

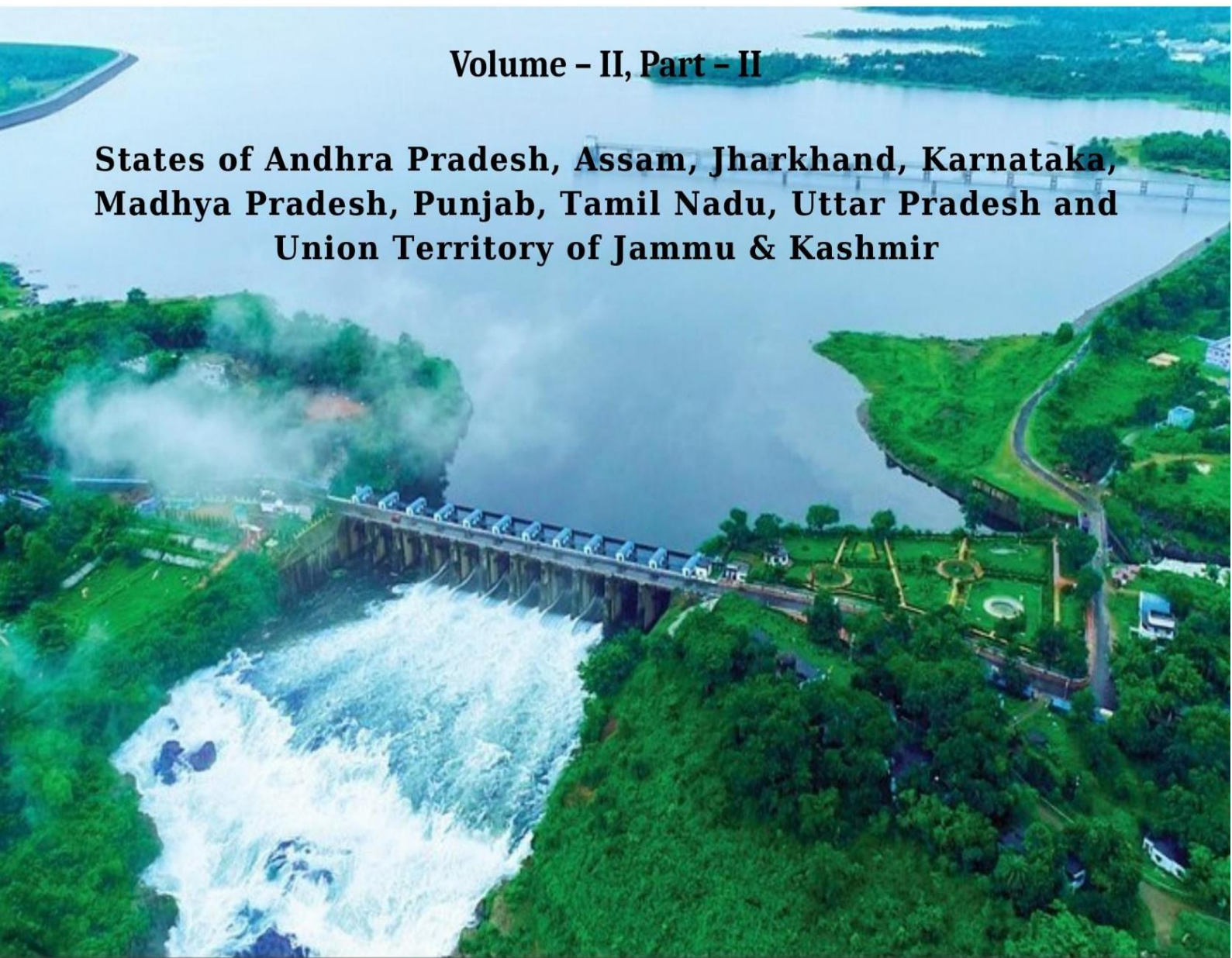


वृहद एवं मध्यम सिंचाई परियोजनाओं की प्रथम गणना रिपोर्ट

REPORT ON FIRST CENSUS OF MMI PROJECTS

Volume – II, Part – II

States of Andhra Pradesh, Assam, Jharkhand, Karnataka,
Madhya Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and
Union Territory of Jammu & Kashmir



भारत सरकार

GOVERNMENT OF INDIA

जल शक्ति मंत्रालय

MINISTRY OF JAL SHAKTI

जल संसाधन, नदी विकास और गंगा संरक्षण विभाग

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT &
GANGA REJUVENATION

Report on First Census of MMI Projects Volume II, Part II

(States of Andhra Pradesh, Assam, Jharkhand, Karnataka,
Madhya Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and
Union Territory of Jammu & Kashmir)



Government of India

Ministry of Jal Shakti

Department of Water Resources, River Development and
Ganga Rejuvenation

Minor Irrigation (Statistics) Wing

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जल शक्ति मंत्री
भारत सरकार
Minister of Jal Shakti
Government of India

MESSAGE

Water is central to agricultural growth, food security, and sustainable development. In a country where irrigation remains the largest user of water, Major and Medium Irrigation (MMI) Projects form the backbone of surface water management and agricultural productivity. These projects, defined on the basis of Culturable Command Area (CCA), play a critical role in bridging the gap between Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU), while also serving multipurpose objectives such as flood moderation, drinking water supply, and hydropower generation.

Recognizing the need for a comprehensive and reliable national database on MMI projects, the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, has undertaken the 1st Census of Major and Medium Irrigation Projects in convergence with the 7th Minor Irrigation Census, 2nd Census of Water Bodies, and the 1st Census of Springs in April 2025. The census covers all States and Union Territories and is being conducted entirely in digital mode through a dedicated web-based platform.

On the occasion of World Water Day 2026, Volume II of the Report of the 1st Census of Major and Medium Irrigation (MMI) Projects was released for the twelve early-completing States and Union Territory—Bihar, Chhattisgarh, Goa, Himachal Pradesh, Gujarat, Kerala, Ladakh, Manipur, Rajasthan, Tripura, Uttarakhand, and West Bengal. The present Report of the 1st Census of Major and Medium Irrigation Projects (Volume II, Part-II) is in respect of the States of Andhra Pradesh, Assam, Jharkhand, Karnataka, Punjab, Tamil Nadu, Uttar Pradesh, Madhya Pradesh and Union Territory of Jammu & Kashmir. The completion of census activities by the 21 States/UTs, including the present 9 States/UT, so far, reflects commendable administrative coordination and technical diligence and would encourage other States/UTs to complete the census work.

The sincere and dedicated efforts of these States are commendable and inspiring. This initiative will significantly contribute to strengthening data-driven planning, policy formulation, and decision-making in the water resources sector.

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Message

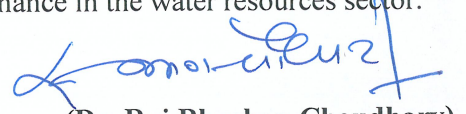
Water sustains agriculture, livelihoods, and economic stability. Major and Medium Irrigation (MMI) Projects, categorized on the basis of Culturable Command Area, constitute vital infrastructure for ensuring assured irrigation, stabilizing crop production, and enhancing resilience against climatic variability.

The 1st Census of Major and Medium Irrigation Projects represents a significant advancement in strengthening India's irrigation statistics framework. Conducted with reference year 2023-24, the census provides complete enumeration of both completed and ongoing MMI projects across the country. It integrates pre-populated data from the national register with field validation, structured scrutiny, GIS-based mapping, and multi-tier approval mechanisms to ensure data accuracy and reliability.

For the first time, the census has been implemented in a fully digital and paperless mode, enabling real-time monitoring through dashboards and streamlined validation processes. The standardized schedule captures critical parameters such as irrigation potential, season-wise utilization, storage capacity, canal systems, lift irrigation components, inter-basin transfers, environmental clearances, and participatory irrigation management structures.

The release of the Volume II of the Report of the Major and Medium Irrigation Projects for the twelve early-completing States/Union Territories—Bihar, Chhattisgarh, Goa, Himachal Pradesh, Gujarat, Kerala, Ladakh, Manipur, Rajasthan, Tripura, Uttarakhand, and West Bengal—published on the occasion of the World Water Day 2026 underscored the importance of robust irrigation data in advancing sustainable water governance. The present Report of the 1st Census of Major and Medium Irrigation Projects (Volume II, Part-II) is in respect of the States of Andhra Pradesh, Assam, Jharkhand, Karnataka, Punjab, Tamil Nadu, Uttar Pradesh, Madhya Pradesh and Union Territory of Jammu & Kashmir. The completion of census activities by the 21 States/UTs, including the present 9 States/UT, so far, reflects commendable administrative coordination and technical diligence and would encourage other States/UTs to complete the census work.

I commend the dedicated efforts of State Governments, project authorities, engineers, and field functionaries who have contributed to the successful conduct of this pioneering census. The insights generated will significantly support data-driven governance in the water resources sector.


(Dr. Raj Bhushan Choudhary)

अर्चना वर्मा, भा.प्र.से.
सचिव
ARCHANA VARMA, IAS
Secretary



भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION



FOREWORD

The Department of Water Resources, River Development and Ganga Rejuvenation has been conducting the Census of Minor Irrigation structures on a quinquennial basis since 1986-87, thereby creating a robust statistical foundation for irrigation planning. In line with the recommendations for expanding the scope of the Centrally Sponsored Scheme "Irrigation Census," the Department has undertaken the 1st Census of Major and Medium Irrigation (MMI) Projects in April 2025.

Major and Medium Irrigation Projects, defined based on Culturable Command Area thresholds, are critical assets in India's irrigation landscape. These projects involve substantial storage reservoirs, diversion structures, canal networks, and in many cases multipurpose functionalities. Despite their importance, the absence of a standardized national database had limited comprehensive performance assessment and planning. The present census addresses this gap.

The census has been designed with clearly defined concepts and definitions covering Gross Command Area (GCA), CCA, Ultimate Irrigation Potential (UIP), Irrigation Potential Created (IPC), Irrigation Potential Utilized (IPU), storage parameters, canal lengths, lift components, Command Area Development works, and Water Users' Associations. The methodology incorporates a structured hierarchy of State Nodal Officers and project-level functionaries, multi-stage scrutiny and validation, and real-time progress monitoring through a web-based application developed with the support of the National Informatics Centre. The census also utilizes pre-populated project data from the Central Water Commission to ensure consistency and completeness.

On the occasion of the World Water Day 2026, Volume of the Report of the 1st Census of Major and Medium Irrigation (MMI) Projects was published which presented key findings from twelve early-completing States and Union Territory—Bihar, Chhattisgarh, Goa, Himachal Pradesh, Gujarat, Kerala, Ladakh, Manipur, Rajasthan, Tripura, Uttarakhand, and West Bengal. The present Report of the 1st Census of Major and Medium Irrigation Projects (Volume II, Part-II) is in respect of the States of Andhra Pradesh, Assam, Jharkhand, Karnataka, Punjab, Tamil Nadu, Uttar Pradesh, Madhya Pradesh and Union Territory of Jammu & Kashmir. The completion of census activities by the 21 States/UTs, including the present 9 States/UT, so far, reflects commendable administrative coordination and technical diligence and would encourage other States/UTs to complete the census work. The completion of field work, validation, and submission by the States/UTs reflects strong institutional commitment and coordinated efforts at multiple administrative levels.

I am confident that the database and analytical insights generated through the 1st MMI Projects Census will significantly strengthen irrigation performance assessment, facilitate bridging of IPC-IPU gaps, support efficient water allocation, and enhance evidence-based planning in the water resources sector.

(Archana Varma)

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PREFACE

The First Census of Major and Medium Irrigation (MMI) Projects is a landmark initiative towards strengthening India's irrigation database and water resources governance framework. While the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, has been conducting the Minor Irrigation Census on a quinquennial basis since 1986-87, the inclusion of Major and Medium Irrigation Projects under the Centrally Sponsored Scheme "Irrigation Census" marks a significant expansion in the scope of the national irrigation information system.

Major and Medium Irrigation Projects form the backbone of the country's surface irrigation infrastructure and play a pivotal role in agricultural development, water security, flood moderation, hydropower generation and other multipurpose uses. A comprehensive, validated and up-to-date national database of these projects is essential for evidence-based planning, policy formulation, efficient asset management and sustainable utilization of water resources. The First MMI Census seeks to fulfil this objective by capturing vital information relating to Gross Command Area (GCA), Culturable Command Area (CCA), Irrigation Potential Created (IPC), Irrigation Potential Utilized (IPU), storage characteristics, canal systems, lift irrigation components, Command Area Development (CAD) and Water Users' Associations (WUAs).

On the occasion of World Water Day 2026, the report covering the 12 (twelve) early-completing States and Union Territory—Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Kerala, Ladakh, Manipur, Rajasthan, Tripura, Uttarakhand and West Bengal was released.

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जल संरक्षण - जीवन संरक्षण
Conserve Water - Save Life

I am pleased to note that 9 (nine) additional States and Union Territory, namely Andhra Pradesh, Assam, Jharkhand, Jammu & Kashmir, Karnataka, Madhya Pradesh, Punjab, Tamil Nadu and Uttar Pradesh, have since completed the processes of enumeration, validation of MMI projects data through the MMI Census Portal. Their timely efforts represent another significant milestone in the successful implementation of this nationwide exercise and further strengthen the national database of irrigation projects.

I place on record my appreciation for the officers of the Central Water Commission, State Governments, State Nodal Officers, field enumerators and all other stakeholders whose dedication, technical expertise and coordinated efforts have made this achievement possible.

I am confident that the information contained in this publication will serve as a valuable reference for planners, administrators, researchers and policymakers, and will contribute significantly towards scientific planning, efficient management and sustainable development of the country's precious water resources. I also look forward to the completion of the Census by the remaining States and Union Territories so that a comprehensive national report covering all Major and Medium Irrigation Projects can be brought out in the near future.

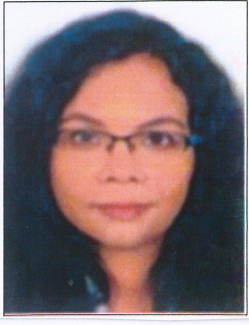


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लघु सिंचाई सांख्यिकी / MINOR IRRIGATION (Stat.)

Preface

The First Census of Major and Medium Irrigation (MMI) Projects marks a significant milestone in strengthening India's irrigation database and water resource governance framework. While the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, has been conducting the Minor Irrigation Census on a quinquennial basis since 1986–87, the inclusion of Major and Medium Irrigation Projects under the Centrally Sponsored Scheme “Irrigation Census” represents an important expansion in scope and vision.

Major and Medium Irrigation Projects, defined on the basis of Culturable Command Area (CCA), constitute the backbone of surface irrigation infrastructure in the country. These projects not only create substantial irrigation potential but also support multipurpose objectives such as flood moderation, drinking water supply, hydropower generation, and industrial use. A comprehensive and reliable national database covering parameters such as Gross Command Area (GCA), CCA, Ultimate Irrigation Potential (UIP), Irrigation Potential Created (IPC), Irrigation Potential Utilized (IPU), storage characteristics, canal systems, lift components, Command Area Development (CAD), and Water Users' Associations (WUAs) is essential for evidence-based planning and improved water use efficiency.

The 1st MMI Census, launched in April 2025, has been undertaken in full digital mode through a dedicated web portal developed with the support of the National Informatics Centre. The census leverages pre-populated data from the National Register of MMI Projects prepared by the Central Water Commission, supplemented by structured field validation, multi-tier scrutiny, GIS-based mapping, and real-time dashboard monitoring. The well-defined hierarchy of State Nodal Officers and Project-level functionaries has ensured systematic data collection, validation, and finalization.

On the occasion of World Water Day, 2026, Volume II, Part I of the 1st Report of the MMI Projects was released for the twelve early-completing States and Union Territory—Bihar, Chhattisgarh, Goa, Himachal Pradesh, Gujarat, Kerala, Ladakh, Manipur, Rajasthan, Tripura, Uttarakhand, and West Bengal. The present Report of the 1st Census of Major and Medium Irrigation Projects (Volume II, Part-II) is in respect of the States of Andhra Pradesh, Assam, Jharkhand, Karnataka, Punjab, Tamil Nadu, Uttar Pradesh, Madhya Pradesh and Union Territory of Jammu & Kashmir. The completion of census activities by these States/UTs, reflects commendable administrative coordination and technical diligence and would encourage other States/UTs to complete the census work. The completion of field work, validation, and submission by the States/UTs reflects strong institutional commitment and coordinated efforts at multiple administrative levels.

A special word of appreciation to the then Secretaries, DoWR, RD&GR, Shri V.L. Kantha Rao and Ms. Debashree Mukherjee and the Additional Director General, Mrs. Pally Kundu, who have been source of inspiration to all of us and have given leadership qualities in the conduct and completion of entire census process.

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ABBREVIATIONS AND ACRONYMS

CAD	Command Area Development
CCA	Culturable Command Area
CWC	Central Water Commission
DDP	Desert Development Programme
DHARMA	Dam Health and Rehabilitation Monitoring Application
DoWR, RD & GR	Department of Water Resources, River Development and Ganga Rejuvenation
DPAP	Drought Prone Area Programme
DSL	Dead Storage Level
ERM	Extension, Renovation & Modernization
FRL	Full Reservoir Level
GCA	Gross Command Area
GIS	Geographic Information System
Ha	Hectare
IC	Investment Clearance
IPC	Irrigation Potential Created
IPU	Irrigation Potential Utilized
MCM	Million Cubic Meter

MDDL	Minimum Draw Down Level
MI Stat Wing	Minor Irrigation Statistics Wing
MoJS	Ministry of Jal Shakti
MMI	Major & Medium Irrigation
MWL	Maximum Water Level
msl	Mean Sea Level
NBWL	National Board for Wildlife
NRLD	National Register of Large Dams
OBC	Other Backward Caste
PIN	Piped Irrigation Network
SC	Scheduled Caste
ST	Scheduled Tribe
TAC	Technical Advisory Committee
UIP	Ultimate Irrigation Potential
UT	Union Territory
WUA	Water Users Association

General Background

1. Introduction

Irrigation has been a crucial component of India's agricultural development, evolving from traditional tank systems and colonial-era canals to large multipurpose river valley projects and modern micro-irrigation technologies. Organized irrigation development began during British rule with major canal systems such as the Upper Ganga Canal (1854), Western Yamuna Canal (1820), and Upper Bari Doab Canal (1859) primarily aimed at enhancing land revenue through assured irrigation. The First Irrigation Commission (1901–03) further accelerated irrigation expansion.

After Independence, irrigation development became a national priority under the Five-Year Plans. Large multipurpose projects such as the Bhakra Nangal Dam (Punjab, 1960), Hirakud Dam (Odisha, 1957), Nagarjuna Sagar Dam (AP/Telangana), Sardar Sarovar Dam (Gujarat), and Indira Gandhi Canal (Rajasthan) significantly expanded irrigation coverage, contributing to food security and supporting the Green Revolution.

As per Land Use Statistics, at present, India's total geographical area is about 328 million hectares. The Net Sown Area is approximately 140–142 million hectares, of which about 75–79 million hectares is net irrigated. The Gross Cropped Area is around 220 million hectares, with gross irrigated area exceeding 120 million hectares. Nearly 48–50% of the net sown area is irrigated, while the remaining area depends on monsoon rainfall. Groundwater sources (tube wells and wells) contribute nearly half of total irrigation, alongside canals and other sources.

