



**GOVERNMENT OF INDIA**

**MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION**

**OUTPUT-OUTCOME MONITORING FRAMEWORK DOCUMENT: 2018-19**

**DEMAND NO. 97**

**MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION**

**Output-Outcome Budget for Schemes 2018-19**  
**Demandno.97: Ministry of Water Resources, River Development and Ganga Rejuvenation**

<b>(Rs. in crores)</b>				
<b>Sl. No.</b>	<b>Name of Scheme/Sub-scheme</b>	<b>Financial Outlay 2018-19</b>	<b>Output/Deliverables against the outlay 2018-19</b>	<b>Projected Medium Term Outcomes</b>
<b>Centrally Sponsored Schemes</b>				
1	Pradhan Mantri Krishi Sinchayee Yojana(PMKSJ)- Accelerated Irrigation Benefits Programme & Command Area Development	6000.00*  *Through NABARD funding.	Works for identified 48 projects under Mission mode will remain in progress, along with left over works of any other project from previous phase (planned to be completed in 2019).	Creation of additional Irrigation Potential of 10 lakh ha by June 2019 and 34.5 lakh ha by December, 2019.  Utilisation of irrigation potential in an additional culturable Command Area of 15 lakh ha.  Resulting in increase in yield of crops & income of farmers; replenishment of ground water and increased water availability for other uses.
2	PMKSJ-HarKhetKo Pani	2600.00	Repayment of interest/ principal of loan from NABARD under LTIF for Implementation of Priority projects in Mission Mode.  Completion of 50 Surface minor irrigation/Repair Renovation and Restoration of Water Bodies scheme; creation of irrigation potential of 0.20 lakh ha.	<ul style="list-style-type: none"> <li>• Debt servicing towards LTIF borrowings.</li> <li>• Increase in area under assured irrigation resulting in increase in :-               <ul style="list-style-type: none"> <li>(i) Crop yield</li> <li>(ii) Farmers' income</li> <li>(iii) Ground water availability</li> <li>(iv) Water availability for other uses.</li> <li>(v) Water Use Efficiency</li> </ul> </li> </ul>

3	Flood Management & Border Areas Programme	527.00	<p>(i) Execution of river management works in critical areas, Anti-erosion works, drainage development works and anti-sea erosion works under the 224 ongoing projects sanctioned under the scheme.</p> <p>(ii) Preparation of Joint Detailed Project Reports (DPR) by PDA &amp; undertaking pre-construction works for Pancheshwar multi-purpose Project.</p> <p>(iii) Preparation of DPR by JPO for Sapta Kosi High dam including Sunkosi diversion cum storage scheme &amp; Kamla dam project.</p> <p>(iv) Continuation of hydrological observations &amp; transmissions of flood &amp; related data from neighboring countries;</p> <p>(v) Development works on common/border rivers;</p> <p>(vi) Anti-erosion and anti sea erosion works of UTs.</p> <p>(vii) Maintenance of flood protection works of Kosi and Gandak Projects (in Nepal).</p>	<ul style="list-style-type: none"> <li>Reduction in damage due to floods, river bank erosion, coastal erosion and sediment erosion in selected river catchments.</li> <li>Mitigation of recurring floods</li> <li>Assessment of water resource potential in international rivers</li> <li>Better flood forecasting</li> <li>The DPR for Pancheshwar multi-purpose project would help in drawing programme for implementation of the project &amp; preconstruction works.</li> </ul>
4	Irrigation Census	50.00	<p>(i) Organisation of All India Training Workshop for 6th MI Census and Census of Water Bodies</p> <p>(ii) Organisation of Regional Training Workshops for 6th MI Census and Census of Water Bodies</p> <p>(iii) Start of Field Work of 6th MI Census and Census of Water Bodies by States/UTs</p>	<ul style="list-style-type: none"> <li>Preparatory/stage works for completion and publication of 6th MI Census report by 2020-2021.</li> <li>Informed planning and policy formulation in the minor irrigation sector.</li> </ul>
<b>Central Sector Schemes</b>				
5	Polavaram Multi-purpose Project	(through NABARD funding)	<p>(i) Earth work 81.89%</p> <p>(ii) Concrete 43%</p> <p>(iii) Structures 39%</p> <p>(iv) Length of canal works completed (50.992 km.)</p>	<ul style="list-style-type: none"> <li>Creation of ultimate irrigation potential of 2,91,000 ha.</li> <li>Drinking water supply to a population of 28.50 lakh in 540 villages,</li> <li>Diversion of 80 TMC of water to Krishna river basin.</li> </ul>
6	Farakka Barrage	195.00	Operation & Maintenance of Farakka Barrage and its associated structures	<ul style="list-style-type: none"> <li>Improved navigability in Bhagirathi Hooghly river system.</li> <li>Compliance of the Ganga Water Treaty, 1996</li> </ul>

