>
<td>10</td>
</tr>
</tbody>
</table>

**Total Marks 100**

### For Goal 4 (B) : Increasing Water Use Efficiency by 20% (WUA, SHGs, RWAs)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Promoted innovative/replicable practices/model of water use efficiency through communication, training and awareness building</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated the economic viability of the innovative technique/practice/plots including sustainability advantages and sustainability</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated participatory pilots/projects for increasing water use efficiency (e.g. through water conservation interventions like ground water recharge, rainwater harvesting, wastewater recycling/reuse, watershed interventions, micro-irrigation system (MIS), efficient irrigation, water demand management etc.).</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Demonstrated measurable impacts in improvements in water -use efficiency through studies/water audits of the implemented pilots/projects</td>
<td>20</td>
</tr>
</tbody>
</table>

**Total Marks 100**

### For Goal 4 (C) : Increasing Water Use Efficiency by 20% (Public Agencies - ULBs/Cities, Govt. Organisations etc.)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implemented innovative/replicable practices/model of water use efficiency through communication, training and awareness building</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated the economic viability of the innovative technique/practice/plots including environmental advantages, sustainability, scalability and social acceptance</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated participatory pilots/projects for increasing water use efficiency (e.g. through water conservation interventions like ground water recharge, rainwater harvesting, wastewater recycling/reuse, watershed interventions, micro-irrigation system (MIS), efficient irrigation, urban/local water demand management, improving water productivity etc.)</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Implemented effective policies to promote and enhancing water use efficiency in agriculture/irrigation, domestic and industrial sectors</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Demonstrated measurable improvements in impacts in water use efficiency through studies/water audits of the implemented pilots/projects</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Marks 100**

### For Goal 4 (D) : Increasing Water Use Efficiency by 20% (Industries/Corporate)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implemented innovative/replicable practices/model of water use efficiency through Corporate Social Responsibility (CSR) as well as training, awareness generation, dissemination activities and sharing of best practices</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated the economic viability of the innovative technique/practice/plots including environmental advantages, sustainability, scalability and social acceptance</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated participatory pilots/projects for increasing water use efficiency e.g. Through-in-situ (within industry) intervention like reduction in specific water consumption, increasing water productivity, wastewater recycling/reuse/Demand Liquid Discharge (DLD), water positivity/neutrality, process water use improvement, water conservation interventions like rainwater harvesting, groundwater recharge, etc.</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>CSRM related activities on water conservation, efficient irrigation/ micro-irrigation system (MIS), watershed interventions through participatory approach etc.</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Demonstrated reduction in industrial water footprint through promotion of efficient water use in its value chain</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Demonstrated measurable improvements in impacts in water use efficiency through studies/water audits of the implemented pilots/projects</td>
<td>20</td>
</tr>
</tbody>
</table>

**Total Marks 100**
### For Goal 4 (E): Increasing Water Use Efficiency by 20% (SMEs)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implemented innovative/replicable practices/model of water use efficiency through Corporate Social Responsibility (CSR) as well as training, awareness generation, dissemination activities and sharing of best practices</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated the economic viability of the innovative technique/practice/pilots including environmental advantages and sustainability</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated participatory pilots/projects for increasing water use efficiency e.g. through interventions like reduction in specific water consumption, increasing water productivity, wastewater recycling/reuse/Zero Liquid Discharge (ZLD), water positivity/neutrality, process water use improvement, water conservation interventions like rainwater harvesting, groundwater recharge, etc.</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Demonstrated measurable impacts in improvements in water use efficiency through studies/water audits of the implemented pilots/projects/Intervention</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total Marks</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### For Goal 5: Promotion of Basin Level Integrated Water Resources Management

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevance and significance of the work done in implementation of basin level interventions on integrated water resources management.</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Demonstrated/implemented programs/practices/policies/technologies using the principles of integrated water resources management (IWRM) with stakeholder participation</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrated measurable impacts (e.g., environmental, sectoral, societal etc.) of the implemented programs/projects/policies through water audits/studies</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Developed a scientific and sustainable model for an area with the scope of replicability and scalability in other areas</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total Marks</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
1. **Organisation/Company/Agency details:**
   a. Name: -
   b. Phone No: -
   c. Fax No: -
   d. Email: -
   e. Company Website: -

2. **Previous achievements (in water sector):** -

3. **Brief description about the work done (in 1000 words), indicating:**
   a. Area of implementation
   b. Pre and Post implementation scenario
   c. Type of water data base created in public domain
   d. Developed a “Water Resources Information System” in any region of the country
   e. Number of parameters included in water database
   f. Implementation of innovative technologies for measurement of various water and allied data
   g. Developed a “Water Resources Information System” in any region of the country
   h. Procedure for dissemination of water data base
   i. Methodology for dissemination of water data base
   j. Scope of replication

4. Whether the achievements have already been recognized for award by any other institution/organization. If so, name of the institution/organization, Award and year.