The ultimate irrigation potential of the country is estimated at about 140 million hectares. In recent years, emphasis has shifted towards water-use efficiency through micro-irrigation (drip and sprinkler systems), schemes like PMKSY. River interlinking initiatives and command area development programs are also being pursued to enhance water availability and equitable distribution for irrigation and other purposes. In order to meet the requirements of planning and policy formulation of this sector, a sound and reliable national data base is a prerequisite.

Since irrigation projects are planned and managed by State Governments, creating a consolidated national database for Major and Medium Irrigation (MMI) projects has been challenging. To address this gap, it was decided to expand the scope of the Centrally Sponsored Scheme "Irrigation Census" to include the First Census of Major and Medium Irrigation (MMI) projects along with 7th Minor Irrigation (MI) Scheme Census, 2nd water Bodies (WB), Census and First Spring Census.

2. Classification of Irrigation Project

Irrigation Projects are classified based on Culturable Command Area (CCA) as follows:

- i. Major Irrigation Projects: The Projects having Culturable Command Area (CCA) more than 10000 hectares ($CCA > 10,000$ ha). This type of project consists huge storage reservoirs, flow diversion structures and a large network of canals.
- ii. Medium Irrigation Projects: Projects having CCA more than 2,000 ha and up to 10,000 Ha

are classified as medium irrigation projects. These are also multi-purpose surface water projects. Medium size storage, diversion and distribution structures are the main components of this type of project.

- iii. **Minor Irrigation Projects:** Projects having CCA less than or equal to 2,000 ha are termed as minor irrigation project

3. Scope & Coverage

The First Census of MMI Projects is conducted in whole of India including Union Territories.

4. Frame of the Census

The frame of the census is all completed MMI projects in the country run by both Central and State Governments which is taken from the “National Register of MMI projects in India” recently published by Central Water Commission.

5. Definitions

- a. **Gross Command Area (GCA):** The total geographical area which can normally be commanded or serviced from an irrigation project without consideration of water supplies available for irrigation.
- b. **Culturable Command Area (CCA):** The gross command area less the non-culturable land.
- c. **Cultivable Area:** It consists of net area sown in the command, current fallow, fallow lands, other than current fallow, culturable waste and land under miscellaneous tree crops.
- d. **Gross Irrigated Area:** The area irrigated under various crops during a year in a command, counting the area irrigated under more than one crop during the same year as many times as the number of crops grown and irrigated.
- e. **Net Irrigated Area:** An area in a command may be irrigated only once a year or multiple times during various seasons of a year. It is aggregate of the area irrigated once a year and area irrigated multiple times counting it as once is net irrigated area.
- f. **Ultimate irrigation potential (UIP):** Maximum area (Gross) identified for irrigation from available water resources. This area is aggregate of area planned to be irrigated once a year and planned to be irrigated multiple times counting it as many times as irrigated during a year.
- g. **Irrigation Potential Created (IPC):** Gross irrigation that can be achieved through the works completed at a particular time.
- h. **Irrigation Potential Utilized (IPU):** The gross area actually irrigated during reference year of the census out of the IPC already created.
- i. **Kharif season:** Kharif crops are cultivated in the monsoon season. Maize, rice, small millets, peas, groundnut, cotton, sesame etc. are the principal kharif crops.
- j. **Rabi season:** Rabi crops are cultivated in the winter season. Wheat, barley, gram, peas, potatoes, mustard etc. are the Rabi Crops.
- k. **Bi seasonal:** The Crops which last during two crop seasons is the Bi Seasonal.

- l. **Summer season:** Often represents an intermediate (third) crop between the Rabi and Kharif crops i.e Zaid crops etc.
- m. **Perennial crop:** Crops which last several crop years like plantation or orchard crops.
- n. **Micro Irrigation Systems:** Micro irrigation system comprises of Drip Irrigation, Sprinkler Irrigation, Jet, Micro-Sprinkler, Porous Pipe, Rain Gun Systems with drip irrigation and sprinkler irrigation being the most common.
- o. **Sprinkler Irrigation system:** Sprinkler Irrigation is a method of applying irrigation water which is similar to rainfall. Water is distributed through a system of pipes usually by pumping. It is then sprayed into the air of entire soil surface through spray heads so that it breaks up into small water drops which fall to the ground.
- p. **Drip Irrigation System:** It comprises the application of water in drops close to the plants. The entire space between the plants is not watered.
- q. **Piped Irrigation System:** A Piped Irrigation Network (PIN) is a network of installation consisting of pipes, fittings such as valves, pumps (if necessary) and other devices properly designed and installed to supply water from the source of the water to the irrigable area.
- r. **River Basin:** River basin is defined as a geographical area (catchment area) determined by the watershed limits of a water system flowing into a common terminus.
- s. **Catchment Area:** The area from which runoff flows into river, reservoir, etc.
- t. **Lift Irrigation:** Lift Irrigation is a method of irrigation in which the water is lifted with Pumps and supplied for irrigation.
- u. **Full Reservoir Level (FRL)** (in meter above msl): It is the maximum level of the reservoir at which water is intended to be held for various uses.
- v. **Maximum Water Level (MWL):** It is the maximum level to which the reservoir water will rise while passing the design flood with the spillway facility in full operation.
- w. **Minimum Draw Down Level (MDDL):** It is the lowest level up to which the reservoir may be depleted for meeting various needs.
- x. **Live Storage capacity:** Storage capacity between the Dead storage Level to full reservoir level.
- y. **Dead Storage capacity:** Storage of the reservoir below the Minimum Draw Down level (MDDL).
- z. **Multipurpose Project:** Multipurpose Project is designed, constructed and operated to serve two or more interests or purposes namely, flood control, hydro-electric power generation, navigation, irrigation, fisheries, public water supplies, recreation, etc.

6. Methodology:

For implementation of the MMI Project Census, each State/UT Administration i.e Chief Secretary/Secretary identified a State Nodal Department for enumeration of Statistics of Irrigation Projects. The State Nodal department is preferably the State's Water Resource Department or Irrigation Department.

To ensure smooth execution of census work, State Nodal Department in State / UT's designated a State Nodal Officer i.e Engineer in Chief / Chief Engineer / head of the Department. As the data of the Census was collected project-wise hence, the State Nodal Officer further designated a project wise Nodal officers (Level I) who were one level down in hierarchy i.e Chief Engineer- I/ Chief Engineer II or Managing Directors etc. for the respective projects. Nodal Officers (level I) further designated a project wise Nodal officers (level II) who were one level below in hierarchy i.e Superintending Engineer-I / Superintending Engineer-II etc. for the respective projects. Nodal Officers (level II) further designated project-wise Nodal officers (level III) who were one level below in hierarchy i.e Executive Engineer I/ Executive Engineer-II etc. Nodal Officers (level III) further assigned each project to concerned project in-charge i.e Assistant Engineer / Junior Engineer for enumeration of data. He is responsible for coordinating and accomplishing the census work for that particular project. Nodal officer level may vary as per Hierarchy level of respective Nodal Department.

The project in-charge is responsible for enumerating the MMI projects in census. MMI Census data is collected through the project authorities as much as possible. But, for the data related with Irrigation Potential Utilized (IPU), WUA formed etc. the concerned village officers e.g. Patwaries, revenue officials and village level workers/gram pradhans etc. were involved. In this regard State Level Committee/Technical Sub Committee issued suitable directions to the concerned Revenue Department. For Irrigation Potential Utilized (IPU), the highest figure achieved so far is entered. Census would be conducted completely in digital mode through web portal.

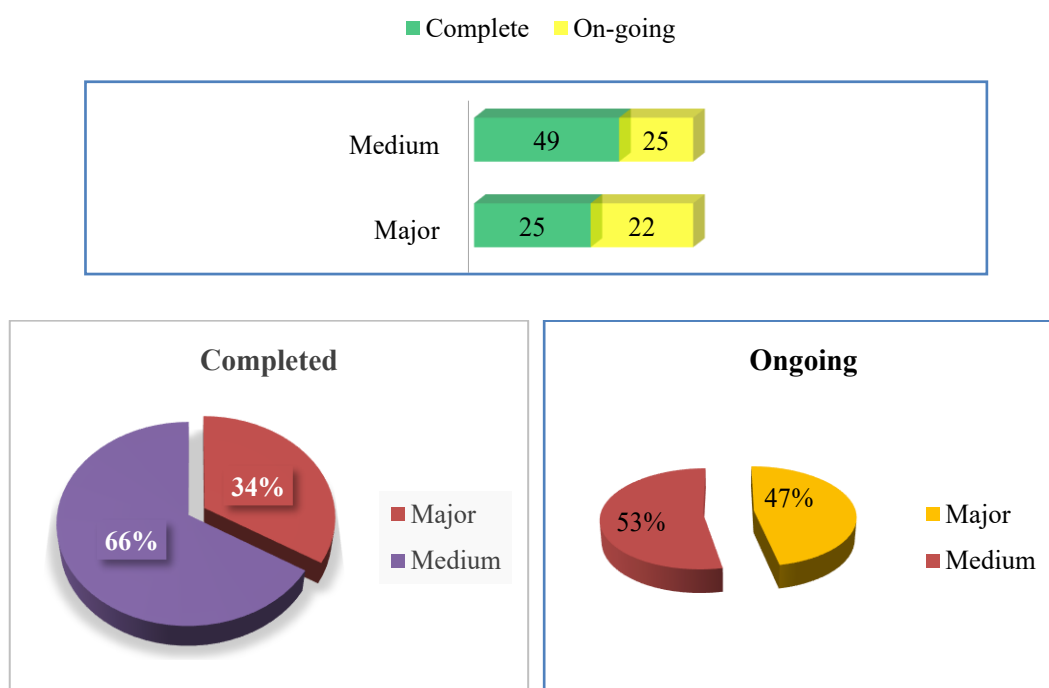
State/UT Reports

Andhra Pradesh

- The State of Andhra Pradesh covers a total area of 162,975 square kilometers. Total number of districts is twenty-eight.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 121 Major and Medium Irrigation projects were enumerated in Andhra Pradesh. Of these, 47 projects are classified as Major Irrigation projects, while the 74 are categorized as Medium Irrigation projects. This distribution indicates that medium irrigation projects constitute a larger share of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (number)



- Out of the total 121 Major and Medium Irrigation (MMI) projects enumerated in Andhra Pradesh, 74 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. These completed projects comprise 25 Major Irrigation projects and 49 Medium Irrigation projects. Remaining projects include 22 Major Irrigation projects and 25 Medium Irrigation projects which are currently in the implementation phase.
- Out of the 47 Major Irrigation projects enumerated in Andhra Pradesh, 29 projects have been developed exclusively for irrigation purposes, while 18 project serves as a multipurpose project, catering to irrigation along with other objectives such as flood control, water supply, or hydropower generation. While in the case of Medium Irrigation Projects, 61 projects have been developed for Irrigation purposes, and the other 13 will

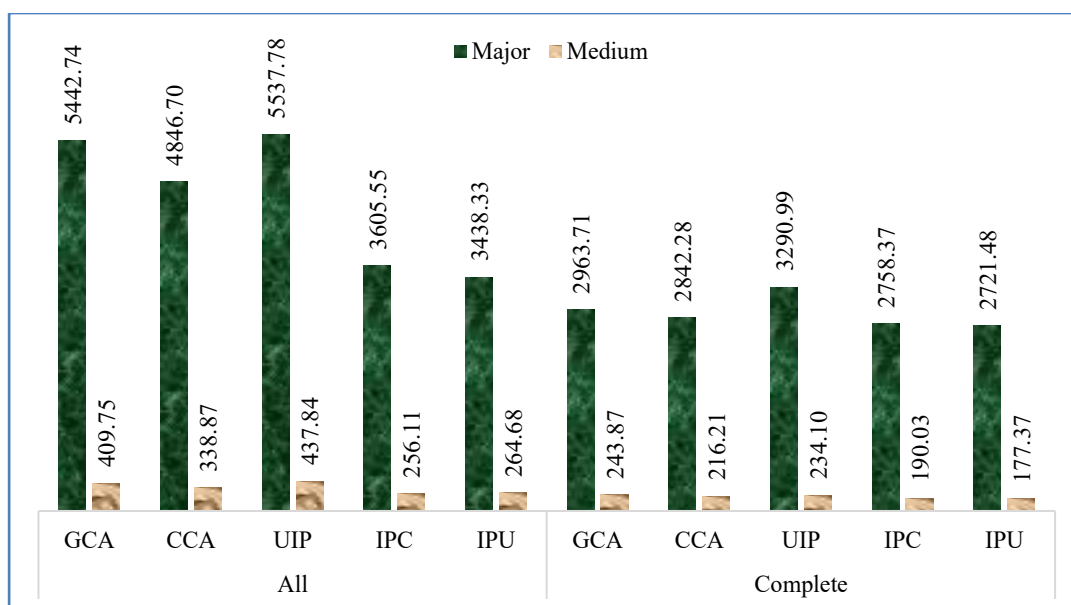
serves as a multipurpose project. This indicates that irrigation remains the primary objective of the State's Major irrigation infrastructure, but a substantial number of projects are also being made for multipurpose use case, indicating a balanced approach towards water use.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	29	61
Multipurpose	18	13
Total	47	74

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all completed Major and Medium Irrigation (MMI) projects in Andhra Pradesh are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 98.7% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. In case of Medium Irrigation projects, Irrigation Potential Utilized (IPU) is 93.4% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure.

C. Type of Project

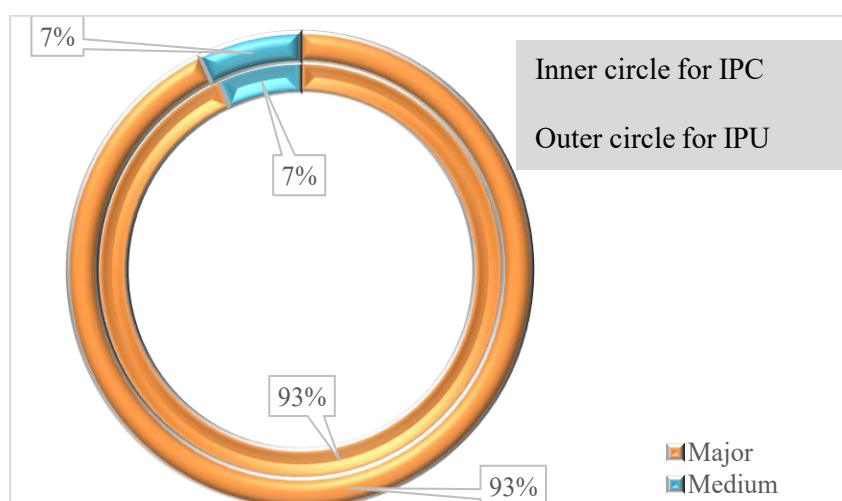
Table 2: Number & Share of different type of project

Nature of MMI project	Storage	Diversion	Lift irrigation	Storage & Diversion	Storage & Lift irrigation	Diversion & Lift irrigation	Storage & Diversion & Lift irrigation	Others	Total
Major	17	9	9	5	3	1	0	3	48
Medium	40	21	6	3	1	0	0	3	73
Total	57	30	15	8	4	1	0	6	121
Share	47%	25%	12%	7%	3%	1%	0%	5%	100%

- The above table shows that most of the MMI projects in Andhra Pradesh are Storage Irrigation type (47%) followed by Diversion type (25%) and Lift Irrigation type (12%).

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart indicates that Major Irrigation Projects accounts for 93% of the total Irrigation Potential Utilized in and Medium Irrigation Projects for 7% of the total Irrigation Potential Utilized in Andhra Pradesh. This indicates that Major Irrigation projects play a dominant role in providing irrigation to agricultural lands, owing to their larger command areas and higher irrigation potential.

E. Season wise Contribution of project in Irrigation

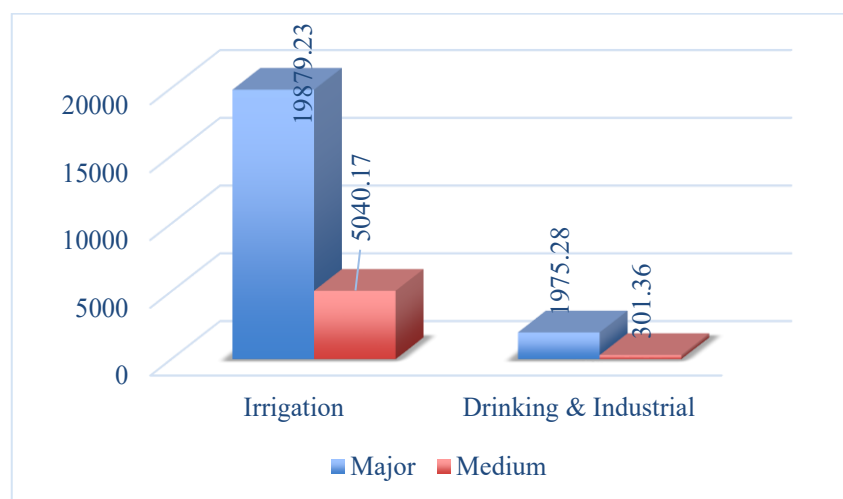
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project Name	IPU						
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	Total
Major	2517.97	882.62	35.72	0	2.02	0	3438.33
Medium	174.05	58.11	8.64	0	0	23.88	264.68
Total	2692.02	940.73	44.36	0	2.02	23.88	3703.01
Share w.r.t IPC	69.7%	24.4%	1.1%	0%	0.1%	0.6%	95.9%

- All Major and Medium Irrigation (MMI) projects in Andhra Pradesh are primarily utilized for irrigation during the Kharif and Rabi seasons. The Kharif season accounts for the largest share of irrigation utilization (69.7% of IPC), followed by the Rabi season (24.4% of IPC). The predominance of Kharif irrigation reflects the State's cropping pattern and the high demand for water during the monsoon cultivation period, while substantial utilization during the Rabi season highlights the importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity.

F. Water Utilization

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of irrigation, Major Irrigation projects utilize a significantly larger volume of water than Medium Irrigation projects, as expected due to their larger storage capacities, command areas, and irrigation potential. Major projects are designed to serve extensive agricultural areas and therefore account for a greater share of water utilization for irrigation. In terms of drinking and industrial purposes, again Major Irrigation Projects contributes more than medium irrigation projects.

G. Associated Program

- Out of the 47 Major Irrigation projects enumerated in Andhra Pradesh, 1 Major Project is covered under Drought Prone Area Programme. Out of the 74 Medium Irrigation Projects enumerated in Andhra Pradesh, 8 Medium projects are covered under Drought Prone Area Programme and Tribal area. The programme-wise and area-wise distribution of these projects is presented in Table 4 & Table 5.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	47	1				
Medium	74	8				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	1.07	0	0	0	0
Medium	20.12	0	17.43	0	0

H. Irrigation Method

- Out of the 121 Major and Medium Irrigation (MMI) projects enumerated in Andhra Pradesh, 115 projects use flood irrigation. Among these, 7 projects also use drip irrigation and 3 projects use sprinkler irrigation. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the state. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions. But efficient irrigation methods which prevent wastage of water are also employed which includes DRIP and Sprinkler Irrigation.