7	Dam Rehabilitation and Improvement Programme	124.00	<ul style="list-style-type: none"> <li>(i) Overall coordination and supervision of dam safety rehabilitation works</li> <li>(ii) Capacity building in dam safety areas.</li> <li>(iii) Seismic hazard mapping studies of North and North-East India through CWPRS, Pune.</li> <li>(iv) Development of remaining modules of dam safety software DHARMA.</li> <li>(v) 8 National training programmes on dam safety; 3 International training programmes and one International Conference in Bhubaneshwar;</li> <li>(vi) Finalization of 5 guidelines on various areas of dam safety;</li> <li>(vii) Third party construction supervision of the ongoing DRIP works;</li> <li>(viii) Inundation maps and dam break analysis for Emergency Action Plans for 50 dams.</li> <li>(ix) EAP loan component of Damodar Valley Corporation</li> </ul>	<ul style="list-style-type: none"> <li>• Improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner.</li> <li>• Capacity building of Water Resources officials</li> <li>• Standardization of dam safety procedures and guidelines</li> <li>• World Bank loan to Damodar Valley Corporation</li> </ul>
8	Ghat Works for beautification of River fronts	50.00	<ul style="list-style-type: none"> <li>(i) Construction/modernization of seven additional ghats</li> <li>(ii) Construction/Development of five additional crematoria</li> </ul>	Improvement in amenities through maintaining cleanliness on river edges and better infrastructure for social and cultural activities and creation of better infrastructure for cremation rituals, preventing unburnt bodies disposed into river Ganga.
9.	National River Conservation Plan		<ul style="list-style-type: none"> <li>(i) Reduction in number of non-complying grossly polluting</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution abatement through regulation of direct</li> </ul>

10.	National Ganga Plan		<p>Industries.</p> <p>(ii) Increase in number of Water Quality Monitoring Stations installed (Manual &amp; Real Time)</p> <p>(iii) Establishment of 20 new Sewage Treatment Plants (STPs) with 369 MLD treatment capacities.</p> <p>(iv) Construction of 155 Ghats and 49 crematoria.</p> <p>(v) Scientific base line survey done to identify threats and identify approx. 200 Kms of potential habitat for conservation of iconic species.</p> <p>(vi) Capacity building for monitoring and conservation of the iconic species in the Ganga.</p> <p>(vii) Creating biodiversity profile of two selected stretches of Ganga river;</p> <p>(viii) Spatial database on aquatic wildlife, habitat condition and spatial risk maps.</p> <p>(ix) Afforestation of 10000 ha. of land along the Ganga river bank.</p> <p>(x) IEC Activities (in Melas/ Mass baths/ Exhibitions/ Competitions/ Advertisements/ usage of social media and continuous activity)</p>	<p>discharge of industrial waste in Ganga.</p> <ul style="list-style-type: none"> <li>● Protection, stabilization and conservation of river Ganga by preventing direct discharge of sewage waste in Ganga</li> <li>● Maintaining cleanliness on river edges and better infrastructure for social and cultural activities</li> <li>● Better infrastructure for cremation rituals, preventing unburnt bodies disposed into river Ganga</li> <li>● Afforestation, biodiversity conservation &amp; Ganga rejuvenation</li> <li>● Reduction of threats to the endangered aquatic species of Ganga river.</li> <li>● Awareness and behaviour change through IEC activities</li> <li>● Increasing social outreach for public participation and encouraging healthy and hygienic practices</li> </ul>
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11	River Basin Management	225.00	<p>(i) Works relating to preparation of Detailed Project Report/ Feasibility Report / Pre-feasibility Report / Preparation of water balance studies report in respect of 8 inter linking of river projects and 4 intra- linking of rivers by National Water Development Agency.</p> <p>(ii) Works related to Ken- Betwa link by National Water Development Agency.</p> <p>(iii) Continued investigation works for preparation of DPRs for the three hydroelectric (HE) power projects in North Eastern States and start of investigations of Berinium HE Project (J&amp;K) by CWC.</p> <p>(iv) R&amp;M of Seismological observations will be continued in Sankosh Basin by CWC</p> <p>(v) Execution of flood and anti-erosion works; preparation of six Master Plans and DPRs of two drainage development schemes; completion of mathematical model studies of river Brahmaputra; and execution of five bank protection projects by Geobag technology by Brahmaputra Board</p>	<ul style="list-style-type: none"> <li>• Completion of interlinking of river projects facilitates transfer of water from water surplus to water deficit areas.</li> <li>• Generation of power from hydel resources after effective implementation of projects covered under DPRs.</li> <li>• Protection of Majuli Island and other areas from flood and erosion.</li> <li>• Reclamation of agricultural land and area to be made free from drainage congestion</li> <li>• Flood and Bank protection works.</li> </ul>
12	Development of WaterResources Information System	211.27	<p>(i) Providing flood forecasts from 275 existing flood forecasting stations and 843 base stations.</p> <p>(ii) Continuation of Hydrological observation &amp; data collection at 878 old sites.</p> <p>(iii) Operationalisation of new 720 stations.</p> <p>(iv) Water quality monitoring at 572 sites</p> <p>(v) 120 additional reservoirs being real-time monitored for water storage</p> <p>(vi) Real time data acquisition system installation at 458 base stations</p>	<ul style="list-style-type: none"> <li>• Timely dissemination of flood forecasts</li> <li>• Reduction in flood incidence and resultant damage</li> <li>• Increased coverage of Water Resources Information System.</li> <li>• Minimizing loss of life and property due to floods</li> <li>• To create a reliable and sound database for informed planning and policy formulation</li> </ul>

