



सत्यमेव जयते

Department of Water Resources
Investigation and Development
Government of West Bengal



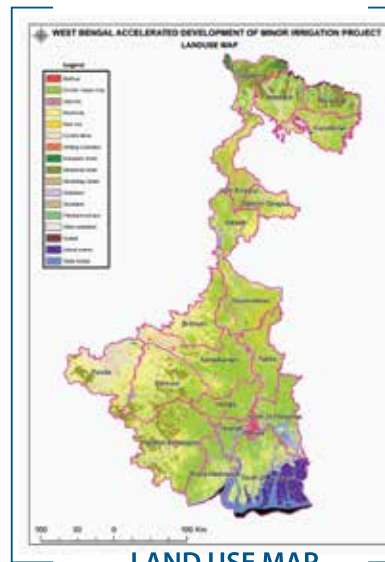
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E-PROJECT MANAGEMENT & E-GOVERNANCE THROUGH WEBGIS TECHNOLOGY (A West Bengal Experience)

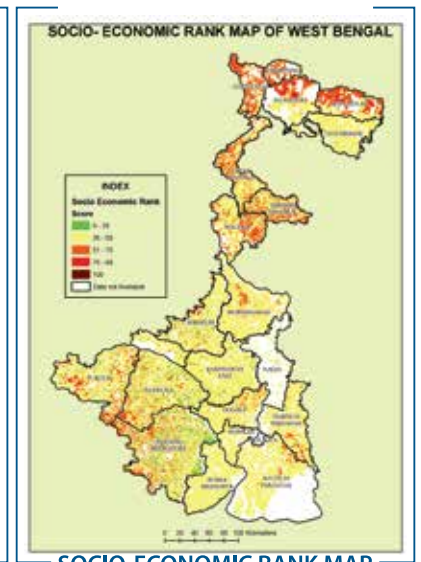
WEST BENGAL ACCELERATED DEVELOPMENT OF MINOR IRRIGATION PROJECT (WBADMIP)

Aiming Secure Irrigation Water in Rainfed areas of West Bengal

Introduction: Government of West Bengal has launched a World Bank supported project called WBADMIP, to enhance the livelihood of small & marginal farmers by creating minor and micro-irrigation structures, and extending agricultural support services in rainfed areas of the state. It is a big and challenging project in terms of geographical diversity associated with different agro-climatic zones of the state, reaching socially backward people, and construction of numerous irrigation project in the remotest areas. To overcome these challenges, project has introduced a robust IT system supported with WEBGIS technology.



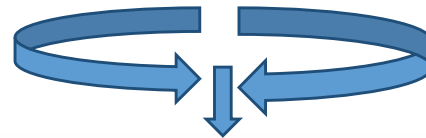
LAND USE MAP



SOCIO-ECONOMIC RANK MAP

SALIENT FEATURES OF WEBGIS ENABLED E-GOVERNANCE AND E-PROJECT MANAGEMENT

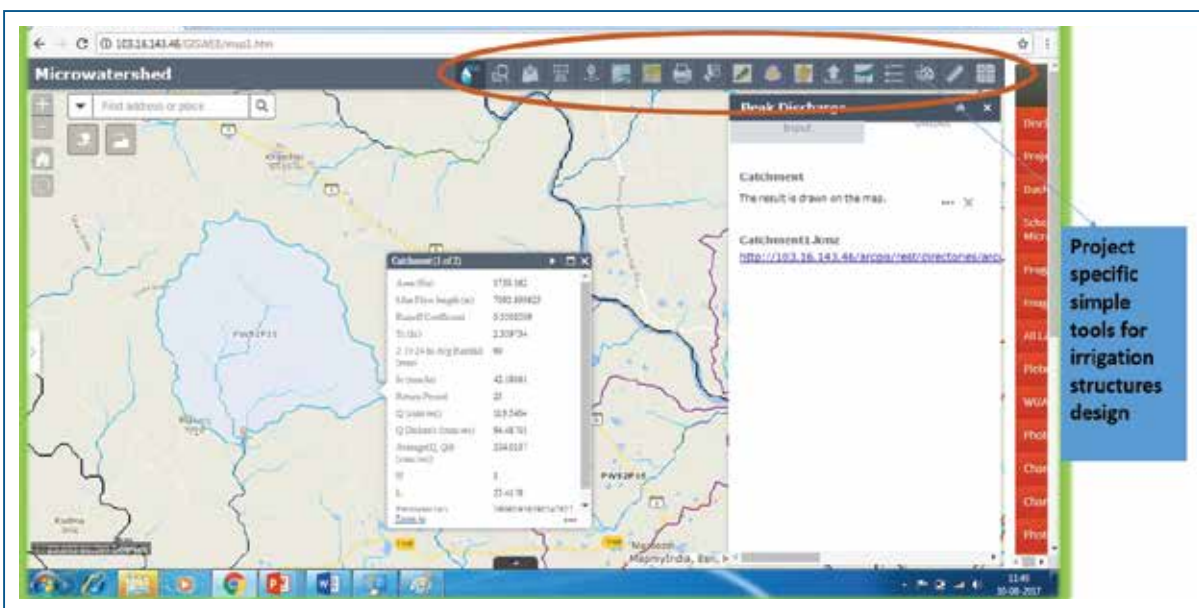
- Introduced robust **online WEBGIS, open to all.**
- It has brought **faster and transparent** way of project area identification and planning process.
- Introduced **online geo-specific design tools** for creating minor irrigation structures like check dams, weir, etc. with comprehensive in-situ water resource analysis and water budgeting.
- Simultaneous **live monitoring of projects** at different implementation stages and faster Decision Support System (DSS).
- Tracking **post-implementation impact assessment** of each project through current remote sensing data, stakeholders' feedback and necessary measures.