Table 6: Number of Project by Method of Irrigation

Total Number Projects	Number With Methods of Irrigation			Area Cover by Methods of Micro Irrigation (in 000'ha)
	Flood Irrigation	DRIP	Sprinkler	DRIP/ Sprinkler
121	115	7	3	91.12

I. CAD, CADWM, WUA

- Out of the 47 Major Irrigation Projects, 7 are covered under the Command Area Development (CAD) Programme. Similarly, out of the 74 Medium Irrigation Projects, 6 are covered under the CAD Programme. These projects receive support for command area development activities aimed at improving irrigation efficiency, bridging the gap between irrigation potential created and utilized, promoting equitable distribution of water, and enhancing agricultural productivity. The corresponding area coverage is presented below.
- A total of 2,351 Water User Associations (WUAs) have been constituted for Major Irrigation Projects, while 270 Water User Associations have been formed for Medium Irrigation Projects. These WUAs play a pivotal role in promoting Participatory Irrigation Management (PIM) by involving farmers in the operation, maintenance, and management of irrigation systems. They facilitate equitable distribution of irrigation water, improve water use efficiency, support maintenance of irrigation infrastructure, and encourage collective decision-making, thereby contributing to the sustainable management of irrigation resources and enhanced agricultural productivity.

Table 7: CAD, CADWM and WUA wise Status of Projects

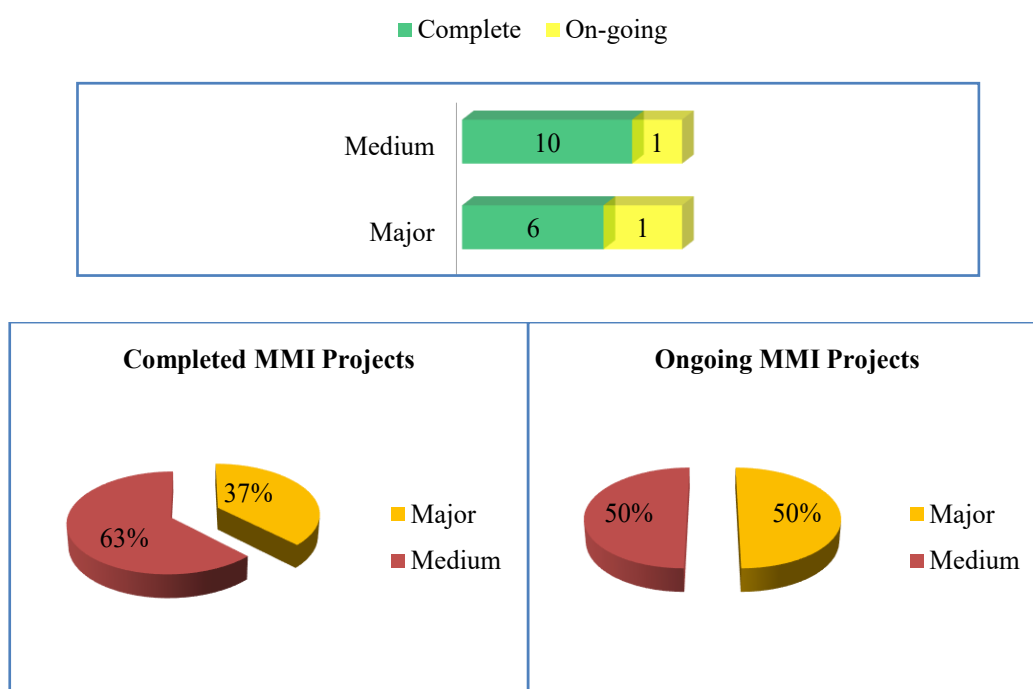
Projects		Number With Methods of Irrigation			Details of WUA			
	Total Number Project	Number of Project	Area of CAD Work Executed from State Govt Funding ((in 000'ha))	Area Covered Under CADWM ((in 000'ha))	Number of Major Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'ha Ha)	Numbers of Members
Major	47	7	303.63	37.45	23	2351	2355.23	52552
Medium	74	6	44.37	0	39	270	195.44	53648

Assam

- The State of Assam covers a total area of 78,438 square kilometers. Total number of districts is thirty-five.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 18 Major and Medium Irrigation projects were enumerated in Assam. Of these, 7 projects are classified as Major Irrigation projects, while the remaining 11 are categorized as Medium Irrigation projects. This distribution indicates that medium irrigation projects constitute a larger share of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects.



- Out of the total 18 Major and Medium Irrigation (MMI) projects enumerated in Assam, 16 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. These completed projects comprise 6 Major Irrigation projects and 10 Medium Irrigation projects. The remaining 2 projects are currently under implementation, consisting of 1 Major Irrigation project and 1 Medium Irrigation project.
- Out of the 7 Major Irrigation projects enumerated in Assam, 6 projects have been developed exclusively for irrigation purposes, while 1 project serves as a multipurpose project, catering to irrigation along with other objectives such as flood control, water supply, or hydropower generation. In contrast, all 11 Medium Irrigation projects are

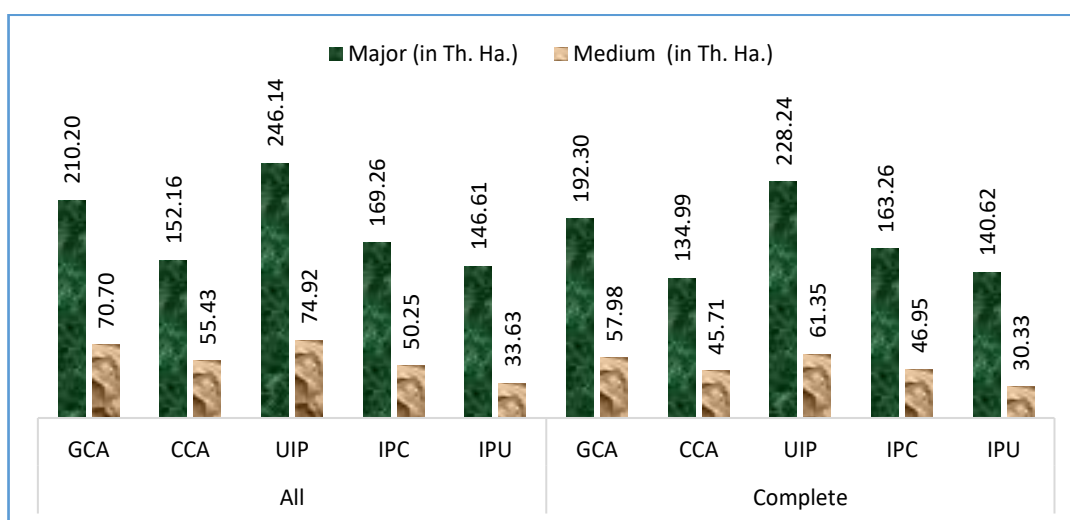
exclusively intended for irrigation. This indicates that irrigation remains the primary objective of the State's Major and Medium Irrigation infrastructure, with only a limited number of projects designed to provide multiple benefits.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	6	11
Multipurpose	1	0
Total	7	11

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all completed Major and Medium Irrigation (MMI) projects in Assam are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 86% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. In comparison, the completed Medium Irrigation projects have utilized about 65% of the Irrigation Potential Created. While both categories are contributing significantly to irrigation, the relatively lower utilization in Medium Irrigation projects suggests scope for improving the efficient use of the irrigation potential already created through better water management, distribution systems, and agricultural practices.

C. Type of Project

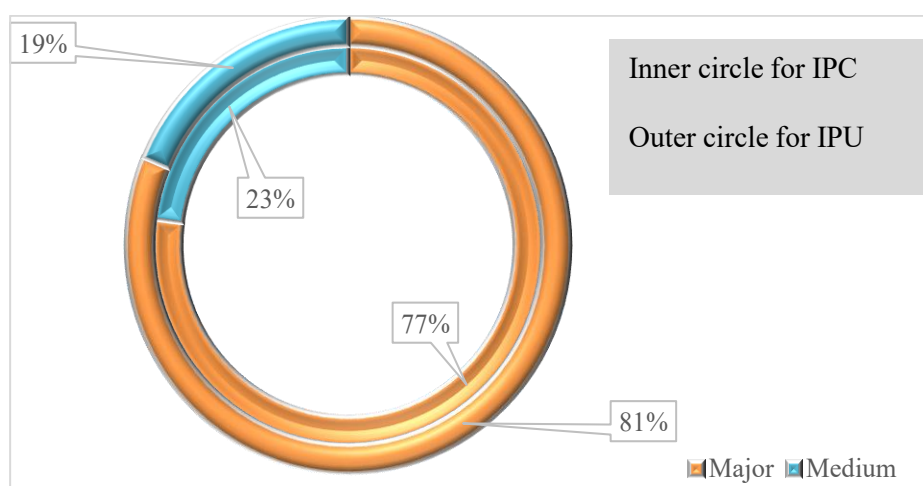
Table 2: Number & Share of different type of project

Project	Storage	Diversion	Lift irrigation	Other	Total
Major	0	6	1	0	7
Medium	0	8	3	0	11
Total	0	14	4	0	18
Share	0%	78%	22%	0%	100%

- The above table shows that 78% of the Major and Medium Irrigation (MMI) projects in Assam are based on the Diversion irrigation system, while the remaining 22% are Lift Irrigation projects.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart shows that Major Irrigation projects account for 81% of the total Irrigation Potential Utilized (IPU) in Assam, while Medium Irrigation projects contribute the remaining 19%. This indicates that Major Irrigation projects play a dominant role in providing irrigation to agricultural lands, owing to their larger command areas and higher irrigation potential. Although Medium Irrigation projects contribute a comparatively smaller share, they continue to play an important role in extending irrigation facilities, particularly in localized areas. Together, both categories of projects make a significant contribution towards enhancing irrigation coverage and supporting agricultural production in the State.

E. Season wise Contribution of project in Irrigation

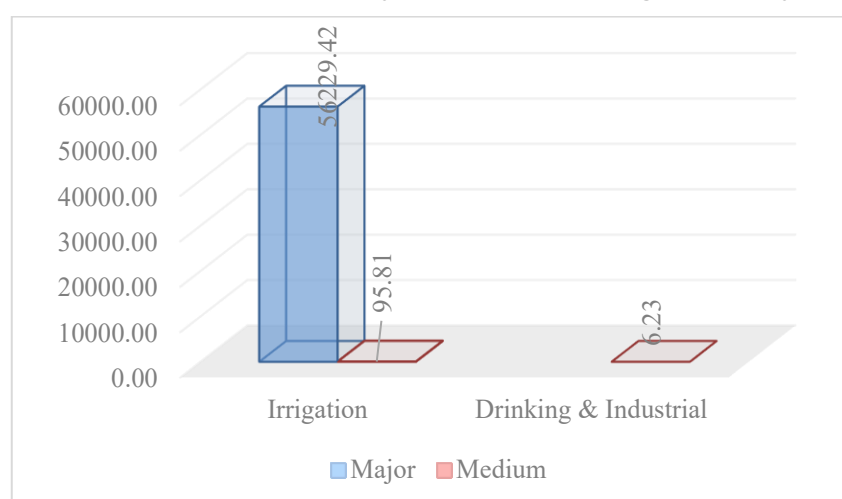
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	98.57	47.37	0	0	0.67	0	146.61
Medium	24.54	8.23	0.42	0	0.45	0	33.63
Total	123.11	55.60	0.42	0	1.12	0	180.25
Share w.r.t to IPC	56.1%	25.3%	0.2%	0%	0.5%	0%	82.1%

- All Major and Medium Irrigation (MMI) projects in Assam are primarily utilized for irrigation during the Kharif and Rabi seasons. The Kharif season accounts for the largest share of irrigation utilization (56.1% of IPC), followed by the Rabi season (25.3% of IPC). The remaining irrigation potential is utilized during other cropping seasons such as Summer Season. The predominance of Kharif irrigation reflects the State's cropping pattern and the high demand for water during the monsoon cultivation period, while substantial utilization during the Rabi season highlights the importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity.

F. Water Utilisation

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of irrigation, Major Irrigation projects utilize a significantly larger volume of water than Medium Irrigation projects, as expected due to their larger storage capacities, command areas, and irrigation potential. Major projects are designed to serve extensive agricultural areas and therefore account for a greater share of water utilization for irrigation.

G. Associated Program

- Out of the 7 Major Irrigation projects enumerated in Assam, none is covered under any special programme. In contrast, 4 out of the 11 Medium Irrigation projects are covered under the Tribal Area Programme, while the remaining projects are not covered under any specific programme. The programme-wise and area-wise distribution of these projects is presented in Table 4 & Table 5.

Table 4: Number of MMI Project under different program

Project	Total number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	7	0	0	0	0	0
Medium	11	0	0	4	0	0

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	0	0	0	0	0
Medium	0	0	9.11	0	0

H. Irrigation Method

- All 18 Major and Medium Irrigation (MMI) projects enumerated in Assam employ the flood irrigation method for irrigating agricultural lands. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the State. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions.

I. CAD, CADWM, WUA

- Out of the 7 Major Irrigation Projects, 5 projects are covered under the Command Area Development (CAD) Programme. In comparison, only 3 out of the 11 Medium Irrigation Projects are covered under the programme. This indicates a relatively higher coverage of Major Projects under CAD interventions aimed at improving water-use efficiency and strengthening irrigation infrastructure within the command areas. The corresponding area covered under the programme is presented in Table 6.
- Water Users' Associations (WUAs) have been constituted for 6 Major Irrigation Projects and 5 Medium Irrigation Projects. A total of 154 WUAs have been formed under the Major Projects, compared to only 23 WUAs under the Medium Projects. The higher number of WUAs associated with Major Projects reflects their larger command areas and greater stakeholder participation in participatory irrigation management.

Table 6: CAD, CADWM and WUA wise Status of Projects

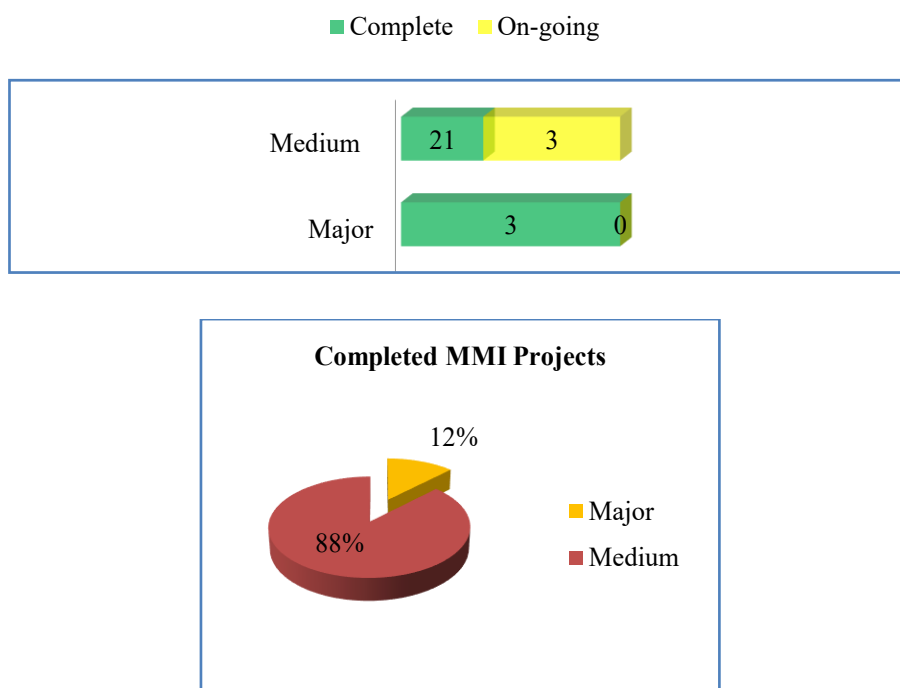
Projects	Total Number Project	Number With Methods of Irrigation				Details of WUA		
		Number of Project	Area of CAD Work Executed from State Govt Funding (in 000'ha)	Area Covered Under CADWM (in 000'ha)	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'Ha)	Numbers of Members
Major	7	5	40.98	54.13	6	154	79.49	1885
Medium	11	3	4.60	11.80	5	23	8.76	239

Jammu & Kashmir

- The Union Territory of Jammu and Kashmir covers a total area of 55,538 kilometers. It has a total 20 administrative districts.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 27 Major and Medium Irrigation projects were enumerated in J&K. Of these, 3 projects were classified as Major Irrigation projects, while the remaining 24 were classified as Medium Irrigation projects. This distribution indicates that medium irrigation projects constitute almost the whole of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (Number)



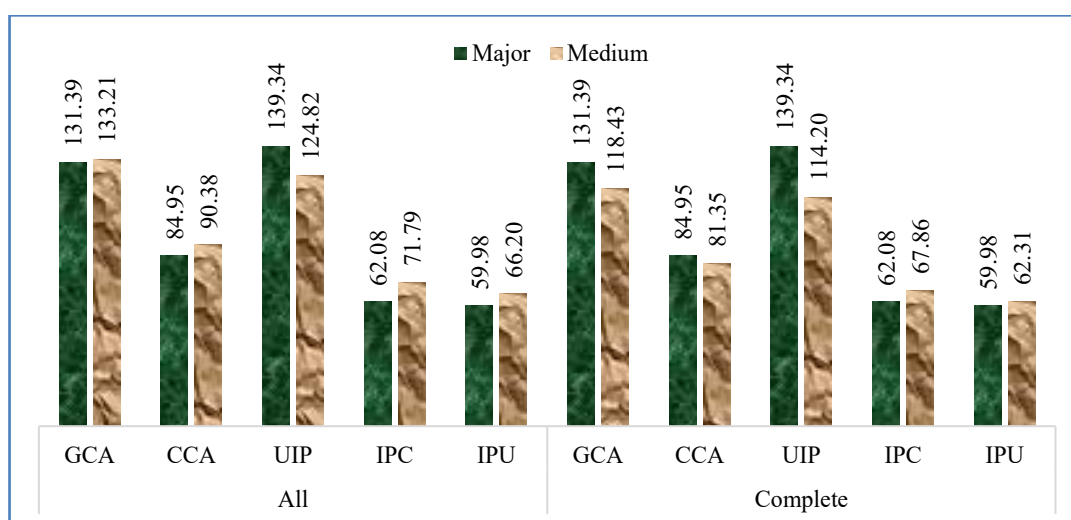
- Out of the total 27 Major and Medium Irrigation (MMI) projects enumerated in J&K, 24 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. All 3 Major projects have been completed along with 21 Medium projects. 3 Medium projects are currently under implementation.
- All of the Major Irrigation projects are reserved only for Irrigation. Similarly, all 24 Medium Irrigation Projects serve as an Irrigation project. This indicates that irrigation remains the primary objective of the State's Major and Medium Irrigation infrastructure.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	3	24
Multipurpose	0	0
Total	3	24

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above graph clearly shows a high IPU-to-IPC ratio for both Major and Medium projects, indicating effective utilisation of the irrigation potential created by these schemes. Major projects have utilised 96.62% of their created potential, while Medium projects have utilised 92.20%, reflecting strong performance in translating created potential into actual irrigation on the ground by the State.

