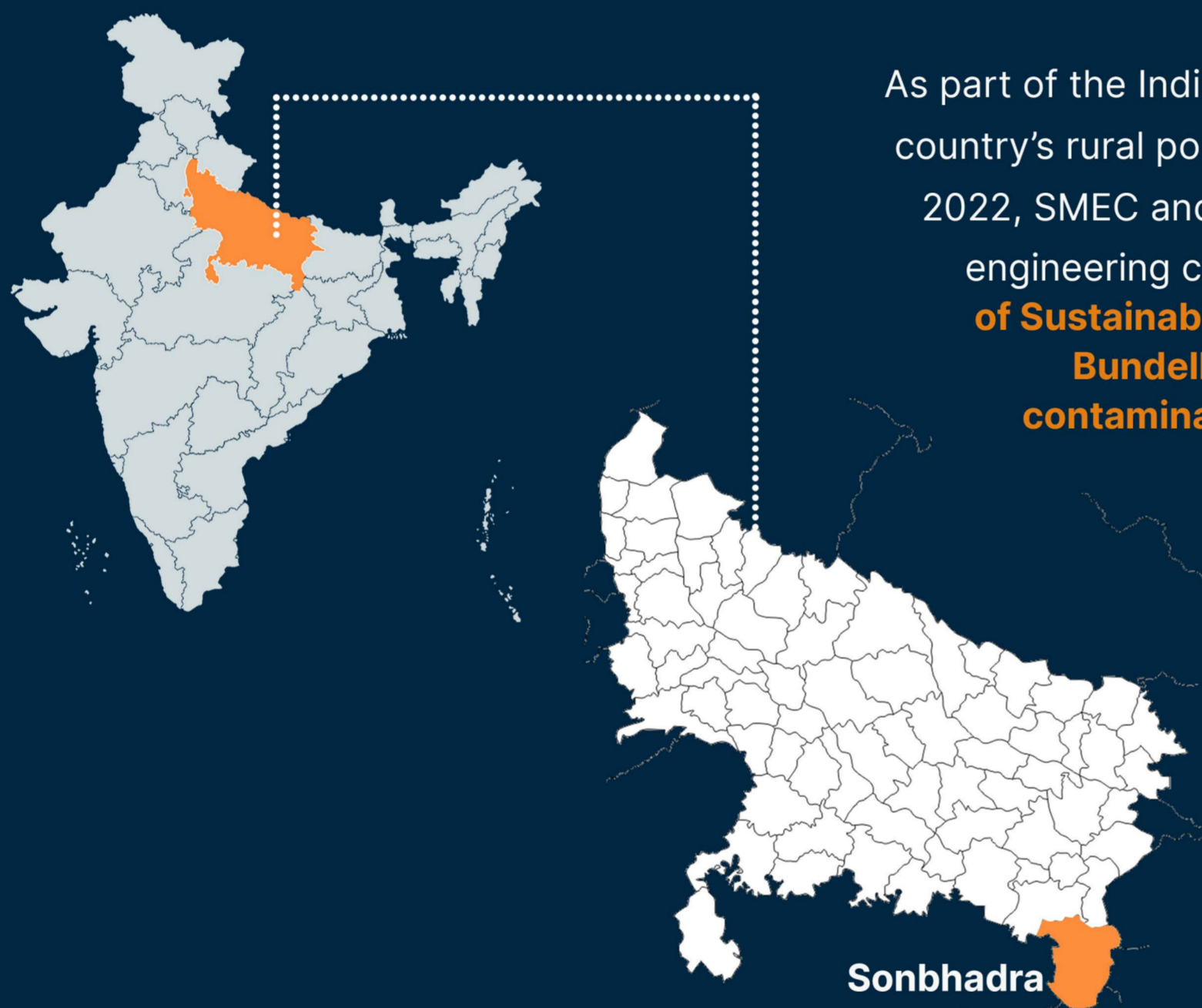


# BUNDELKHAND WATER SUPPLY SCHEME

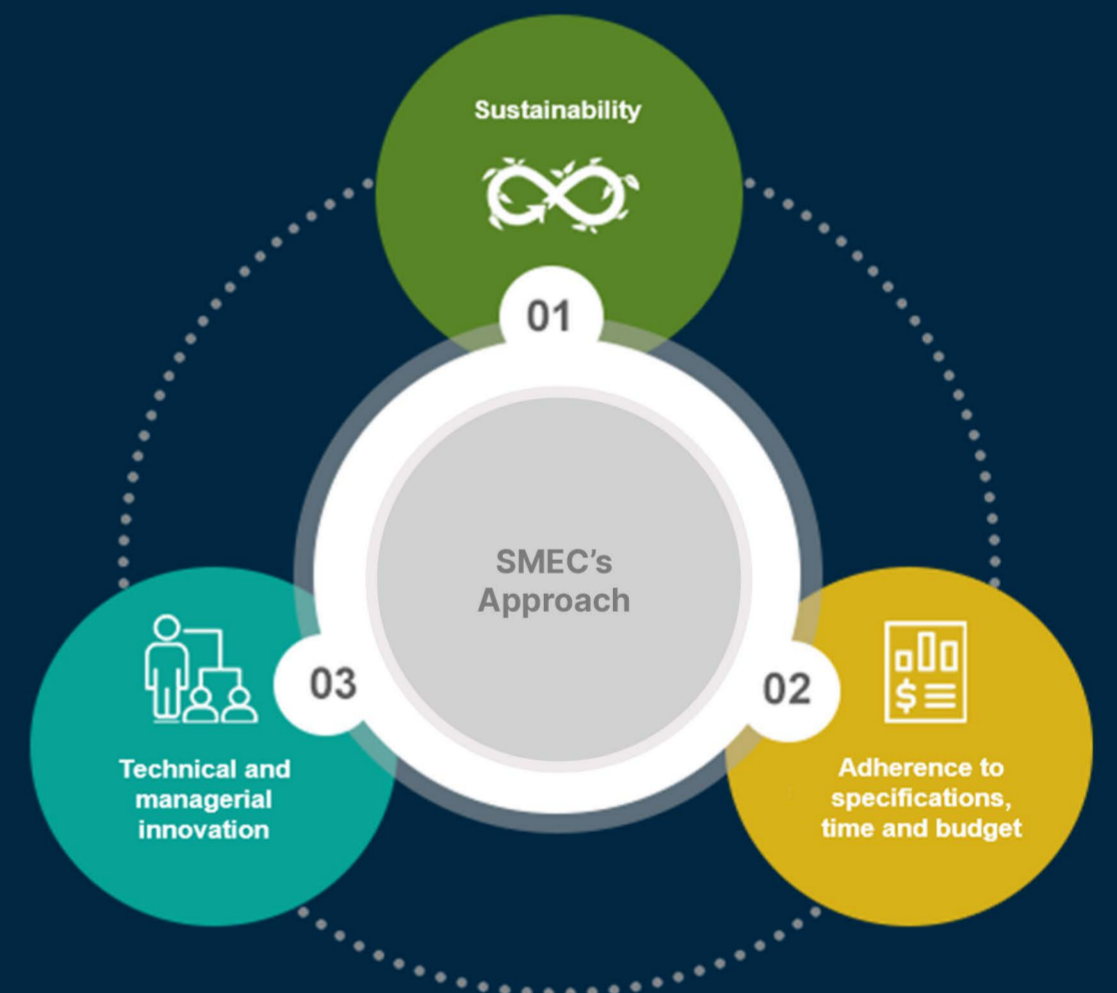
**HAR GHAR JAL** - “*Water for every household*”

The Bundelkhand and Vindhya regions of Uttar Pradesh, India, are some of the most water-scarce areas in the country. Only around 10% of the rural population in Uttar Pradesh have access to piped water supply schemes. Many residents are forced to walk long distances to obtain water that may not be potable, leading to water-borne disease.