5. **Declaration**
   - Use the content below in the letter head of your company and attach it with the questionnaire. (Declaration is a must to complete the screening process).

   **DECLARATION**

   I hereby declare that the data/information provided in the questionnaire is correct to the best of my knowledge.
   I also declare that information contained can be used for knowledge sharing and increasing awareness with due acknowledgement.

   Date:              Signature:

   Seal of organisation     Name and Designation:

---

**Constitution of Jury Committee**

[Details of the constitution of the jury committee are not fully visible in the image.]
Constitution of Screening Committee

Ground Truthing of Entries
National Water Mission
Department of Water Resources, RD & GR
Ministry of Jal Shakti
Government of India

National Water Mission
Department of Water Resources, RD & GR
Ministry of Jal Shakti
Government of India

AWARD CEREMONY
of
National Water Mission Awards
25th September, 2019 (Wednesday)
(Programme overleaf)

Chief Guest
Shri Gajendra Singh Shukhawat
H.E. the Minister of Jal Shakti

Guest of Honour
Shri Rattan Lal Kataria
Hon’ble Minister of State for Jal Shakti,
Social Justice and Empowerment

August Presence
Shri S.P. Singh
Secretary
Department of Water Resources, RD & GR, Ministry of Jal Shakti

G. Anuk Kumar
Mission-Director
National Water Mission

AWARD CEREMONY
PROGRAMME SCHEDULE

<table>
<thead>
<tr>
<th>Time</th>
<th>Program Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 hrs</td>
<td>Registration</td>
</tr>
<tr>
<td>11:00 hrs</td>
<td>Arrival of the Chief Guest</td>
</tr>
<tr>
<td>11:50 hrs</td>
<td>Prayer</td>
</tr>
<tr>
<td>12:00 hrs</td>
<td>Address by Shri G. Anuk Kumar</td>
</tr>
<tr>
<td></td>
<td>Mission-Director, National Water Mission</td>
</tr>
<tr>
<td>12:15 hrs</td>
<td>Address to Shri U.P. Singh</td>
</tr>
<tr>
<td></td>
<td>Secretary, Department of Water Resources, RD &amp; GR, Ministry of Jal Shakti</td>
</tr>
<tr>
<td>13:15 hrs</td>
<td>Address by Shri Rattan Lal Kataria</td>
</tr>
<tr>
<td></td>
<td>Hon’ble Minister of State for Jal Shakti, Social Justice and Empowerment</td>
</tr>
<tr>
<td>16:30 hrs</td>
<td>Moments to Juris Members</td>
</tr>
<tr>
<td>17:15 hrs</td>
<td>Distribution of Awards</td>
</tr>
<tr>
<td>17:15 hrs</td>
<td>Address by Shri Gajendra Singh Shukhawat</td>
</tr>
<tr>
<td></td>
<td>Hon’ble Minister of Jal Shakti</td>
</tr>
<tr>
<td>17:30 hrs</td>
<td>宣读 of Thanks</td>
</tr>
<tr>
<td>18:00 hrs</td>
<td>High Tea</td>
</tr>
</tbody>
</table>

National Water Mission
Department of Water Resources, RD & GR
Ministry of Jal Shakti
Government of India

N.B.: Please bring this card on award ceremony day.
"Sahi Fasal" campaign was launched by National Water Mission on 14.11.2019 to nudge farmers in the water stressed areas to grow crops which are not water intensive, but use water very efficiently; and are economically remunerative; are healthy and nutritious; suited to the agro-climatic-hydro characteristics of the area; and are environmentally friendly. Creating awareness among farmers on appropriate crops, micro-irrigation, soil moisture conservation etc. Weaning them away from water intensive crops like paddy, sugarcane etc to crops like corn, maize etc which require less water; assisting policy makers to frame policies that make effective pricing of inputs (water and electricity); improve procurement and market for these alternate crops; create appropriate storage them etc ultimately leading to increase in the income of farmers are the key elements of “Sahi Fasal”.

Under Sahi Fasal, series of workshops are being organized in the water stressed areas of the country.

In India, 85-89% of water usage is for agricultural purposes and about 5% usage is for drinking and domestic purposes. Hence, even a small percentage saving of water in agricultural usage will have a significant impact in water availability for drinking and domestic purposes.
Catch the Rain

National Water Mission’s campaign “Catch the rain” is to nudge states and stakeholders to create Rain Water Harvesting Structures (RWH) suitable to the climatic conditions and subsoil geology by first week of June itself, i.e., before the onset of monsoons location wise.

Steps to make check dams, water harvesting pits, rooftop RWHs etc. removal of encroachments and devaluing of tanks to increase their storage capacity; removal of obstructions in the channels which bring water to them from the catchment area etc; repairs to step-wells and using defunct borewells to put the water back to aquifers etc. to be taken up with peoples active participation.