C. Type of Project

Table 2: Number & Share of different type of project

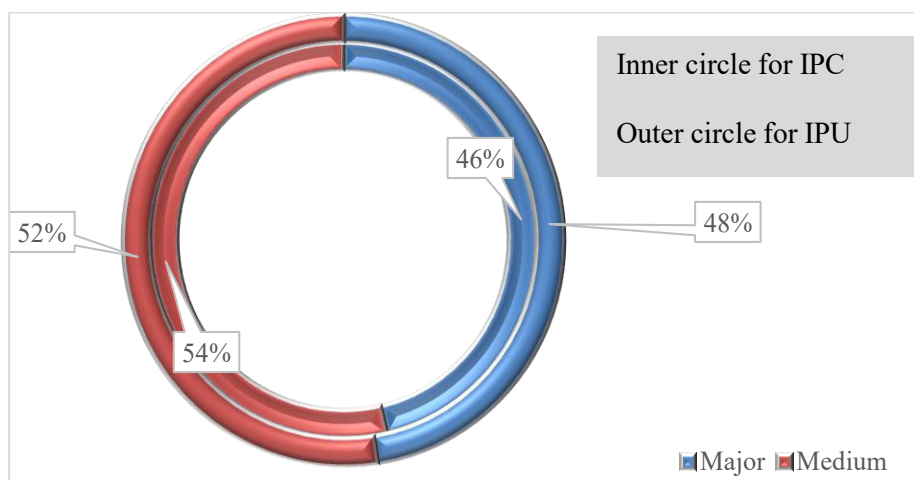
Project	Diversion	Lift irrigation	Other	Total
Major	2	1	0	3
Medium	17	6	1	24
Total	19	7	1	27
Share	70%	26%	4%	100%

- The above table shows that 70% of the Major and Medium Irrigation (MMI) projects in J&K are based on the Diversion irrigation system, while 26% are Lift Irrigation projects.

We can conclude that Diversion and Lift Irrigation take up the bulk of the total types of projects.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above graph shows the relative contribution of Major and Medium Irrigation projects to the total irrigation potential in the J&K. Medium projects account for a slightly larger share, contributing 54% of the total Irrigation Potential Created (IPC) and 52% of the total Irrigation Potential Utilised (IPU), while Major projects contribute 46% and 48% respectively. This indicates that Medium Irrigation projects, despite typically covering smaller command areas individually, collectively play a marginally greater role than Major projects in building and utilising irrigation potential across the State, reflecting a fairly balanced contribution from both categories towards overall irrigation development.

E. Season wise Contribution of project in Irrigation

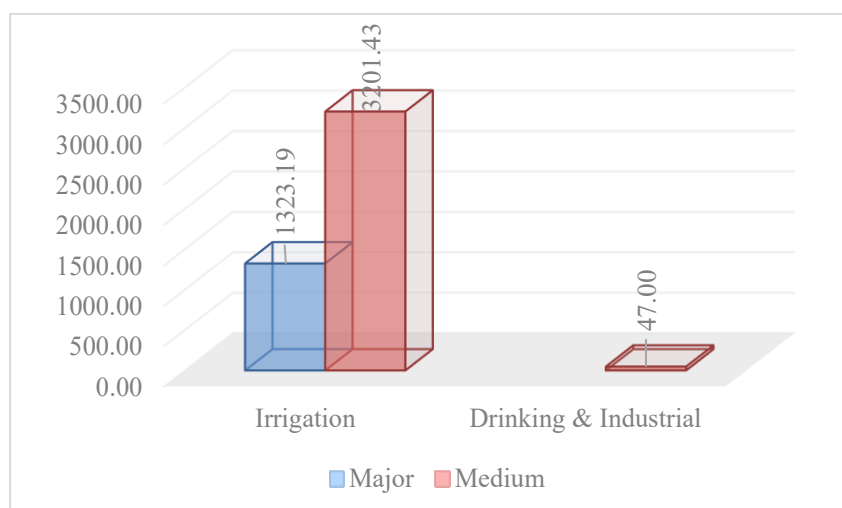
- Irrigation (MMI) projects in the State are primarily utilised during the Kharif and Rabi seasons. The Kharif season accounts for the largest share of irrigation utilisation (57.86% of IPC), followed by the Rabi season (36.35% of IPC), together making up nearly the entire irrigation potential utilised. Utilisation during Bi-Seasonal and Summer Season (Zaid) periods remains negligible, at 0.04% and 0.01% respectively, while no utilisation is recorded under the Perennial or Other categories. The predominance of Kharif irrigation reflects the State's cropping pattern and the high-water demand during the monsoon cultivation period, while the notable share during Rabi highlights the continued importance of irrigation in supporting dry-season agriculture and sustaining overall agricultural productivity.

Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	28.17	31.81	0	0	0	0	59.98
Medium	49.28	16.85	0.05	0	0.02	0	66.20
Total	77.45	48.66	0.05	0	0.02	0	126.18
Share w.r.t IPC	57.86%	36.35%	0.05%	0%	0.01%	0%	94.25%

F. Water Utilisation

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of water utilisation, Medium Irrigation projects account for a significantly larger share of water used for irrigation, utilising 3,201.43 Mcm compared to 1,323.19 Mcm by Major Irrigation projects, out of a total of 4,524.62 Mcm. This means Medium projects contribute nearly 71% of the total irrigation water utilisation, over two-and-a-half times that of Major projects. This may be attributed to the larger number of Medium projects in the State, which collectively serve a wider spread of command areas despite each individual project being smaller in scale compared to Major projects.

G. Associated Program

- None of the Major Irrigation projects come under a different program while only 1 out of 24 Medium Projects comes under a different program. The area is negligible with only 0.04 Th. Ha. coming under Tribal area in the State.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	3	0				
Medium	24	1				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	0	0	0	0	0
Medium	0	0	0.04	0	0

H. Irrigation Method

- All 27 Major and Medium Irrigation (MMI) projects enumerated in J&K employ the flood irrigation method for irrigating agricultural lands. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the State. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions.

I. CAD, CADWM, WUA

- None out of the 3 Major projects come under CAD or CADWM, while 4 of the 24 medium projects come under CAD with majority of the area coming under CADWM.
- Water Users' Associations (WUAs) have not been constituted for any projects in the State.

Table 6: CAD, CADWM and WUA wise Status of Projects

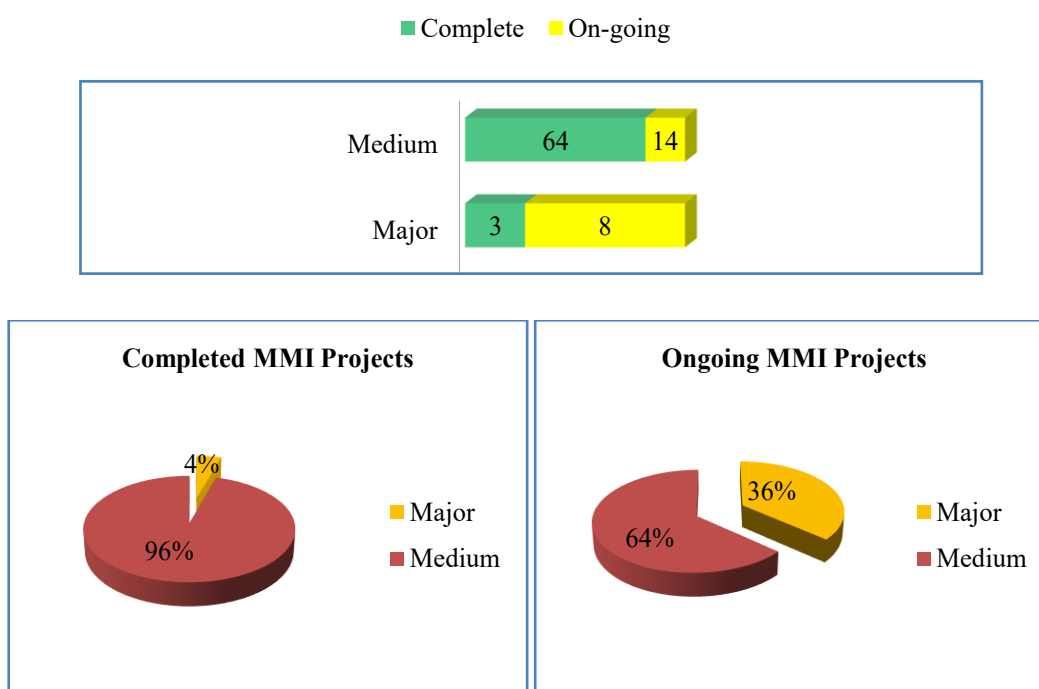
Projects	Number With Methods of Irrigation					Details of WUA		
	Total Number Project	Number of Project	Area of CAD Work Executed from State Govt Funding (in 000'ha)	Area Covered Under CADWM (in 000'ha)	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'Ha)	Numbers of Members
Major	3	0	0	0	0	0	0	0
Medium	24	4	0.42	9.69	0	0	0	0

Jharkhand

- The State of Jharkhand covers a total area of 79,716 square kilometers. This makes it India's 15th largest state by area. Total number of districts is twenty-four.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 89 Major and Medium Irrigation projects were enumerated in Jharkhand. Of these, 11 are Major Irrigation projects and the remaining 78 are Medium Irrigation projects, showing that Medium projects make up the bulk of the State's MMI infrastructure. This census data will help in planning, monitoring and better management of irrigation infrastructure, and in taking informed decisions for development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (Number)



- Out of the total 89 Major and Medium Irrigation (MMI) projects enumerated in Jharkhand, 67 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. These completed projects comprise 3 Major Irrigation projects and 64 Medium Irrigation projects. The remaining 22 projects are currently under implementation, consisting of 8 Major Irrigation projects and 14 Medium Irrigation projects.
- Out of the 11 Major Irrigation projects enumerated in Jharkhand, 8 projects have been developed exclusively for irrigation purposes, while 3 projects serve as multipurpose projects, catering to irrigation along with other objectives such as flood control, water supply, or hydropower generation. Among the 78 Medium Irrigation projects, 74 are exclusively intended for irrigation, while the remaining 4 are multipurpose. This indicates that irrigation remains the primary objective of the State's Major and Medium

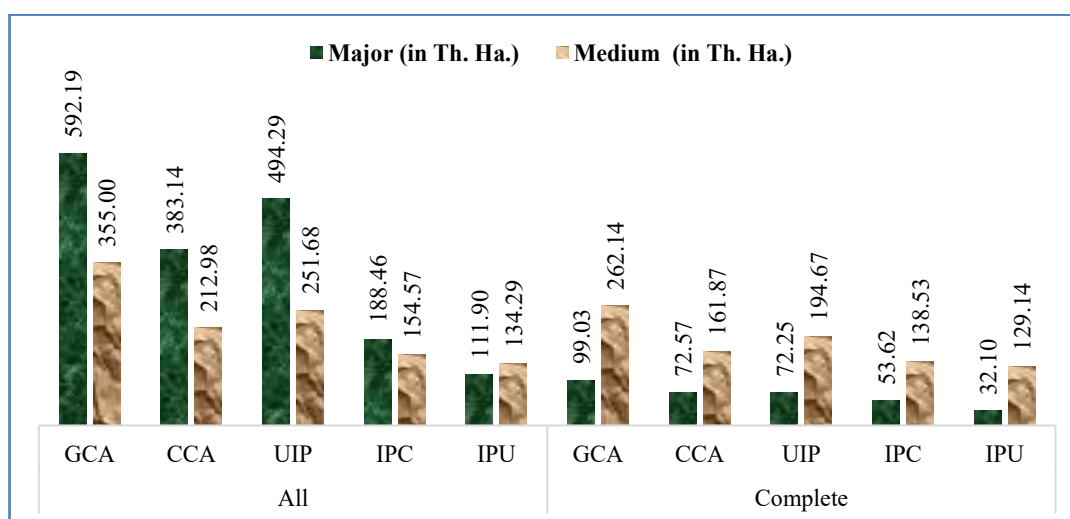
Irrigation infrastructure, with only a limited number of projects designed to provide multiple benefits.

Table1: Nature of Project (number)

Nature of Project	Major	Medium	Total
Irrigation	8	74	82
Multipurpose	3	4	7
Total	11	78	89

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that completed Major and Medium Irrigation (MMI) projects in Jharkhand show markedly different levels of utilization. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 60% of the Irrigation Potential Created (IPC), indicating considerable scope for improving the use of already-created infrastructure. In comparison, the completed Medium Irrigation projects have utilized about 93% of the Irrigation Potential Created, reflecting a much higher level of utilization. This suggests that Medium Irrigation projects in the State are, on the whole, being used closer to their full potential than Major Irrigation projects.

C. Type of Project

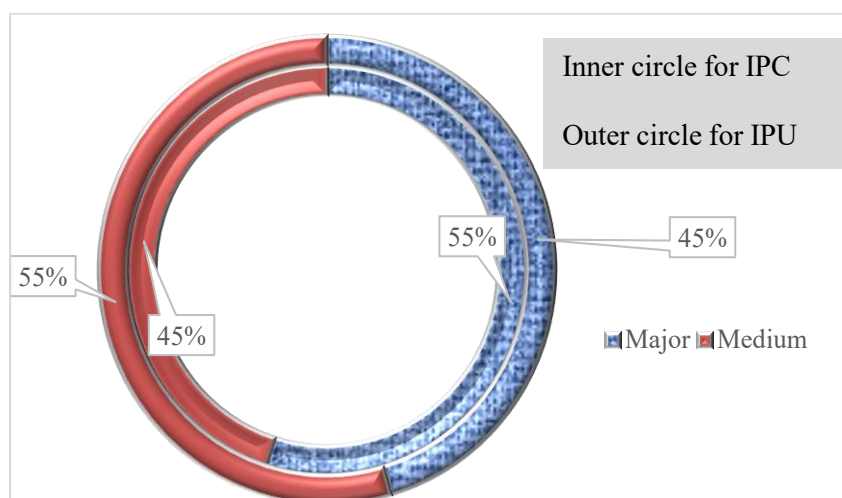
Table 2: Number & Share of different type of project

Nature of MMI project	Storage	Diversion	Lift irrigation	Storage & Diversion	Storage & Lift irrigation	Diversion & Lift irrigation	Storage & Diversion & Lift irrigation	Other	Total
Major	3	4	1	2	0	0	1	0	11
Medium	43	25	1	3	0	0	0	6	78
Total	46	29	2	5	0	0	1	6	89
Share	52%	33%	2%	6%	0%	0%	1%	7%	100%

- The above table shows that 52% of the Major and Medium Irrigation (MMI) projects in Jharkhand are based on the Storage irrigation system, while 33% are Diversion-based. The remaining projects are spread across Lift Irrigation (2%), combined Storage & Diversion systems (6%), and other methods (7%) etc.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart illustrates that Medium Irrigation projects account for 55% of the total Irrigation Potential Utilized (IPU) in Jharkhand, while Major Irrigation projects contribute the remaining 45%. This indicates that, unlike many other States, Medium Irrigation projects play a marginally larger role than Major projects in providing irrigation to agricultural lands in Jharkhand. Nonetheless, both categories make a substantial and fairly balanced contribution towards irrigation coverage in the State.

E. Season wise Contribution of project in Irrigation

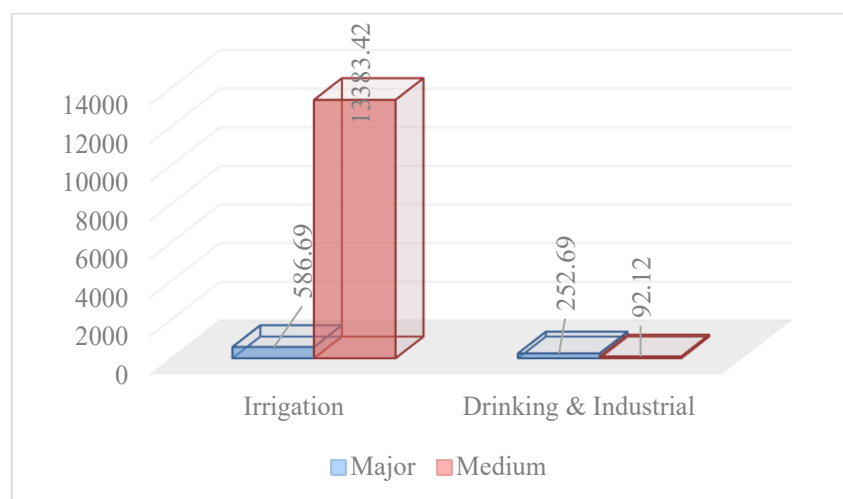
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	108.10	3.80	0	0	0	0	111.90
Medium	123.92	10.37	0	0	0	0	134.29
Total	232.01	14.17	0	0	0	0	246.19
Share w.r.t IPC	67.6%	4.1%	0%	0%	0%	0%	71.8%

- Almost all Major and Medium Irrigation (MMI) projects in Jharkhand are utilized for irrigation during the Kharif season, which accounts for the overwhelming share of irrigation utilization (67.6% of IPC), while the Rabi season accounts for very less share (4.1% of IPC). This strong Kharif-season dominance reflects the State's heavy dependence on monsoon-based cultivation and indicates significant scope for expanding irrigation-supported cultivation during the Rabi (dry) season.

F. Water Utilisation

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of overall water utilization, Medium Irrigation projects account for a substantially larger volume of water (13,383.42Mcm) compared to Major Irrigation projects (586.69Mcm). Major Irrigation projects, while utilizing far less water overall, show a comparatively more diversified use. However, when it comes to Drinking & Industrial use, the trend reverses: Major Irrigation projects contribute a higher volume (252.69 Mcm) than Medium Irrigation projects (92.12 Mcm).

G. Associated Program

- Out of the 11 Major Irrigation projects enumerated in Jharkhand, only 1 project (a multipurpose project) is covered under a special programme — spanning both the Tribal Area Programme (29.12 thousand ha) and the Left Wing Extremism (LWE) Affected Area category (12.06 thousand ha). Among the 78 Medium Irrigation projects, 4 irrigation projects are covered under the Tribal Area Programme (2.84 thousand ha), while the remaining projects are not covered under any specific programme. The programme-wise and area-wise distribution of these projects is presented in Table 4 & Table 5.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	11	1				
Medium	78	4				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	0	0	29.12	0	12.06
Medium	0	0	2.84	0	0

H. Irrigation Method

- All 89 Major and Medium Irrigation (MMI) projects enumerated in Jharkhand employ the flood irrigation method for irrigating agricultural lands. In addition, 1 of these projects also employs drip micro-irrigation on a limited area, while sprinkler irrigation is not used in any project. This indicates that flood irrigation is overwhelmingly the predominant irrigation practice adopted across MMI projects in the State, reflecting its suitability for the prevailing cropping patterns and field conditions.

I. CAD, CADWM, WUA

- None of the 11 Major Projects in Jharkhand have undertaken Command Area Development (CAD) works, whereas 2 out of the 78 Medium Projects are covered under the programme, with 9.56 thousand ha of CAD work executed from State Government funding, of which 8.65 thousand ha is covered under CADWM.

- Water Users' Associations (WUAs) have been constituted for 1 Major Project and 1 Medium Project. A total of 48 WUAs have been formed under the Major Project, covering 29.03 thousand ha, compared to just 1 WUA under the Medium Project, covering 6.07 thousand ha with 12 registered members.