As part of the Indian government’s strategic plan to ensure that 90% of the country’s rural population would be provided with piped drinking water by 2022, SMEC and our parent company Surbana Jurong was appointed as engineering consultancy firm for **Detailed Project Reports preparation of Sustainable Piped Drinking water Supply in Sonbhadra district in Bundelkhand where villagers suffered from Flouride & Arsenic contaminated ground water.** Sonbhadra is a densely populated area covering more than 1400 villages.

**SMEC** approached the project with a vision for designing **nation-building infrastructure** that would meet the most **essential human needs for clean water** in an economical manner.



## PROJECT HIGHLIGHTS

### REALISTIC APPROACH

Envisioned 63 village cluster groups - 16 DPR schemes as per the source availability and Digital Elevation Model

### GIS INTEGRATION

Optimised field sureys and resource optimisation using Geographical Information System (GIS) and Digital Elevation Model (DEM)

### BASELINE ASSESSMENT

Detailed inventory of primary & secondary data collection. Gap analysis involving multi-stakeholder consultations & community interactions.

### SOURCE SUSTAINABILITY STUDY

Reservoirs and perennial river courses were proposed for piped water sources to the villages. Watershed analysis and software simulations done for understanding impact on storage/ flow capacity.

## OUTCOMES

**“Integrated water management is vital for poverty reduction, environmental protection and sustainable economic development.”**

These studies provide implementable engineering design solutions that would supply safe drinking water to all rural households in the area, improving health, development and quality of life outcomes for these communities.