ENABLING PROJECT TEAM TO DESIGN APPROPRIATE STRUCTURE ECONOMICALLY AND SAFELY WITH THE HELP OF 24X7 ONLINE INFORMATION AND AUTOMATED GEO-SPECIFIC DESIGN TOOLS.

Constructing minor irrigation structure was one of the main themes of the project in rainfed rural Bengal. Earlier due to lack of hydro-geological information many government projects which have been installed, failed to give any service to the people due to ill-informed flawed design. After implementing the GIS based network, the information needed for design of such schemes was easily available to the field workers working in remote areas. This has enabled error-free design of minor irrigation infrastructure.

Online automated system generated design parameters of hydraulic design, like rainfall intensity and peak flood discharge through simple tools



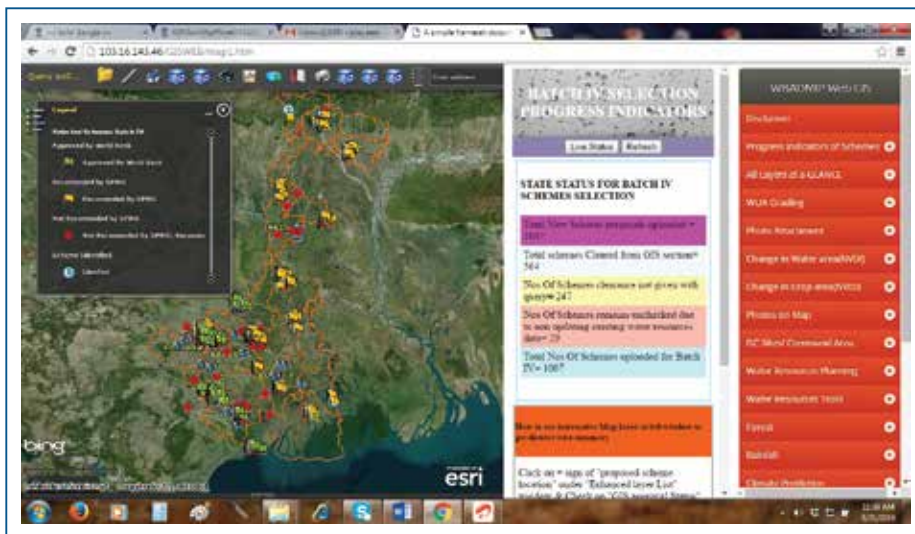
WEBGIS TECHNOLOGY HELPS IN EXPEDITING ERROR FREE DESIGN OF MINOR IRRIGATION INFRASTRUCTURES.

The system generated tools provide various vital design parameters and output for Minor irrigation projects like:

- area of catchment with all hydro-morphological parameters
- peak flood discharge
- suitable width of the dam
- maximum height of the dam
- maximum allowable afflux

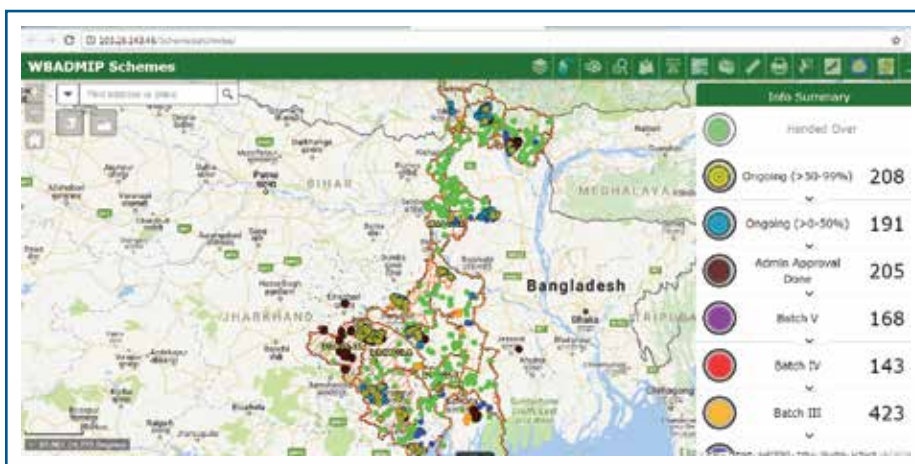
EFFECTIVE MONITORING OF PROJECTS LOCATED IN REMOTEST AREAS OF THE STATE

GIS-MIS based IT system is applied for project monitoring effectively. Each sub-projects, although located far from the district and state centres, are tracked individually with **live monitoring system** in the online platform **supported with project's photos**. Decision making for mid-course correction or other issues becomes easier.