Table 6: CAD, CADWM and WUA wise Status of Projects

Project	Total Number Project	Number With Methods of Irrigation			Details of WUA			
		Number of Project	Area of CAD Work Executed from State Govt Funding ((in 000'ha))	Area Covered Under CADWM ((in 000'ha))	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000' Ha)	Numbers of Members
Major	11	0	0	0	1	48	29.03	0
Medium	78	2	9.56	8.65	1	1	6.07	12

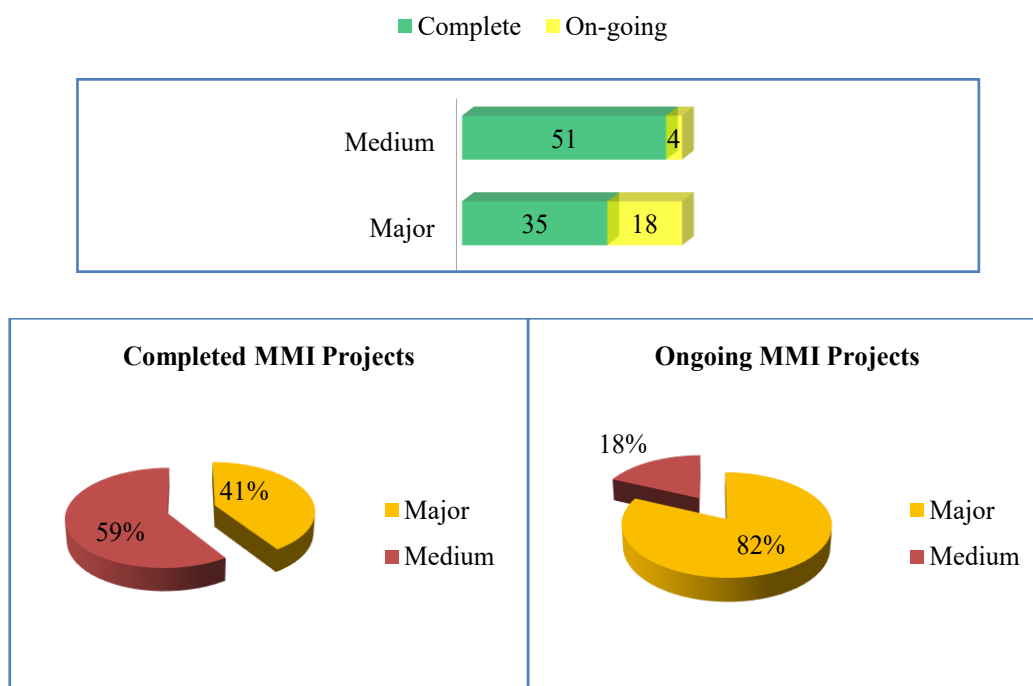
KARNATAKA

- Karnataka has a geographical area of 191,791 square kilometers and comprises 31 districts. The State has a diverse topography and river basin system, making irrigation infrastructure an important component of agricultural development and water resource management.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 108 MMI projects were enumerated in the State. Of these, 53 are Major Irrigation Projects and 55 are Medium Irrigation Projects.

A. Completion Status

- Out of the 108 Major & Medium Irrigation (MMI) Projects enumerated in Karnataka, 86 projects have been completed, comprising 35 Major Projects and 51 Medium Projects. The remaining 22 projects are under implementation, of which 18 are Major Projects and 4 are Medium Projects. This indicates that while a substantial proportion of the Medium Projects have been completed, a significant number of Major Projects are still in various stages of construction.

Chart 1: Distribution of Major and Medium Projects.



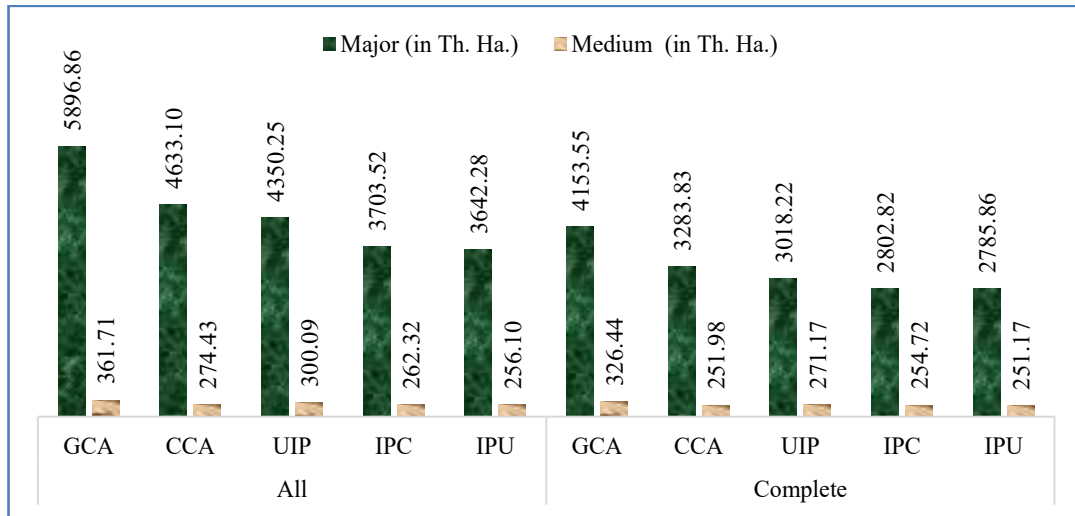
- Among the 53 Major Irrigation Projects enumerated in Karnataka, 35 projects are exclusively intended for irrigation, while the remaining 18 projects are multipurpose in nature, serving irrigation along with other functions such as hydropower generation, drinking water supply, flood control, or other water resource needs. Among the 55 Medium Irrigation Projects, 48 projects are exclusively meant for irrigation, indicating that the primary objective of most Medium Projects in the State is to support agricultural irrigation.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	35	48
Multipurpose	18	7
Total	53	55

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all the completed Major and Medium Irrigation (MMI) Projects are effectively contributing to irrigation development in the State in terms of both Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU). Among the completed Major Projects, more than 99.39% of the irrigation potential created has been successfully utilized, reflecting their efficient operation and optimum utilization. Similarly, the completed Medium Projects have achieved an irrigation potential utilization of over 98.60% of the potential created. These high utilization levels demonstrate the effective performance of the completed irrigation projects and their significant contribution towards enhancing agricultural productivity and water resource management in Karnataka.

C. Type of Project

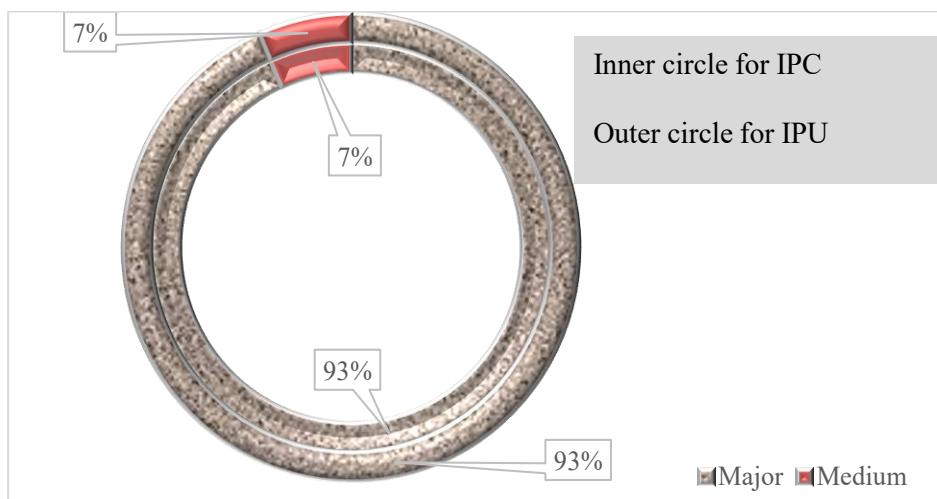
Table 2: Number & Share of different type of project

Project	Storage	Diversion	Lift irrigation	Storage & Diversion	Storage & Lift irrigation	Diversion & Lift irrigation	Storage & Diversion & Lift irrigation	Other	Total
Major	13	8	20	4	2	0	0	6	53
Medium	29	15	8	0	0	1	0	2	55
Total	42	23	28	4	2	1	0	8	108
Share	39%	21%	26%	4%	2%	1%	0%	7%	100%

- The above table shows that 39% of the Major and Medium Irrigation (MMI) Projects in Karnataka are Storage-type irrigation systems, 26% are Lift Irrigation type while 21% are Diversion-type projects.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart indicates that Major Irrigation Projects account for 93% of the total Irrigation Potential Utilized (IPU) in Karnataka, while Medium Irrigation Projects contribute the remaining 7%. This highlights the dominant role of Major Projects in the State's irrigation sector, reflecting their larger command area and greater capacity to provide irrigation benefits compared to Medium Projects.

E. Season wise Contribution of Project in Irrigation

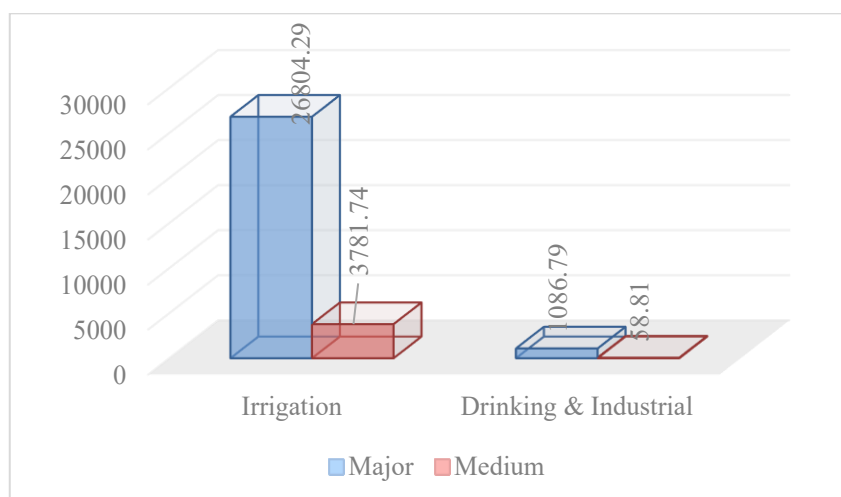
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	2115.67	1112.51	236.57	40.39	133.10	4.05	3642.28
Medium	182.33	51.15	10.72	11.01	0.63	0.27	256.10
Total	2298.00	1163.66	247.29	51.40	133.72	4.31	3898.38
Share w.r.t IPC	57.9%	29.3%	6.2%	1.3%	3.4%	0.1%	98.3%

- The above analysis shows that the Major and Medium Irrigation (MMI) Projects in Karnataka are utilized predominantly during the Kharif season, accounting for 57.9% of IPC, followed by the Rabi season with 29.3% of IPC. Although irrigation demand is highest during the Kharif and Rabi cropping seasons, these projects continue to support agricultural activities and other water requirements throughout the year, ensuring a reliable and sustained water supply across all seasons.

F. Water Utilisation

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- As expected, Major Irrigation Projects account for a substantially higher volume of water utilized for irrigation than Medium Irrigation Projects. This is primarily due to their larger storage capacity, wider command area, and greater irrigation potential, enabling them to supply water to a significantly larger agricultural area.

G. Associated Program

- Among the 35 completed Major Irrigation Projects in Karnataka, 18 projects are covered under the Drought Prone Area Programme (DPAP). In contrast, among the 51 completed

Medium Irrigation Projects, only 4 projects are covered under any development programme. The programme-wise distribution indicates that a larger proportion of Major Projects have been implemented in drought-prone regions to enhance irrigation facilities and improve water security. The area-wise coverage of these projects under different programmes is presented in Table 4 & Table 5.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	53	18				
Medium	55	4				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	876.03	0	0	0	0
Medium	25.56	0	0	0	0

H. Irrigation Method

Table 6: Number of Project by Method of Irrigation

Total Number Projects	Number With Methods of Irrigation			Area Cover by Methods of Micro Irrigation (in 000'ha)
	Flood Irrigation	DRIP	Sprinkler	DRIP/ Sprinkler
108	102	6	2	413.81
108	102	6	2	413.81

- Out of the 108 Major and Medium Irrigation Projects covered under the census, 102 projects are utilizing the conventional flood irrigation method. In addition, 6 projects have adopted drip irrigation, while 2 projects are using the sprinkler irrigation method. The predominance of flood irrigation indicates that it continues to be the principal irrigation practice in the State, whereas the limited adoption of drip and sprinkler systems suggests less incorporation of water-efficient irrigation technologies.

I. CAD, CADWM, WUA

- Out of the Major Irrigation Projects, 18 projects are covered under the Command Area Development (CAD) programme. The area where CAD works have been executed

through State funding is 805.04 thousand hectares, while 276.67 thousand hectares are covered under the Command Area Development and Water Management (CADWM) programme.

- Similarly, 14 Medium Irrigation Projects are covered under the CAD programme. The area where CAD works have been executed through State funding is 67.56 thousand hectares, whereas 13.52 thousand hectares are covered under the CADWM programme

Table 7: CAD, CADWM and WUA wise Status of Projects

Projects	Total Number Project	Number With Methods of Irrigation			Details of WUA			
		Number of Project	Area of CAD Work Executed from State Govt Funding (in 000'ha)	Area Covered Under CADWM (in 000'ha)	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'Ha)	Numbers of Members
Major	53	18	805.04	276.67	34	3989	1901.50	864702
Medium	55	14	67.56	13.52	29	211	97.68	363281

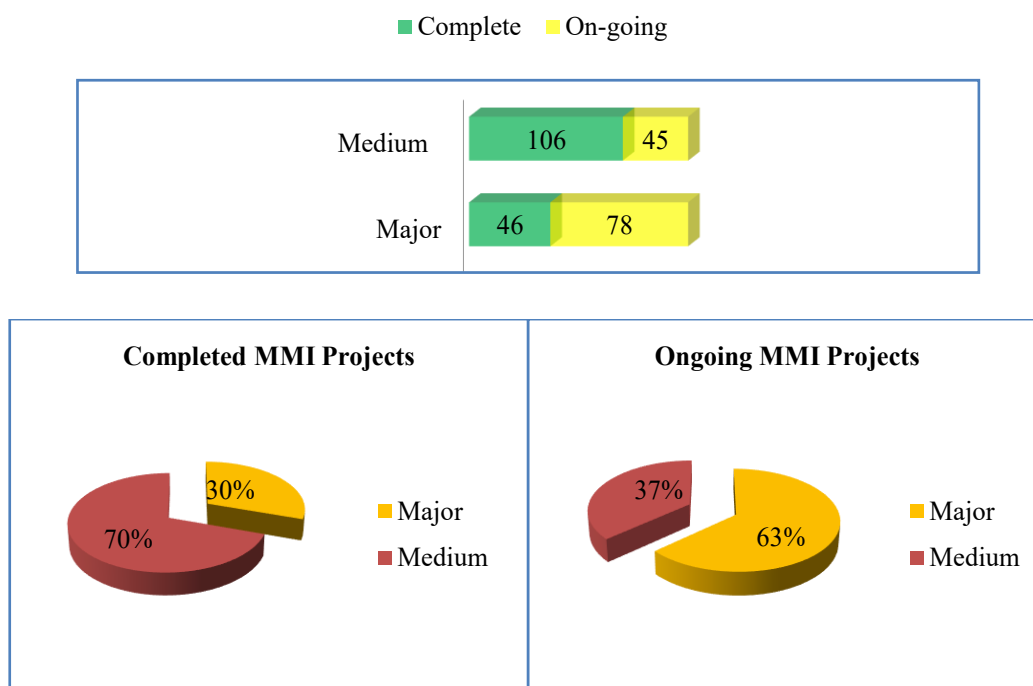
- A total of 3,989 Water Users' Associations (WUAs) have been formed for 34 Major Irrigation Projects. The formation of these WUAs reflects a strong emphasis on participatory irrigation management, enabling farmers to take an active role in the operation, maintenance, and equitable distribution of irrigation water within the command areas.
- Similarly, 211 Water Users' Associations (WUAs) have been formed for 29 Medium Irrigation Projects. Although the number of WUAs is comparatively lower than that for Major Projects, their establishment promotes community participation in irrigation management and contributes to the efficient utilization, maintenance, and sustainable management of irrigation systems.

Madhya Pradesh

- The total geographical area of Madhya Pradesh is 3,08,252 square kilometers, making it the second-largest state in India by size. Total number of districts is fifty-five.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 275 Major and Medium Irrigation projects were enumerated in Madhya Pradesh. Of these, 124 projects are classified as Major Irrigation projects, while the remaining 151 are categorized as Medium Irrigation projects. This distribution indicates that medium irrigation projects constitute a larger share of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (number).



- Out of the total 275 Major and Medium Irrigation (MMI) projects enumerated in Madhya Pradesh, 152 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. These completed projects comprise 46 Major Irrigation projects and 106 Medium Irrigation projects. The remaining 123 projects are currently under implementation, consisting of 78 Major Irrigation project and 45 Medium Irrigation project.
- Out of the 124 Major Irrigation projects enumerated in Madhya Pradesh, 84 projects have been developed exclusively for irrigation purposes, while 40 projects serve as a multipurpose project, catering to irrigation along with other objectives such as flood

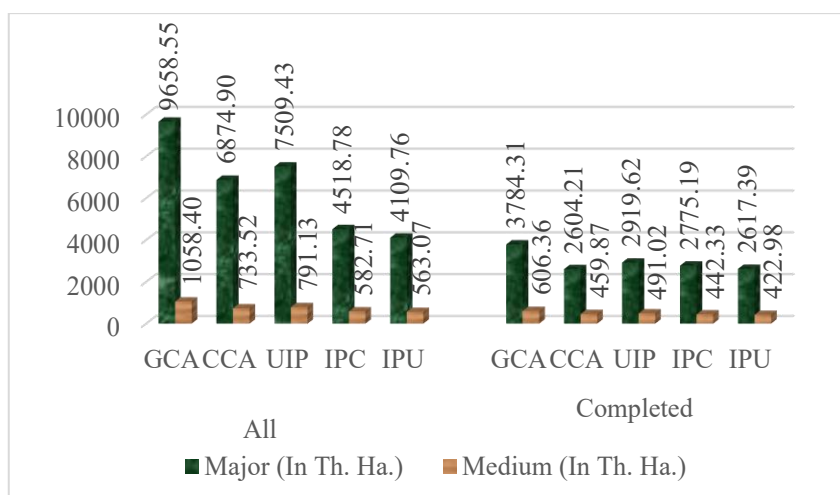
control, water supply, or hydropower generation. 112 Medium Irrigation projects are exclusively intended for irrigation. This indicates that irrigation remains the primary objective of the State's Major and Medium Irrigation infrastructure, with only a limited number of projects designed to provide multiple benefits.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	84	112
Multipurpose	40	39
Total	124	151

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all completed Major and Medium Irrigation (MMI) projects in Madhya Pradesh are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 94.31% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. In comparison, the completed Medium Irrigation projects have utilized about 95.63% of the Irrigation Potential Created. While both categories are contributing significantly to irrigation, the relatively lower utilization in Major Irrigation projects suggests scope for improving the efficient use of the irrigation potential already created through better water management, distribution systems, and agricultural practices.