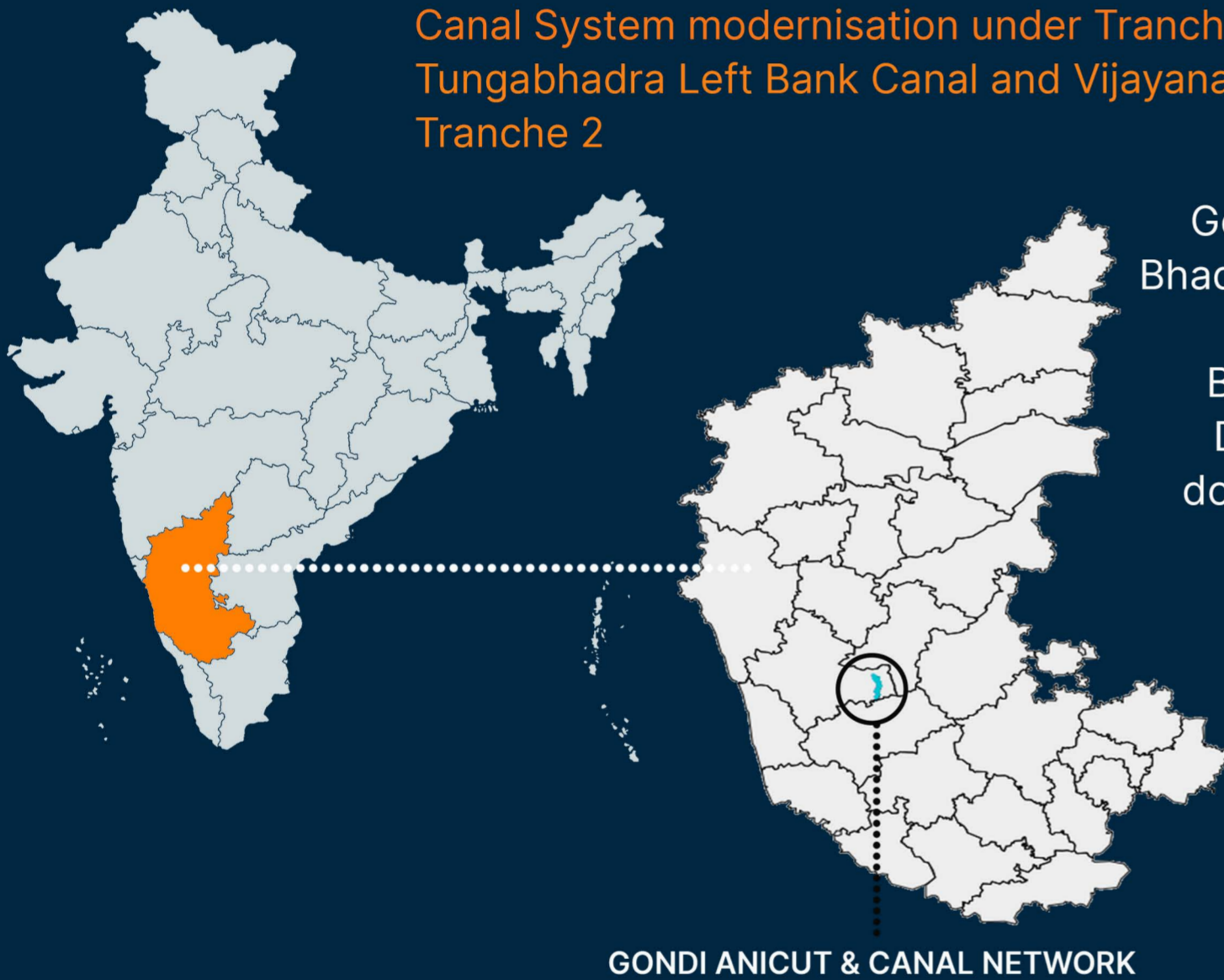
# KARNATAKA INTEGRATED AND SUSTAINABLE WATER RESOURCES MANAGEMENT PROGRAM

SMEC has been engaged to provide consultancy support services for the Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMP)

The Karnataka state in south India is water-stressed, with increasing water demands from urban and industrial sectors. This is exacerbated by uneven spatial and temporal distribution of water resources and the predicted impacts of climate change.

Funded by the Asian Development Bank (ADB), the Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMP) aims to modernise irrigation system infrastructure and improve the implementation of program management systems in Karnataka.

As part of KISWRMP, SMEC is providing technical support for the coordination, implementation, capacity building and program and financial management of the 4,500 hectare **Gondi Irrigation Canal System modernisation under Tranche-1**, and the implementation of **Tungabhadra Left Bank Canal and Vijayanagara Canals subprojects under Tranche 2**



Gondi Anicut is built across river Bhadra, near Gondi village 11.56 km from Bhadravathi Town, Bhadravathi Taluk, Shivamogga District. It is located at 14.5 Km downstream of Bhadra reservoir.



## SMEC's CONTRIBUTION

- Preparation of Feasibility reports & bidding documents
- Contract management & Packaging
- Capacity building & training
- Environmental & Social safeguard monitoring
- Quality control
- Construction management

## PROJECT HIGHLIGHTS

### PIONEERING TECHNOLOGIES

#### - DESIGN ELEMENTS

- PMIS data is entered through Admin modules on the website for dynamic updating
- PSC (SMEC) has voluntarily developed inhouse smartphone based applications for updating civil work progress.

### VALUE ADDITION

- First Irrigation Project in Karnataka which demonstrated use of Integrated Water Resources Management (IWRM) principles.
- GIS based Asset Management Plan and O&M

### SUSTAINABILITY ELEMENTS & COMMUNITY PARTICIPATION

- Gondi organic farmers group and sustainable agriculture groups as ACTION ELEMENTS put in place for environment and project sustainability.
- Institutional Strengthening, and Capacity building of System Operations staff and Water Users Cooperative Societies (WUCS) for efficient operation and system maintenance.

## OUTCOMES

*An irrigation project is generally viewed and implemented dominantly as an engineering project.*

This project made it participatory irrigation management project at the ground level. IWRM principles have reached farmers too through capacity building activities by PSC (SMEC) which help in proper use of available water by adopting **SOCIO - TECHNICAL APPROACH** to irrigation systems.

