IRRIGATION IN INDIA 2020
State Profiles, Upcoming Projects, Investments and Opportunities

The irrigation report 2020 will help you to:

- Analysis of trends and developments in the irrigation sector
- Recent initiatives and update on key government programmes
- Impact of COVID-19 on ongoing, under bidding and announced projects
- State-wise irrigation plans, investments and opportunities
- Upcoming projects in the pipeline and expansion of irrigation potential
- Irrigation techniques and practices and notable advancements in equipment market
- Investment requirements and outlook for the irrigation sector
IRRIGATION IN INDIA 2020

Report Summary and Key Insights

- According to the Composite Water Management Index 2.0 report, released by NITI Aayog in August 2019, the total irrigated command area in 24 states has increased from 55.38 million ha in 2015-16 to 63.94 million ha in 2017-18.

- In the past few years, several initiatives have been taken by the government to increase the irrigation coverage in the country and promote efficient water management in the sector. These include the introduction of various flagship initiatives such as the Pradhan Mantri Kisan Sinchayee Yojana, Interlinking of Rivers Programme, Atal Bhujal Yojana, Dam Rehabilitation and Improvement Project, among others.

- However, the current irrigation practices are far from satisfactory. These are characterised by poor water use efficiency, less than optimal utilisation of irrigation potential, low coverage of advanced micro irrigation systems, over-exploitation of groundwater sources, widespread use of water-intensive crops and poor freshwater management.

- The current stress on the country’s finite water resources has been worrisome. The need of the hour, therefore, is to improve the water use efficiency in the irrigation sector through adoption of micro irrigation techniques such as the drip and sprinkler irrigation systems.

- Other innovative practices such as irrigation through underground pipeline conveyance system and use of treated wastewater have also gained traction in some states. The pipeline irrigation system not only surpasses the land acquisition but also evades the evaporation losses.

- The adoption of advanced technologies such as remote sensors, automation of irrigation structures, use of drones, etc., can also play a big role in transforming the irrigation sector and improving the water use efficiency. The real-time availability of crop data can help the farmers in understanding the irrigation requirements and reducing water losses.

- Besides, solar pumps have emerged as a viable, non-polluting source of power for agricultural consumers. The central government has been actively encouraging the uptake of solar pumps among farmers through schemes such as Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM).

- Going forward, the use of efficient irrigation practices such as micro irrigation will play a crucial role in improving management of water in the sector and achieving food security for a rapidly growing population. Besides, it is also essential to upgrade the existing irrigation in the network in the country to improve productivity and reduce wastage of scarce water resources.

- Based on projects tracked by India Infrastructure Research, the irrigation segment offers a lucrative pipeline of 877 projects, covering announced, approved and ongoing projects. These projects entail a total investment of Rs 25.740 trillion.

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**Project Pipeline in terms of Investment, Treatment Capacity and Network**

*(includes planned, proposed, announced & under bidding projects)*

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**By No. of Projects**

- Ongoing
- Announced
- Approved

**By Cost**

- Rs million
- Approved
- Announced
- Ongoing

**By Capacity**

- 1000 hectares
- Approved
- Announced
- Ongoing

Source: India Infrastructure Research
Though the economy is expected to revive in the first-half of 2021, the log-jam created in the short-term due to the emergence of Covid-19 is expected to affect the medium-term pipeline as well. Announced projects/projects in the preliminary stages are likely to be delayed the most.
Key takeaways and the road ahead

SECTION I: EMERGING TRENDS, DEVELOPMENTS, NEW PROJECTS AND OPPORTUNITIES

1. Irrigation Market Overview
   - Size and Growth
   - Irrigation Potential
   - Notable Sector Trends
   - Key Government Programmes
   - Funding Sources & Expenditure Trends
   - Type of Irrigation Systems
   - Industry Structure and Major Players
   - Issues & Challenges

2. Impact of COVID-19 on Irrigation Sector
   - Overview
   - Impact on Government Programmes and Budgets
   - Impact on Project Delivery
     - Ongoing Projects
     - New Bids/Tenders
   - Impact on Labour and Raw Material Availability
   - Impact on Input Costs
   - Impact on Financial Performance of Major Players
   - Relief Measures for Farm and Irrigation Sector
   - Key Recommendations

3. Water Demand and Supply Sources
   - Freshwater Resources Availability
   - Demand for Water
     - Overall
     - Sector
     - State
   - New Water Sources
   - Alternative Sources
   - Water Supply-Demand Gap
   - Demand Outlook
     - Overall
     - By State

4. Recent Developments (in the past 12 to 18 months)
   - Regulatory Developments
   - New Standards and Norms
   - Project Completions
   - Contract Awards
   - Projects Approved/Announced
   - Other Key Developments

5. Project Pipeline and Analysis
   - Overall Project Pipeline by
     - Region
     - State
     - Stage of Development
     - Type of Irrigation
     - By Completion Period
   - Expected Capacity Addition
   - Analysis of Upcoming Projects
   - Top 50 Upcoming Projects

6. Future Outlook and Opportunities
   - Key Growth Drivers
   - Short-term and Long-Term Sector Outlook
   - Investment Requirements
   - Market Opportunities
     - EPC Contractors
     - Pumps Manufacturers
     - Pipe Manufacturers
     - Meter Manufacturers
     - Storage System Providers
     - Technology Providers
     - Consultants

7. Update on Key Government Programmes
   - Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)
   - Accelerated Irrigation Benefits Programme
   - Command Area Development and Water Management
   - Bharat Nirman Programme
   - Participatory Irrigation Management
   - Interlinking of Rivers (ILR) Programme
8. Irrigation Techniques and Technology
   - Current Deployment & Practices
   - Key Irrigation Techniques (Drip, Sprinkler, Center Pivot, Pot)
   - Focus on Micro Irrigation
   - Notable Innovations and Advancements
   - Future Outlook

9. Equipment Market Trends and Requirements
   - Types of Equipment
   - Pumps and Pumping Systems (Solar & Electric Pumps)
   - Metering Practices
   - Other Ancillary Equipment
   - New Trends and Advancements
   - Major Players
   - Sourcing Options
   - Segment Outlook

SECTION II: STATE IRRIGATION PLANS AND INITIATIVES

10. Profiles of Key States
Each profile will give information on the following:
   - Agriculture Overview
   - Water Availability and Sources
   - Irrigation Potential
   - Irrigation Schemes and Programmes
     - Key Completed Projects
     - Key Ongoing Projects
     - Key Upcoming Projects
   - Recent Developments & Initiatives
   - Type of Projects (Major, Medium and Minor)
   - Cost Structure and Water Tariffs
   - Key Funding Sources
   - Irrigation Techniques & Practices
   - New Trends and Advancements
   - Irrigation Storage Systems
   - Initiatives for Improving Water Use Efficiency
   - Pipes and Pumping Systems
   - Major Players
   - Upcoming Contracts and Tenders
   - Expected Capacity Addition
   - Investment Requirements
   - Future Outlook
   - Issues and Concerns

This section covers detailed profiles of states such as Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Uttarakhand, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal

SECTION III: DATABASE OF KEY PROJECTS
The database is a compilation of upcoming projects (ongoing and planned) in the sector with details on scope, location, cost, capacity, funding sources, implementing agency, contractor (wherever available), current status, expected date of completion, etc.

The Irrigation Report will include four quarterly updates:
   - Update on Government Programmes/Schemes
   - Project Completions
   - Project Awards
   - New Project Announcements
   - Upcoming Tenders
   - Key Data and Statistics
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