C. Type of Project

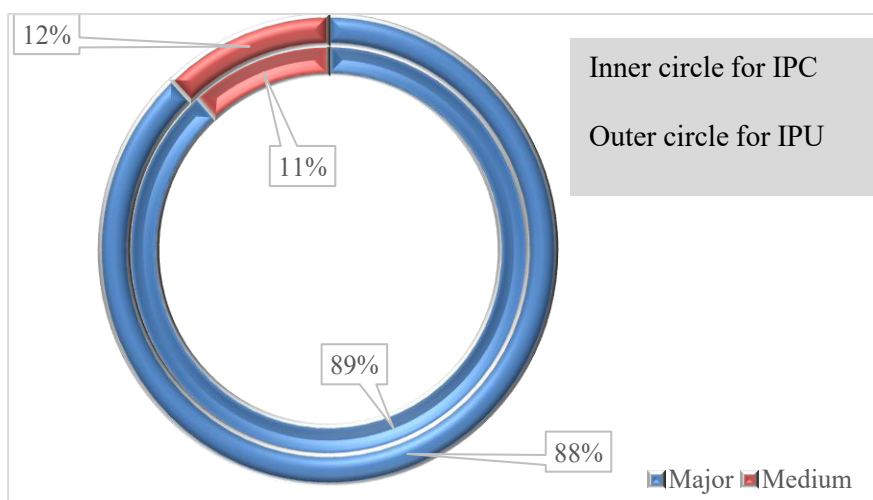
Table 2: Share of different type of project (number)

Project	Storage	Diversio n	Lift irrigatio n	Storage & Diversion	Storage & Lift irrigation	Storage, Diversion & Lift irrigation	Other	Total
Major	32	7	58	0	18	1	8	124
Medium	97	1	35	1	11	0	6	151
Total	129	8	93	1	29	1	14	275
Share	46.91%	2.91%	33.82%	0.36%	10.55%	0.36%	5.09%	100%

- The distribution of Major and Medium Irrigation (MMI) projects in Madhya Pradesh shows that Storage-type irrigation systems constitute the largest share, accounting for 46.91% of all projects. These projects primarily rely on reservoirs and dams to store water and ensure a dependable supply for irrigation during different cropping seasons. The Lift Irrigation system is the second most prevalent category, comprising 33.82% of the MMI projects. These projects involve lifting water from rivers, reservoirs, or other water sources to irrigate areas located at higher elevations where gravity flow is not feasible. The remaining projects fall under other irrigation system types, reflecting the diverse irrigation infrastructure across the State.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart shows that Major Irrigation projects account for 88% of the total Irrigation Potential Utilized (IPU) in Madhya Pradesh, while Medium Irrigation projects contribute the remaining 12%. This indicates that Major Irrigation projects play a dominant role in providing irrigation to agricultural lands, owing to their larger command areas and higher irrigation potential. Although Medium Irrigation projects contribute a comparatively smaller share, they continue to play an important role in

extending irrigation facilities, particularly in localized areas. Together, both categories of projects make a significant contribution towards enhancing irrigation coverage and supporting agricultural production in the State.

E. Season wise Contribution of project in Irrigation

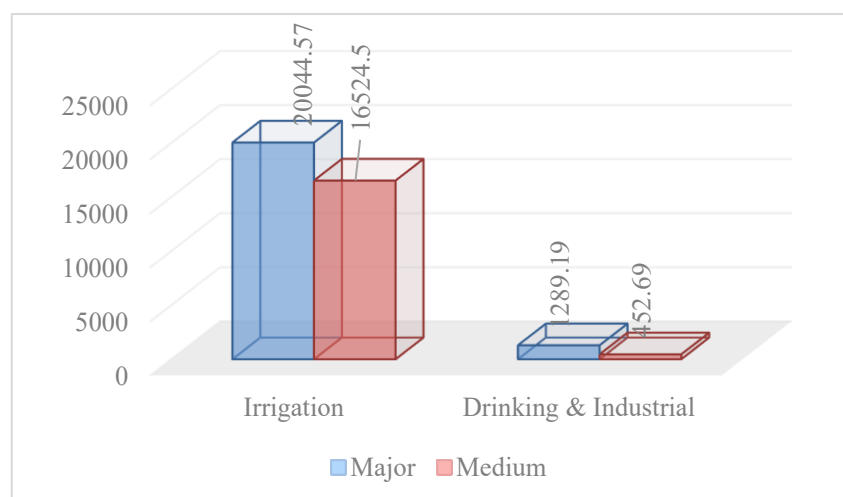
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	330.64	3665.89	8.48	4.68	10.54	89.54	4109.76
Medium	68.77	494.25	0	0	0.05	0	563.07
Total	399.41	4160.14	8.48	4.68	10.59	89.54	4672.83
Share w.r.t IPC	7.83%	81.55%	0.17%	0.09%	0.21%	1.76%	91.60%

- All Major and Medium Irrigation (MMI) projects in Madhya Pradesh are primarily utilized for irrigation during the Kharif and Rabi seasons. The Rabi season accounts for the largest share of irrigation utilization (81.6% of IPC), followed by the Kharif season (7.8% of IPC). The remaining irrigation potential is utilized during other cropping seasons such as Summer Season. The predominance of Rabi season highlights the importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity, while substantial utilization during the Kharif irrigation reflects the State's cropping pattern and the high demand for water during the monsoon cultivation period.

F. Water Utilization

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of irrigation, Major Irrigation projects utilize a significantly larger volume of water than Medium Irrigation projects, as expected due to their larger storage capacities,

command areas, and irrigation potential. Major projects are designed to serve extensive agricultural areas and therefore account for a greater share of water utilization for irrigation.

G. Associated Program

- Out of the 124 Major Irrigation projects enumerated in Madhya Pradesh, 30 is covered under a few special programs. 24 out of the 151 Medium Irrigation projects are covered under some special program. The program-wise and area-wise distribution of these projects is presented in Table 4 & Table 5.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	124	30				
Medium	151	24				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Bundelkhand Region of Madhya Pradesh & Uttar Pradesh
Major	493.68	0	828.34	0	0
Medium	28.10	0	92.10	0	2.43

H. Irrigation Method

- Out of the 275 Major and Medium Irrigation (MMI) projects enumerated in Madhya Pradesh, 154 projects use flood irrigation. Among these, 64 projects also use drip irrigation and 114 projects use sprinkler irrigation. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the state. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions. But efficient irrigation methods which prevents wastage of water are also employed which includes DRIP and Sprinkler Irrigation.

Table 6: Number of Project by Method of Irrigation

Total Number Projects	Number With Methods of Irrigation			Area Cover by Methods of Micro Irrigation (in 000'ha)
	Flood Irrigation	DRIP	Sprinkler	DRIP/ Sprinkler
275	154	64	114	4562.93

I. CAD, CADWM, WUA

- Out of the 124 Major Projects, 21 are covered under the Command Area Development (CAD) Program, while only 17 out of the 151 Medium Projects are covered under the program. The corresponding area coverage is presented below.
- Water Users' Associations (WUAs) have been constituted for 30 Major Projects and 60 Medium Projects. A total of 1015 WUAs have been formed under the Major Projects, compared to only 215 WUAs under the Medium Projects.

Table 7: CAD, CADWM and WUA wise Status of Projects

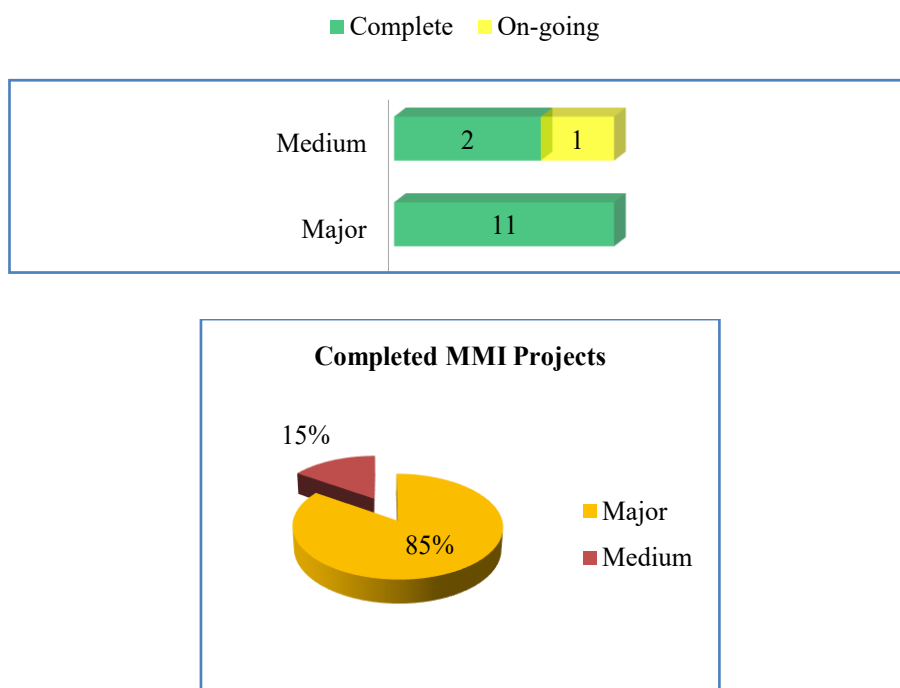
Projects	Total Number Project	Number With Methods of Irrigation			Details of WUA			
		Number of Project	Area of CAD Work Executed from State Govt Funding (in 000'ha)	Area Covered Under CADWM (in 000'ha)	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'Ha)	Numbers of Members
Major	124	21	549.47	284.69	30	1015	2032.28	240605
Medium	151	17	46.99	63.93	60	215	311.41	26208

Punjab

- The State of Punjab covers a total area of 50,362 square kilometers. Total number of districts is twenty-three.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 14 Major and Medium Irrigation projects were enumerated in Punjab. Of these, 11 projects are classified as Major Irrigation projects, while the remaining 3 are categorized as Medium Irrigation projects. This distribution indicates that major irrigation projects constitute a larger share of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (Number)



- Out of the total 14 Major and Medium Irrigation (MMI) projects enumerated in Punjab, 13 projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State. These completed projects comprise 11 Major Irrigation projects and 2 Medium Irrigation projects. The remaining 1 project is currently under implementation, consisting of 1 Medium Irrigation project.
- Out of the 11 Major Irrigation projects enumerated in Punjab, 8 projects have been developed exclusively for irrigation purposes, while 3 project serves as a multipurpose project, catering to irrigation along with other objectives such as flood control, water supply, or hydropower generation. While in the case of Medium Irrigation Projects, 1 projects have been developed for Irrigation purposes, and the other 2 will serves as a

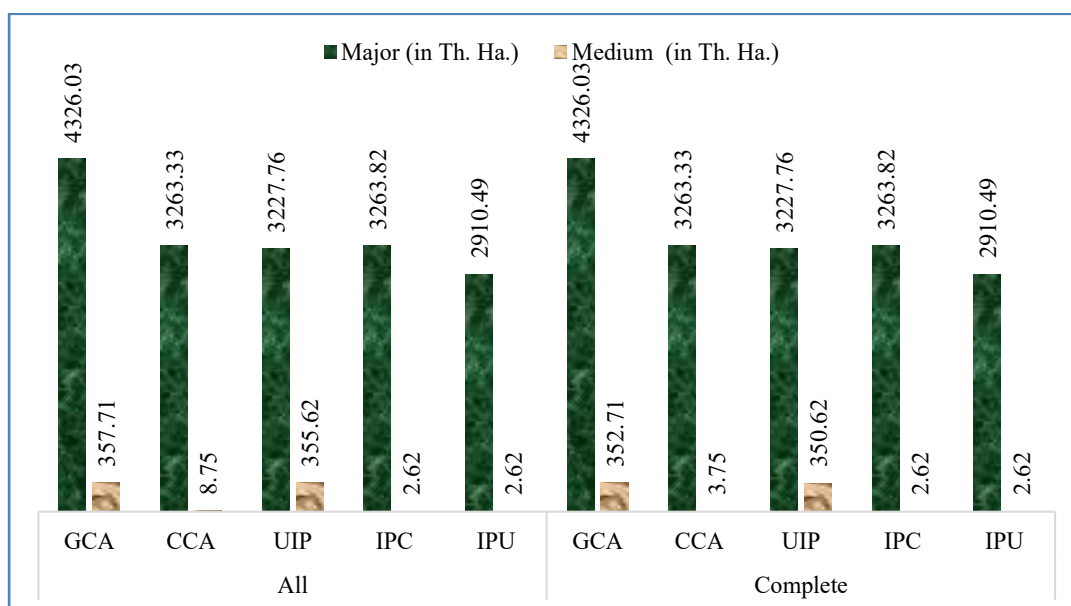
multipurpose project. This indicates that irrigation remains the primary objective of the State's Major irrigation infrastructure, with only a limited number of projects designed to provide multiple benefits. In the case of Medium irrigation project, number of multipurpose projects are higher indicating it will benefit large areas.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	8	1
Multipurpose	3	2
Total	11	3

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all completed Major and Medium Irrigation (MMI) projects in Punjab are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 89% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. In case of Medium Irrigation projects, Irrigation Potential Utilized (IPU) is 100% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. Both categories show remarkable utilization of IPC, but there is still a scope for increase of IPU in case of Major Irrigation Projects.

C. Type of Project

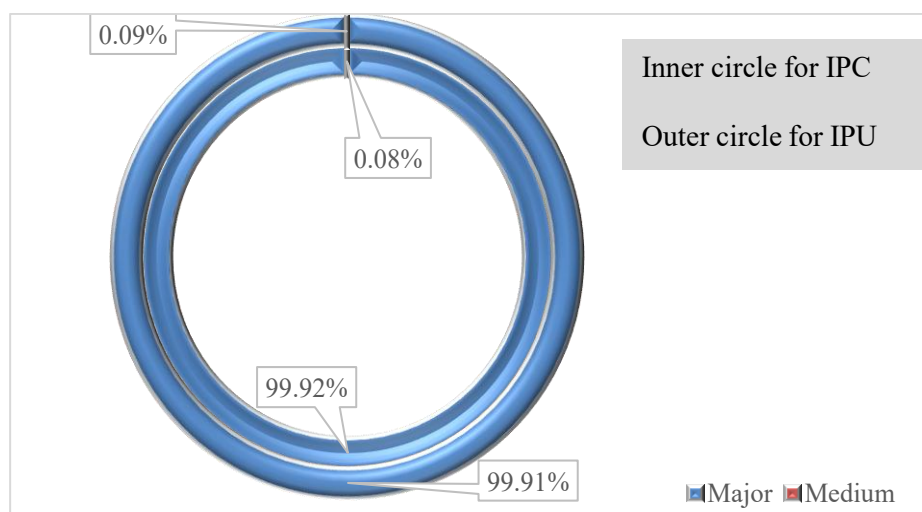
Table 2: Number & Share of different type of project

Nature of MMI project	Storage	Diversion	Storage & Diversion	Diversion & Lift irrigation	Storage & Diversion & Lift irrigation	Other	Total
Major	1	6	1	1	1	1	11
Medium	3	0	0	0	0	0	3
Total	4	6	1	1	1	1	14
Share	29%	43%	7%	7%	7%	7%	100%

- The above table indicates that diversion irrigation systems constitute the predominant type of Major and Medium Irrigation (MMI) projects in Punjab, accounting for 43% of the total projects. These projects primarily divert water from rivers through barrages, headworks, or canal networks to irrigate agricultural land. In contrast, 29% of the MMI projects are based on storage irrigation systems, where water is impounded in reservoirs or dams and released as required for irrigation. The predominance of diversion-based systems reflects Punjab's extensive canal irrigation network, supported by perennial rivers, while storage-based projects complement irrigation by ensuring regulated water availability during periods of low river flow and peak irrigation demand.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart indicates that Major Irrigation Projects accounts for 99.9% of the total Irrigation Potential Utilized in Punjab. This indicates that Major Irrigation projects play a dominant role in providing irrigation to agricultural lands, owing to their larger command areas and higher irrigation potential.

E. Season wise Contribution of project in Irrigation

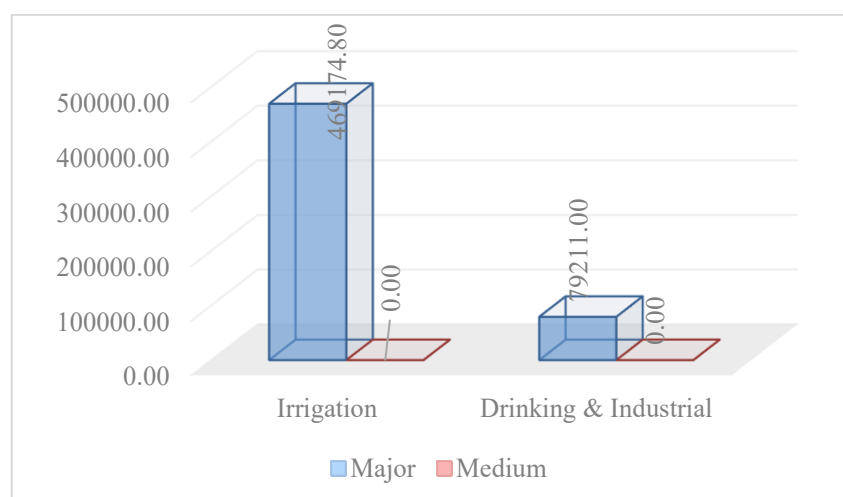
Table 3: Season wise utilization in Irrigation (in Th. Ha.)

Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	1677.15	1233.34	0	0	0	0	2910.49
Medium	0.00	2.62	0	0	0	0	2.62
Total	1677.15	1235.96	0	0	0	0	2913.11
Share w.r.t IPC	51.3%	37.8%	0%	0%	0%	0%	89.2%

- All Major and Medium Irrigation (MMI) projects in Punjab are primarily utilized for irrigation during the Kharif and Rabi seasons. The Kharif season accounts for the largest share of irrigation utilization (51.3% of IPC), followed by the Rabi season (37.8% of IPC). The predominance of Kharif irrigation reflects the State's cropping pattern and the high demand for water during the monsoon cultivation period, while substantial utilization during the Rabi season highlights the importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity.

F. Water Utilization

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of irrigation, Major Irrigation projects utilize a significantly larger volume of water, as expected due to their larger storage capacities, command areas, and irrigation potential. Major projects are designed to serve extensive agricultural areas and therefore account for a greater share of water utilization for irrigation. In terms of drinking and industrial purposes, Major Irrigation projects are solely responsible for provision of

water to consumers. Medium Irrigation projects utilize negligible amount of water for both irrigation, drinking and industrial purposes.

G. Associated Program

- Out of the 11 Major Irrigation projects enumerated in Punjab, none is covered under any special programme. Similarly, out of the 3 Medium Irrigation Projects enumerated in Punjab, none is covered under any special programme.

H. Irrigation Method

- All 14 Major and Medium Irrigation (MMI) projects enumerated in Punjab employ the flood irrigation method for irrigating agricultural lands. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the State. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions.