13	Ground Water Management and Regulation	450.00	<p>(i) Preparation of Aquifer Map and Management Plan- 3.00 lakh Sqkm</p> <p>(ii) Ground Water level surveillance through 23125 wells</p> <p>(iii) Ground water quality monitoring through 15448 wells.</p> <p>(iv) Conducting 70 public interaction Programmes on aquifer maps and management plan</p>	<ul style="list-style-type: none"> <li>• Sustainable ground water resource management in the country.</li> <li>• Increased spatial coverage of Information generation for sustainable management of Ground Water Resources</li> <li>• Sensitization and awareness creation on ground water resource usage</li> </ul>
14	National Hydrology Project	250.00	<p>(i) Operationalisation of National Water Informatics Centre.</p> <p>(ii) Procurement and installation of 4370 Hydro met equipment</p> <p>(iii) River Basin Assessment and Planning for 3 basins</p> <p>(iv) Improvement in Flood forecast based upon ID modeling for 6 Basins</p>	<ul style="list-style-type: none"> <li>• Improved Water resources management in the country through improved flood forecasting and water resources assessment and planning.</li> <li>• Improved collection, collation, storage and dissemination of Hydro met and spatial data in the country.</li> </ul>
15	Research & Development and Implementation of National Water Mission	95.00	<p>(i) Publication of 150 publications and 150 research papers.</p> <p>(ii) Holding of 25 workshops/trainings focusing on R&amp;D</p> <p>(iii) Completion of eleven State Specific Action Plans</p> <p>(iv) Twenty Five Capacity Building trainings</p> <p>(v) Completion of fifteen baseline studies and two demonstration/ benchmarking/ pilot projects.</p>	<ul style="list-style-type: none"> <li>• Increase in number of research papers in reputed journals</li> <li>• Awareness generation on water conservation</li> <li>• Improved indigenously developed technology use, increased officer capacities and wider research based utilization.</li> <li>• Water budgeting and preparation of water budget by States.</li> <li>• Demonstration of modern and new technology for Conservation of water and abatement of pollution</li> </ul>
16	Human Resources Development and Capacity Building in NERIWALM, National Water Academy, RGI-Groundwater, MoWR and IEC	62.77	<p>(i) 200 training programmes including 3 international training programmes.</p> <p>(ii) 41 outreach activities covering advertisements, outdoor publicity, electronic media campaign, participation in exhibitions etc. including thirteen special activities aimed at children/tribal areas.</p> <p>(iii) 26 workshops/ seminars</p> <p>(iv) Training of about 200 officials.</p>	<p>Increased awareness, upgradation of knowledge and skills of water resources professionals (Technical as well as non-technical) in the field of water resources planning, development and management, thereby contributing in the sustainable development and conservation of water resources in India.</p>



17	Infrastructure Development	87.76	<p>(i) Renovation of approx 15 Rooms/Toilets in offices of Ministry proper.</p> <p>(ii) Continuation of construction/renovation of buildings &amp; services of CWC (five places) and CGWB (six places) as approved under scheme.</p> <p>(iii) Implementation of e-Office in Three Organisations under the Ministry.</p> <p>(iv) Implementation of e-HRMS in Six Organisations under the Ministry.</p>	<ul style="list-style-type: none"> <li>• Better working environment on completion of works.</li> <li>• Savings on monthly rent on completion of works.</li> <li>• Speedy disposal of files on implementation of e-office.</li> <li>• Better monitoring of Human Resources.</li> </ul>
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