ONLINE PROCESS OF PROJECT APPROVAL

- Faster project approval
- Informing stakeholders about their project approval or disapproval mentioning reasons



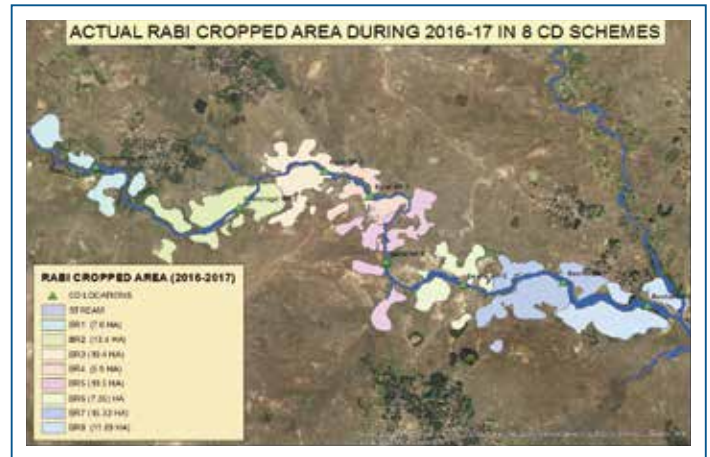
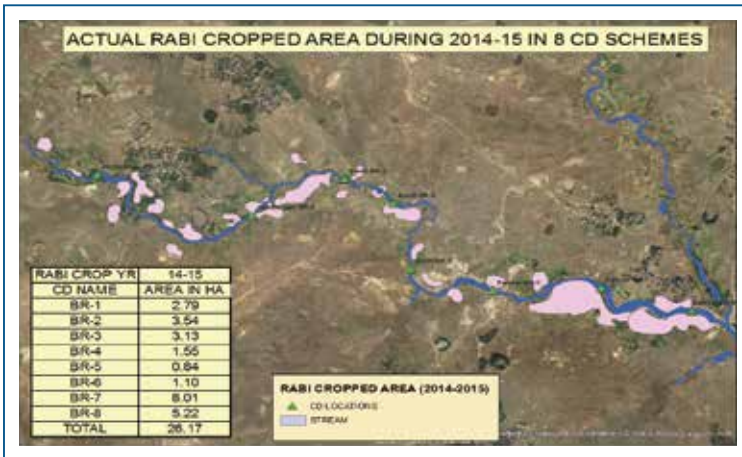
MONITORING IMPLEMENTATION STATUS

Updating project manager with current status of the projects supported by geo-tagged photos

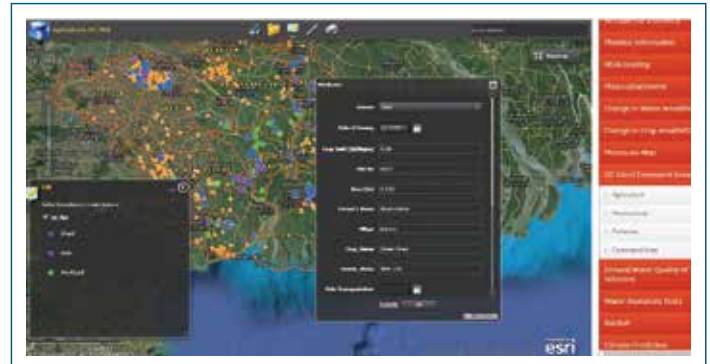
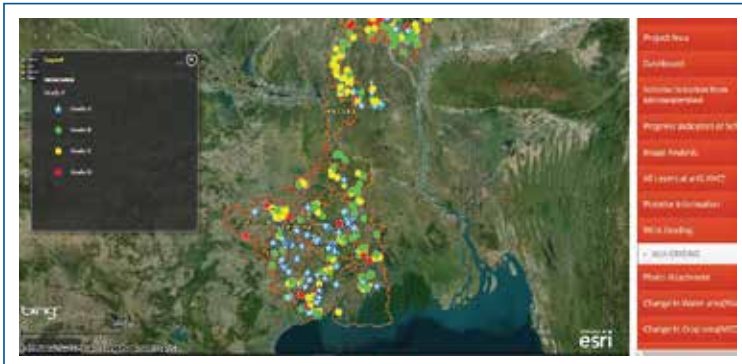


IMPACT ASSESSMENTS

For the first time, it has been possible for the state to assess the impacts of the minor irrigation projects after its implementation, on a regular basis. Through analysis of latest images of remote sensing data, the project collects the information about the area of crops grown in rabi, kharif and pre-kharif season, and passes the information to the field with appropriate recommendations to improve its effectiveness.



VISIBLE TRANSFORMATION FROM SINGLE CROPPED AREA TO DOUBLE CROPPED AREA



TRACKING SCHEME PERFORMANCE

TRACKING CROP DEMONSTRATION PROGRAMME



Almost 70,000 households already benefited with assured irrigation | 30,000 hectares for multi-cropping | Improved agricultural, horticultural and fisheries practices | 900 no of projects out of total target of 75,000 hectares under this WBADMI Project.