Table 4: Number of Project by Method of Irrigation

Total Number Projects	Number With Methods of Irrigation			Area Cover by Methods of Micro Irrigation (in 000'ha)
	Flood Irrigation	DRIP	Sprinkler	DRIP/ Sprinkler
14	14	0	0	0
14	14	0	0	0

•

I. CAD, CADWM, WUA

- Out of the 11 Major Projects, 1 is covered under the Command Area Development (CAD) Programme, while none of the 3 Medium Projects are covered under CAD or CADWM. The corresponding area coverage is presented in Table 5
- No Water User Associations (WUA) has been formed for neither the Major Irrigation Project, nor the Medium Irrigation Project.

Table 5: CAD, CADWM and WUA wise Status of Projects

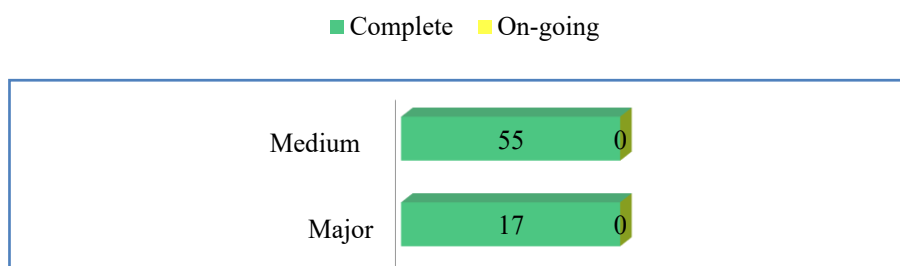
Projects		Number With Methods of Irrigation			Details of WUA			
	Total Number Project	Number of Project	Area of CAD Work Executed from State Govt Funding ((in 000'ha))	Area Covered Under CADWM ((in 000'ha))	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000' Ha)	Numbers of Members
Major	11	1	22.15	0	0	0	0	0
Medium	3	0	0	0	0	0	0	0

Tamil Nadu

- The State of Tamil Nadu covers a total area of 1,30,058 square kilometers. Total number of districts is thirty-eight.
- During the 1st Census of Major & Medium Irrigation (MMI) Projects, a total of 72 Major and Medium Irrigation projects were enumerated in Tamil Nadu. Of these, 17 projects are classified as Major Irrigation projects, while the remaining 55 are categorized as Medium Irrigation projects. This distribution indicates that medium irrigation projects constitute a larger share of the State's MMI infrastructure. The census provides a comprehensive database on these projects, which will support planning, monitoring, efficient management of irrigation infrastructure, and informed decision-making for the sustainable development of water resources in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects (Number).



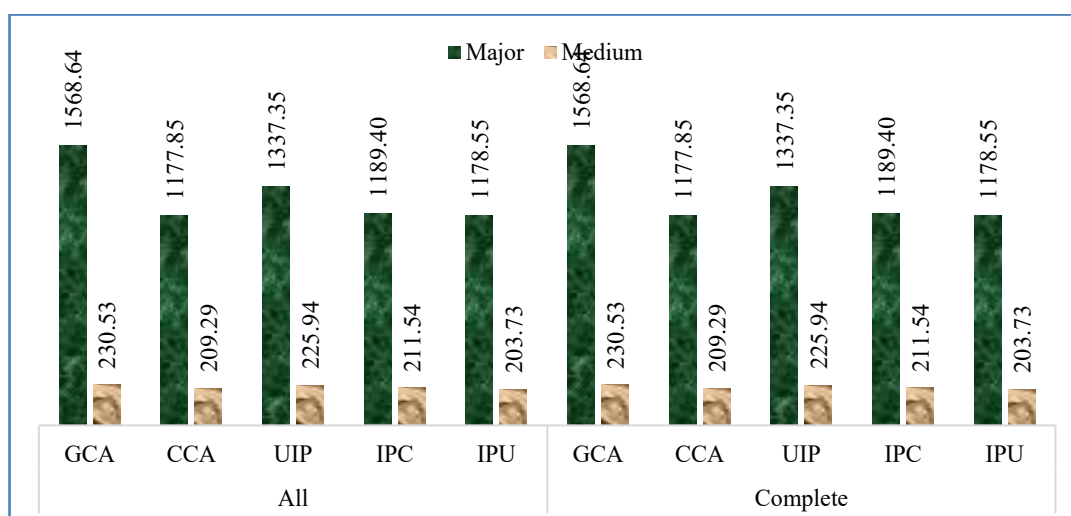
- Out of the total 72 Major and Medium Irrigation (MMI) projects enumerated in Tamil Nadu, all projects have been completed, reflecting substantial progress in the development of irrigation infrastructure in the State.
- Out of the 17 Major Irrigation projects enumerated in Tamil Nadu, 9 projects have been developed exclusively for irrigation purposes, while 8 projects serve as a multipurpose project, catering to irrigation along with other objectives such as flood control, water supply, or hydropower generation. 45 Medium Irrigation projects are exclusively intended for irrigation. This indicates that irrigation remains the primary objective of the State's Major and Medium Irrigation infrastructure, with only a limited number of projects designed to provide multiple benefits.

Table1: Nature of Project (number)

Nature of Project	Major	Medium
Irrigation	9	45
Multipurpose	8	10
Total	17	55

B. Coverage

Chart 2: Contribution of Completed project in total project (in Th. Ha.)



- The above chart indicates that all Major and Medium Irrigation (MMI) projects in Tamil Nadu are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 99% of the Irrigation Potential Created (IPC), reflecting a high level of utilization of the irrigation infrastructure. In comparison, the completed Medium Irrigation projects have utilized about 96% of the Irrigation Potential Created. While both categories are contributing significantly to irrigation, the relatively lower utilization in Medium Irrigation projects suggests scope for improving the efficient use of the irrigation potential already created through better water management, distribution systems, and agricultural practices.

C. Type of Project

Table 2: Share of different type of project (number)

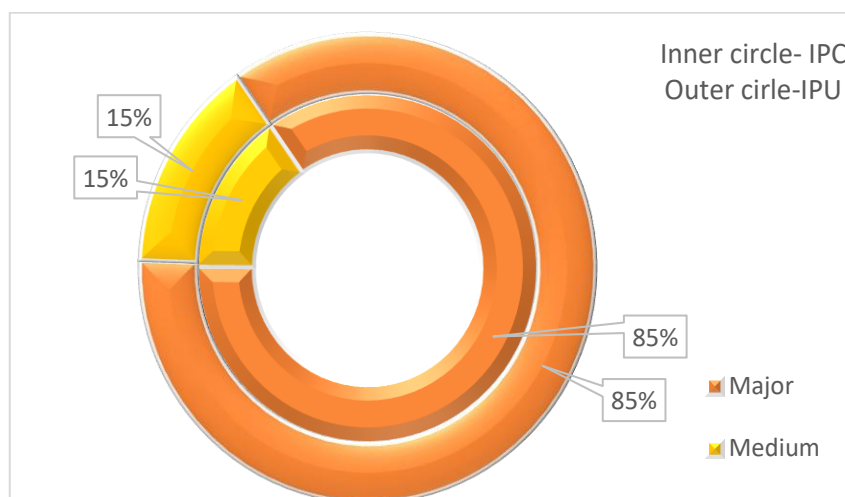
Project	Storage	Diversion	Storage & Diversion	Other	Total
Major	7	6	3	1	17
Medium	36	16	2	1	55
Total	43	22	5	2	72
Share	59.72%	30.55%	6.94%	2.77%	100%

- The distribution of Major and Medium Irrigation (MMI) projects in Tamil Nadu indicates that Storage-type irrigation systems are the predominant category, accounting for 59.7% of all projects. These projects primarily depend on the storage of water in reservoirs, dams, or tanks to ensure a reliable and regulated supply for irrigation throughout the year. In contrast, 30.6% of the MMI projects are Diversion-type irrigation systems, which utilize diversion structures such as barrages, weirs, or anicuts to channel

water directly from rivers and streams into irrigation canals without significant storage. The remaining projects comprise other irrigation system types, reflecting the diversity of irrigation infrastructure in the State.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The above chart shows that Major Irrigation projects account for 85% of the total Irrigation Potential Utilized (IPU) in Tamil Nadu, while Medium Irrigation projects contribute the remaining 15%. This indicates that Major Irrigation projects play a dominant role in providing irrigation to agricultural lands, owing to their larger command areas and higher irrigation potential. Although Medium Irrigation projects contribute a comparatively smaller share, they continue to play an important role in extending irrigation facilities, particularly in localized areas. Together, both categories of projects make a significant contribution towards enhancing irrigation coverage and supporting agricultural production in the State.

E. Season wise Contribution of project in Irrigation

Table 3: Season wise utilization in Irrigation (in Th. Ha.)

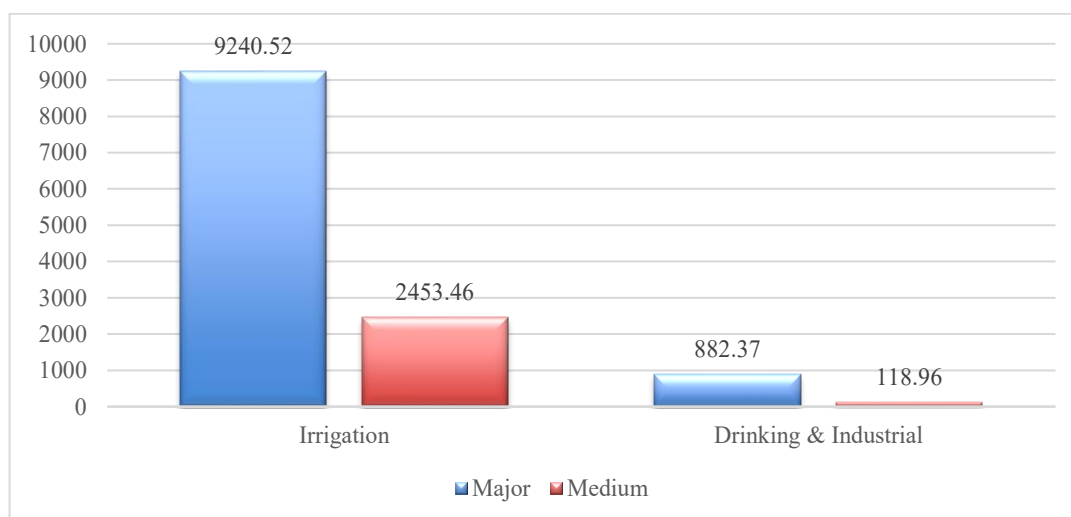
Project	IPU						Total
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	
Major	258.09	579.34	62.49	144.10	41.26	93.29	1178.55
Medium	82.09	78.78	18.67	8.54	0.11	15.55	203.73
Total	340.17	658.11	81.16	152.64	41.36	108.84	1382.28
Share w.r.t IPC	24.28%	46.98%	5.79%	10.90%	2.95%	7.77%	98.67%

All Major and Medium Irrigation (MMI) projects in Tamil Nadu are primarily utilized for irrigation during the Kharif and Rabi seasons. The Rabi season accounts for the largest share of irrigation utilization (46.98% of IPC), followed by the Kharif season (24.28% of IPC).

The remaining irrigation potential is utilized during other cropping seasons. The predominance of Rabi irrigation reflects importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity.

F. Water Utilization

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



- In terms of irrigation, Major Irrigation projects utilize a significantly larger volume of water than Medium Irrigation projects, as expected due to their larger storage capacities, command areas, and irrigation potential. Major projects are designed to serve extensive agricultural areas and therefore account for a greater share of water utilization for irrigation.

G. Associated Program

- Out of the 17 Major Irrigation projects and out of the 55 Medium Irrigation projects enumerated in Tamil Nadu, none is covered under any special programme.

H. Irrigation Method

- Out of the 72 Major and Medium Irrigation (MMI) projects enumerated in Tamil Nadu, 69 projects use flood irrigation. Among these, 3 projects also use drip irrigation system. This indicates that flood irrigation is the predominant irrigation practice adopted across all MMI projects in the State. The widespread use of this conventional method reflects its suitability for the prevailing cropping patterns and field conditions.

I. CAD, CADWM, WUA

- Out of the 17 Major Projects, only 2 are covered under the Command Area Development (CAD) Programme, while no project out of the 55 Medium Projects are covered under the programme. The corresponding area coverage is presented below.
- Water Users' Associations (WUAs) have been constituted for 13 Major Projects and 47 Medium Projects. A total of 1106 WUAs have been formed under the Major Projects, compared to 760 WUAs under the Medium Projects.

Table 4: CAD, CADWM and WUA wise Status of Projects

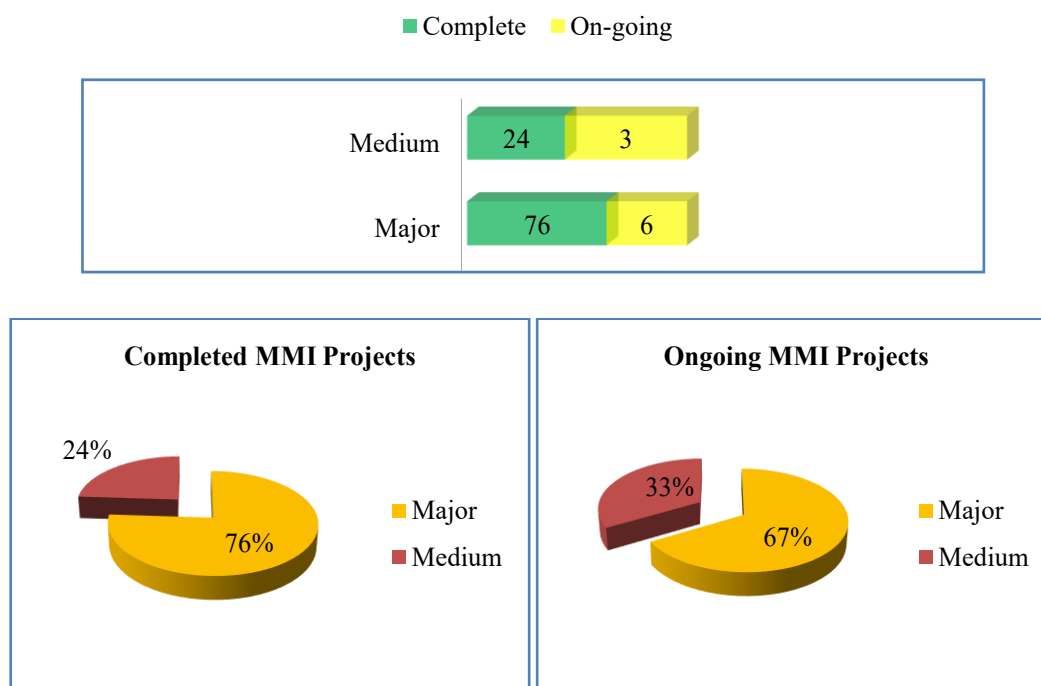
Number With Methods of Irrigation Details of WUA								
Projects	Total Number Project	Number of Project	Area of CAD Work Executed from State Govt Funding (in 000'ha)	Area Covered Under CADWM (in 000'ha)	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000'Ha)	Numbers of Members
Major	17	2	25.17	0	13	1106	600.61	784830
Medium	55	0	0	0	47	760	156.96	520439

Uttar Pradesh

- The State of Uttar Pradesh covers a total area of approximately 2,40,928 square kilometers, with 75 districts. For better administrative governance, these 75 districts are grouped into 18 broader divisions.
- The 1st Census of Major & Medium Irrigation (MMI) Projects enumerated 109 projects in Uttar Pradesh, of which 82 are Major Irrigation projects and 27 are Medium Irrigation projects. Major projects clearly make up the larger share of the State's MMI infrastructure. This project-wise data should be useful for future planning, monitoring, efficient management of irrigation infrastructure and water-resource management decisions in the State.

A. Completion Status

Chart 1: Distribution of Major and Medium Projects.



- Out of the total 109 Major and Medium Irrigation (MMI) projects identified in the State, 100 projects have been completed, indicating significant progress in the development of irrigation infrastructure. The completed projects comprise 76 Major Irrigation projects and 24 Medium Irrigation projects, accounting for nearly 92% of the total projects. The remaining 9 projects, including 6 Major and 3 Medium Irrigation projects, are currently under implementation.
- Of the 82 Major Irrigation projects, 62 are exclusively intended for irrigation purposes, while the remaining 20 are multipurpose projects that also contribute to flood control, water supply, and hydropower generation. Similarly, out of the 27 Medium Irrigation projects, 20 are irrigation-specific and 7 are multipurpose in nature. This indicates that

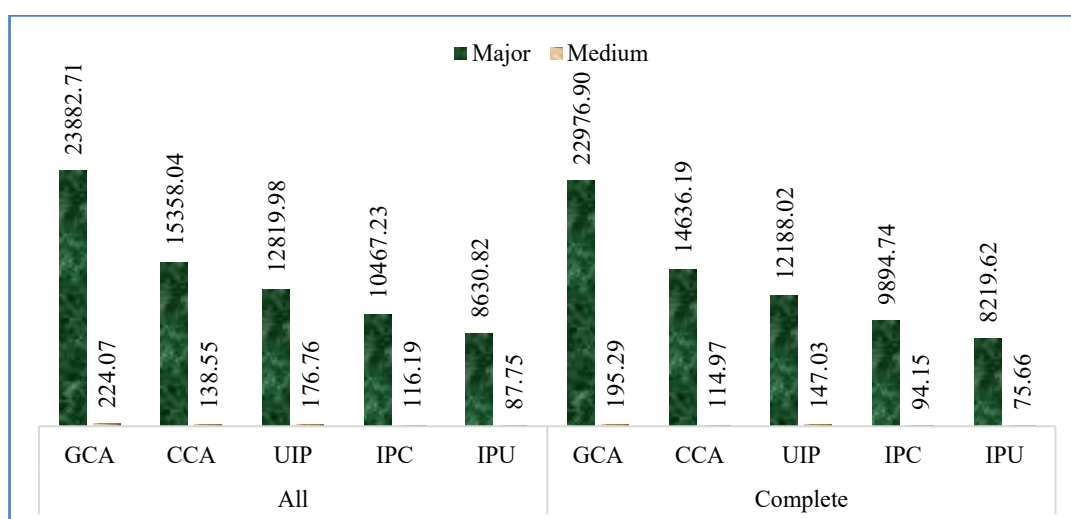
while irrigation remains the primary objective of most projects, a considerable number also provide multiple water resource benefits.

Table1: Nature of Project (number)

Nature of Project	Major	Medium	Total
Irrigation	62	20	82
Multipurpose	20	7	27
Total	82	27	109

B. Coverage

Chart 2: Contribution of completed project in total project (in Th. Ha.)



- The above chart indicates that all completed Major and Medium Irrigation (MMI) projects in Uttar Pradesh are contributing effectively towards irrigation development by creating and utilizing irrigation potential. For the completed Major Irrigation projects, the Irrigation Potential Utilized (IPU) is about 83% of the Irrigation Potential Created (IPC), reflecting a good level of utilization of the irrigation infrastructure. Similarly, the completed Medium Irrigation projects have utilized about 80% of the Irrigation Potential Created, indicating effective use of the available irrigation capacity. While both categories are making a significant contribution to irrigation development, the remaining gap between the irrigation potential created and utilized suggests there is still scope for improving water management, strengthening distribution systems, and promoting efficient agricultural practices to achieve better utilization of the existing irrigation infrastructure.

C. Type of Project

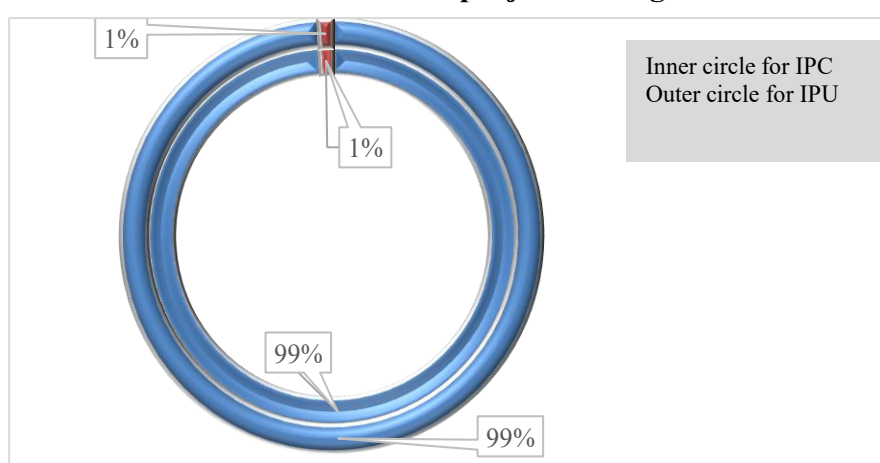
Table 2: Number & Share of different type of project

Nature of MMI project	Storage	Diversion	Lift irrigation	Storage & Diversion	Storage & Lift irrigation	Diversion & Lift irrigation	Storage & Diversion & Lift irrigation	Other	Total
Major	34	20	17	3	1	1	0	6	82
Medium	21	2	3	0	0	0	0	1	27
Total	55	22	20	3	1	1	0	7	109
Share	50%	20%	18%	3%	1%	1%	0%	6%	100%

- The above table shows that Storage type Irrigation Systems constitute the largest share of Major and Medium Irrigation (MMI) projects in Uttar Pradesh, accounting for 50% of the total projects. These projects store water in reservoirs or dams and ensure a regulated supply for irrigation during different crop seasons. Diversion Irrigation Systems account for 20% of the projects, utilizing barrages, weirs, or canal headworks to divert river water directly into canal networks. Lift Irrigation Systems comprise 18% of the projects, where water is mechanically lifted from rivers, canals, or other water sources to irrigate areas located at higher elevations. The remaining 6% of the projects fall under the 'Other' category, which includes projects with specialized or mixed irrigation arrangements. The predominance of storage-based projects highlights the State's emphasis on ensuring dependable water availability and efficient irrigation management across diverse agro-climatic regions.

D. Project wise Irrigated Area

Chart 3: Contribution of project in Irrigated area



- The chart 3 shows that Major Irrigation projects account for about 99% of the total Irrigation Potential Utilized (IPU) in Uttar Pradesh. This indicates that Major Irrigation projects play an overwhelmingly dominant role in providing irrigation to agricultural lands in the State, owing to their much larger command areas and irrigation potential.

Medium Irrigation projects, though limited in scale in Uttar Pradesh compared to Major projects, continue to serve localized irrigation needs.

E. Season wise Contribution of project in Irrigation

Table 3: Season wise utilization in Irrigation (in Th. Ha.)

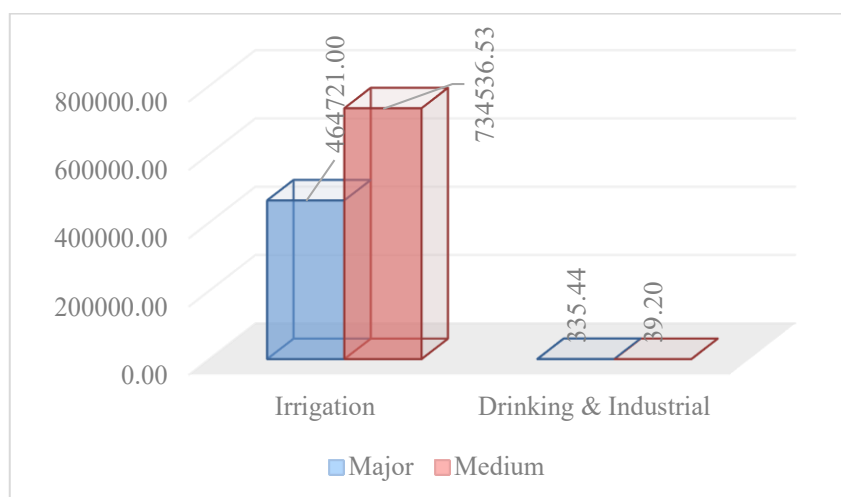
Project	IPU						
	Kharif	Rabi	Bi Seasonal	Perennial	Summer Season (Zaid)	Other	Total
Major	4025.22	4348.47	159.96	26.64	1.84	68.69	8630.82
Medium	32.75	49.05	4.00	0	0	1.96	87.75
Total	4057.97	4397.52	163.95	26.64	1.84	70.64	8718.56
Share w.r.t IPC	38.3%	41.6%	1.5%	0.3%	0.02%	0.7%	82.4%

- All Major and Medium Irrigation (MMI) projects in Uttar Pradesh are primarily utilized for irrigation during the Kharif and Rabi seasons. The Rabi season accounts for the largest share of irrigation utilization (41.6% of IPC), followed by the Kharif season (38.3% of IPC). The remaining irrigation potential is utilized during other cropping seasons such as Summer Season. The predominance of Kharif irrigation reflects the State's cropping pattern and the high demand for water during the monsoon cultivation period, while substantial utilization during the Rabi season highlights the importance of irrigation in supporting dry-season agriculture and enhancing overall agricultural productivity.

F. Water Utilization

- The Chart 4 shows that Medium projects actually use more total water (about 7,34,536 Mcm) than Major projects (about 4,64,721Mcm), even though Major projects irrigate a much larger area. This probably means some of the Medium projects are drawing from big perennial rivers. Water used for drinking and industrial purposes is small for both categories compared to irrigation.

Chart 4: Water Utilization from Major & Medium Irrigation Projects (in Mcm)



G. Associated Program

- Out of the 82 Major Projects, 20 Projects are covered under some programmes such as the Drought Prone Area Programme, Tribal Area and Flood Prone Area, as shown in Table 4. The programme-wise and area-wise distribution of these projects is presented in Table 5.

Table 4: Number of MMI Project under different program

Project	Total Number of Project	No. of MMI Project Under Different Programs				
		Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	82	13				
Medium	27	7				

Table 5: Area under different program (in Th. Ha.)

Project	Area (in Th. Ha.) Under Different Programs				
	Drought Prone Area Programme	Desert Development Programme	Tribal Area	Flood Prone Area	Left Wing Extremism Affected Area
Major	119.73	0	11.00	0	0
Medium	0	0	0	14.97	0

H. Irrigation Method

- All 109 MMI projects in Uttar Pradesh rely on flood irrigation, and none currently use drip or sprinkler irrigation. Since flood irrigation generally consumes much more water than micro-irrigation methods, introducing these modern systems in the future could help the State use water more efficiently and improve overall irrigation management.

I. CAD, CADWM, WUA

- Out of the 82 Major Projects, 4 are covered under the Command Area Development (CAD) Programme, while no Medium Projects are covered under CAD or CADWM programme. The corresponding area coverage is presented below.
- No Water Users' Associations (WUAs) have been constituted for any Projects.

Table 6: CAD, CADWM and WUA wise Status of Projects

Project	Total Number Project	Number With Methods of Irrigation			Details of WUA			
		Number of Project	Area of CAD Work Executed from State Govt Funding ((in 000'ha))	Area Covered Under CADWM ((in 000'ha))	Number of Project	Total Number of WUA Formed	Area Covered Under WUA (in 000' Ha)	Numbers of Members
Major	82	4	87.00	242.00	0	0	0	0
Medium	27	0	0	0	0	0	0	0

Summary of Findings – First Census of MMI Projects (Volume-II Part-II)

S.No.	State/UT	Major	Medium	Total Projects	CCA (in Th.Ha.)	UIP (in Th.Ha.)	IPC (in Th.Ha.)	IPU (in Th.Ha.)	Ratio of IPU to IPC
1	Andhra Pradesh	47	74	121	5185.57	5975.62	3861.67	3703.01	0.96
2	Assam	7	11	18	207.584	321.054	219.51	180.247	0.82
3	Jammu and Kashmir	3	24	27	175.321	264.161	133.87	126.179	0.94
4	Jharkhand	11	78	89	596.119	745.963	343.036	246.187	0.72
5	Karnataka	53	55	108	4907.54	4650.34	3965.84	3898.38	0.98
6	Madhya Pradesh	124	151	275	7608.43	8300.55	5101.49	4672.83	0.92
7	Punjab	11	3	14	3272.07	3583.38	3266.44	2913.11	0.89
8	Tamil Nadu	17	55	72	1387.14	1563.29	1400.94	1382.28	0.99
9	Uttar Pradesh	82	27	109	15496.6	12996.7	10583.4	8718.56	0.82

SCHEDULE FOR CENSUS OF MAJOR AND MEDIUM IRRIGATION PROJECTS**Part: 1**

S No	Identification particulars		
1	Name of project *		
2	Name of State/UT *		
3	Districts benefitting from the project *	i.	ii.
		iii.	iv.
		v.	vi.
4	Name of the River basin: *		
5	Nature of project (Irrigation / Multipurpose) * If Multipurpose; please select from the followings: i) Irrigation ii) Hydro-Electric Power Generation, iii) Flood Control iv) Domestic and Industrial Water Supply v) Fisheries vi) Navigation vii) Recreation viii) Others.		
6	Gross Command Area (GCA) in Ha*		
7	Culturable Command Area (CCA) in Ha*		
8	Category of Irrigation Project (Major, Medium) *		
9	Whether project is inter-state- *		Yes/No
	if yes, name of the other states. please also provide the name of corresponding projects in respective states.	Name of State	Name of corresponding Project in the State.
		i	
		ii	
		iii	
10	Whether inter basin transfer is involved: [Yes/No] *		i.
	(if yes) Name of the basins involved		ii.

Part: 2

11	Type of project (Storage, Diversion, Lift irrigation schemes & Combination of Storage lift or diversion).*				
12	Project Authority *				
13	Area in Hectares in case of Piped Distribution Network				
14	Ultimate Irrigation Potential (UIP) in Ha*				
15	Season wise irrigation potential created (IPC) in Ha *	Crop Season	As envisaged in DPR	As per actual	
		i. Kharif			
		ii. Rabi			
		ii. Bi Seasonal			
		v. Perennial			
		v. Summer season (Zaid)			
		i. Others			
		Total IPC			
16	Season wise irrigation potential utilized (IPU) in Ha [Maximum potential utilized, so far] *	Crop Season			
		i. Kharif			
		ii. Rabi			
		ii. Bi Seasonal			
		iv. Perennial			
		v. Summer season (Zaid)			
		i. Others			
		Total IPU			
17	Existing cropping pattern in the command Area *	Crop Season	Name of Crop	Area under the crop (Ha)	
				As envisaged in DPR	As per actual
		i. Kharif	Crop 1		
			Crop 2		

		ii. Rabi	Crop 1		
			Crop 2		
		iii. Bi Seasonal	Crop 1		
			Crop 2		
		iv. Perennial	Crop 1		
			Crop 2		
		v. Summer season (Zaid)	Crop 1		
			Crop 2		
		vi. Others	Crop 1		
			Crop 2		
18	No. of villages benefitted*				
19	No. of people benefitted *				
	i. SC		i. Male	(xxxx/N.A)	
	ii. ST		ii. Female	(xxxx/N.A)	
	iii. OBC		iii. Transgender	(xxxx/N.A)	
	iv. General		Total		
	Total				
20	Whether the command area of the project is benefitting the area under Drought Prone Area Programme (DPAP), Desert Development Programme (DDP), Tribal area, Flood prone area, left wing extremism affected area, Koraput, Bolangir and Kalahandi (KBK) regions of Odisha, Vidarbha & Marathwada regions of Maharashtra and Bundelkhand region of Madhya Pradesh & Uttar Pradesh * (If yes Please provide the following information in Ha :)				
	Area under Drought Prone Area Programme (DPAP).				
	i. Area under Desert Development Programme (DDP).				
	ii. Tribal area.				
	iii. Flood prone area.				
	iv. Left wing extremism affected area.				

	v. Area under Koraput, Bolangir and Kalahandi (KBK) regions of Odisha.	
	vi. Area under Vidarbha & Marathwada regions of Maharashtra.	
	vii. Area under Bundelkhand region of Madhya Pradesh & Uttar Pradesh.	

Part:- 3

21	Approval status: Central TAC/IC/State Approved/ Un Approved. *			
	If approved, Please provide initial year& initial cost of the following clearances:		Cost (Rs Crore)	Year
	i. Central TAC clearance:			
	ii. Investment Clearance (IC):			
	iii. State Govt Clearance			
22	Status of other clearances *			
	i. Environment Clearance (Latest) :	(Stage I) (Year/N.A)		
		(Stage II) (Year/N.A)		
	ii. Forest Clearance:	(Stage I) (Year/N.A)		
		(Stage II) (Year/N.A)		
	iii. NBWL Clearance: (Year/N.A)			
	iv. Tribal Clearances: (Year/N.A)			
23	Status of the Project (Whether completed/ongoing) *			
	1.Completed	Final cost of the completed project (Rs Crore)		
		Price level		
		Year of commencement of the project		
		Year of completion of the project		
	2. Ongoing.	Year of commencement of the project		
		Physical Progress (%)		
		Financial Progress (%)		
		Latest estimated cost of Project (Rs Crore)		
		Price level		

Part:- 4

24	Design Features of the project *		
	a) Whether the Project comprises of Head Works with Dam, Barrage weir or Gated Structure		
	b) If yes (Dam, Barrage, Weir, Gated Structure) , then No. of Head Works (Dam/Barrage/Weir)		
	1. Name of head works		
	i. Nature of head works (Dam/Barrage/Weir/ Gated Structure		If User select “ Gated Structure ” then sr .24 (vi) to 24. (xx) will disable.
	ii. Whether, the Dam/Barrage/Weir/ Gated Structure is included in the DHARMA portal. If “Yes”, please make sure data entered here in this module is same as entered on the DHARMA portal for this Dam/Barrage/Weir and provide NRLD Code of the Dam		(Yes/No)
	iii. Name of River		
	iv. Name of the district of Headworks		
	v. Latitude, Longitude of Headworks		Option for selecting “Not available” Option of choosing “Not Applicable”
	vi. Type of Dam, Barrage or Weir (Concrete / Masonry / Earthen/ Rock fill/ combination)		
	vii. Length of Dam/Barrage/Weir (meters)	Type of Structure	
		(a) Concrete	(xxxx/N.A)
		(b) Masonry	(xxxx/N.A)
		(c) Earthen	(xxxx/N.A)
		(d) Rock fill	(xxxx/N.A)
	Total		
viii. Maximum height of the structure above deepest bed level (Dam/Barrage/Weir) (in meters)		(xxxx/N.A)	
ix. FRL / Pond Level (in meter above msl)		(xxxx/N.A)	
x. MWL (in meter above msl)		(xxxx/N.A)	

	xi. MDDL (in meter above msl)		Irrigation (in meter above msl)		(xxxx/N.A)	
			Power Generation (in meter above msl)		(xxxx/N.A)	
	xii. Design Gross Storage capacity (MCM) at FRL/ Pond Level				(xxxx/N.A)	
	iii. Design Live Storage capacity (MCM) at FRL/ Pond Level				(xxxx/N.A)	
	xiv. Design Dead Storage capacity (MCM)				(xxxx/N.A)	
	xv. Catchment area of the reservoir/pond in Km ²				(xxxx/N.A)	
	xvi. Area of submergence (Ha)				(xxxx/N.A)	
	xvii. Number of projects affected families displaced.				(xxxx/N.A)	
	xviii. Number of projects affected people displaced.				(xxxx/N.A)	
	xix. Since Commissioning of the Project, how many times the reservoir has reached at FRL.				(xxxx/N.A)	
	xx. Since commissioning whether reservoir capacity survey has been conducted. (Yes/No)					
	If Yes, Year & Revised Live Storage Capacity (MCM)				Year	Revised Live Storage Capacity (MCM)
	xxi. Nos of main canals					
	xxii. Length of Canal system (m)	Type of Canals	Unlined	Lined	PDN	Total
		Main Canal				
		Branch Canal				
		Distributary				
		Minor Canals				
Total						
xiii. Design Discharge (m ³ /sec) of each canal system (main canals)		Name of the canal		Design Discharge (m ³ /Sec)		
		I.				

		II.		
		III.		
25	Number of Lifts in the Lift Irrigation Scheme and for the project with Lift Irrigation as component *			
	For Lift Irrigation Scheme and for the projects with Lift Irrigation as component. Please provide the following details:	Location of Pump House (District)		
		Latitude and Longitude of Pump House		
		Source of Lifting and its name.	River/ Reservoir/ Canal	Name of the Source
		Number of Pumps installed	For operation	Standby
		Total Capacity of pumps installed for operation in Horse Power (HP)		
		Head of the Lift in Meters.		

Part:- 5

26	Water Utilization for various sectors in MCM (Irrigation and others viz Hydro/ Drinking / Industrial, etc.) during the reference year of the Census *						Utilization head	Planned	Actual				
							i. Irrigation						
							ii. Drinking & Industrial						
							ii. Others						
							Total						
27	Whether scope of the project has been increased by ERM (Yes/No) *												
	S. No.	Name of ERM Project	Original Year of Approval	Original y Approved by IC/TAC/SA/UA	Original Approved Cost (Rs Crore)	Completi on Year / Ongoing	Completion Cost (Rs Crore)	Ongoing		Additional			
								Latest Estimated Cost (Rs Crore)	Expenditure (Rs Crore)	CCA (Ha)	UIP (Ha)	IPC (Ha)	IPU (Ha)
	Total												
28	Has the Project taken over the command of any other project (Yes/No) *												
	If yes, list the projects and area of overlap				Name of Project					Area of overlap (Ha)			
					i.					i.			
					ii.					ii.			
					iii.					ii.			
29	Cost of O&M during the year (Rs Crore) *												
30	Methods of irrigation as envisaged in DPR*(Flood Irrigation, Drip or sprinkler)												
31	Area covered under micro irrigation (Ha) *e.g. Drip or sprinkler												
32	Whether Command Area Development (CAD) Work has been executed (Yes/No) *												
	If Yes, please provide the area			i. Area of CAD Work executed from State Govt Funding									

	in Ha	ii. Area covered under CADWM Scheme of DoWR RD&GR GoI.			
33	Whether WUAs have been formed: *				(Yes/No)
	i. Number of WUA formed				
	ii. Area covered under WUA (Ha)				
	iii. Numbers of members in the WUA's registered.				
	iv. Breakup of the Members				
	i. SC		i. Male	(xxxx/N. A)	
	ii. ST		ii. Female	(xxxx/N. A)	
	iii. OBC		ii. Transgender	(xxxx/N. A)	
	iv. General			Total	
	Total				

Part:- 6

34	Please upload the GIS based Index Map showing the Dam/Reservoir/River/Main Canal / Branch Canal System with command area.	
35	Please upload the high-resolution photographs of Project Head Works showing panoramic view.	

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