



Infrastructure and Engineering

Our practice delivers end-to-end solutions across the entire infrastructure project lifecycle—from concept development to detailed design, implementation, and post-implementation support. Our multidisciplinary team brings expertise in water supply, sanitation, stormwater management, urban transport, public spaces, tourism infrastructure and more. Our cross-sectoral service offerings include needs assessments, project identification, feasibility studies, architectural and engineering designs, procurement support, construction supervision, quality assurance/control, project monitoring, and programme management. Through innovative design and sustainable engineering, we continue to create resilient infrastructure that enriches lives and strengthens communities.



350+

Cities across
India



30+Mn

People directly
impacted



2000+

Infrastructure
projects



USD 3 Bn

Project value managed



300+

Multi-disciplinary
engineering team



Our Services



Strategy/Concept
Development



Detailed Design
Development



Programme
Management



Master Planning



Feasibility Studies



Construction
Quality Control



Vulnerability Mapping & Risk
Assessment



Field Investigations & Surveys



Procurement &
Advisory



Pre-feasibility Studies



Technical Studies/ Sectoral
Studies



Training & Capacity
Building



Sectoral Planning &
Management Plans

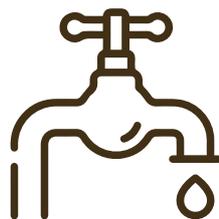


Environmental Screening &
Impact Assessment

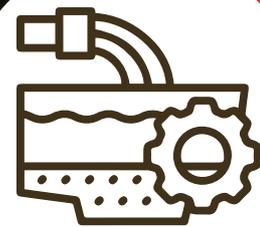


Post-Project
Support & Handover

Expertise



Water Supply



Wastewater & Faecal
Sludge Management

St
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Supervision &
Control



Transaction
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City Building,
Strengthening

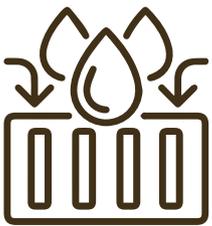


Implementation
and holding

Project
Identification

Project
Planning &
Design

Project
Implementation



Stormwater Drainage
and Flood Mitigation



Public Spaces
and Parks



Waterbody Rejuvenation

PRESS
SAND
FILTER

PSE

Key
Project





FILTER FE
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ACF

ACTIVA
CARBO
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TREATED WATER TANK

(A-100 000 / 2000 Certified Company)

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Driving Change through our Work

Karnataka Urban Water Supply & Drainage Board (KUWS&DB), Government of Karnataka | Project Development and Management Consultant (PDMC) for Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0 | Karnataka, (2023-2026)

Following the success of the AMRUT mission, the Government of India launched the AMRUT 2.0 mission in October 2021, aiming to make all cities 'water secure' and provide functional household tap connections to every urban household. This mission also aims to manage 100% of sewage/septage in 500 AMRUT cities. This is achieved through water source conservation, rejuvenation of water bodies and wells, reuse of treated wastewater, and rainwater harvesting.

Under this mission, we are supporting design and development of urban water supply infrastructure, green spaces and parks, and waterbody rejuvenation across 227 urban local bodies in Karnataka state, enriching the lives of nearly 10 Mn people. Infrastructure works under the mission are packaged into 645 individual projects with a combined valuation of INR 10,270 Cr. (USD 1,237 Mn)

Scope of Services : Project planning and conceptualisation, engineering surveys and investigations, detailed engineering designs, procurement assistance, construction supervision, contract administration and management, project monitoring, and project management.

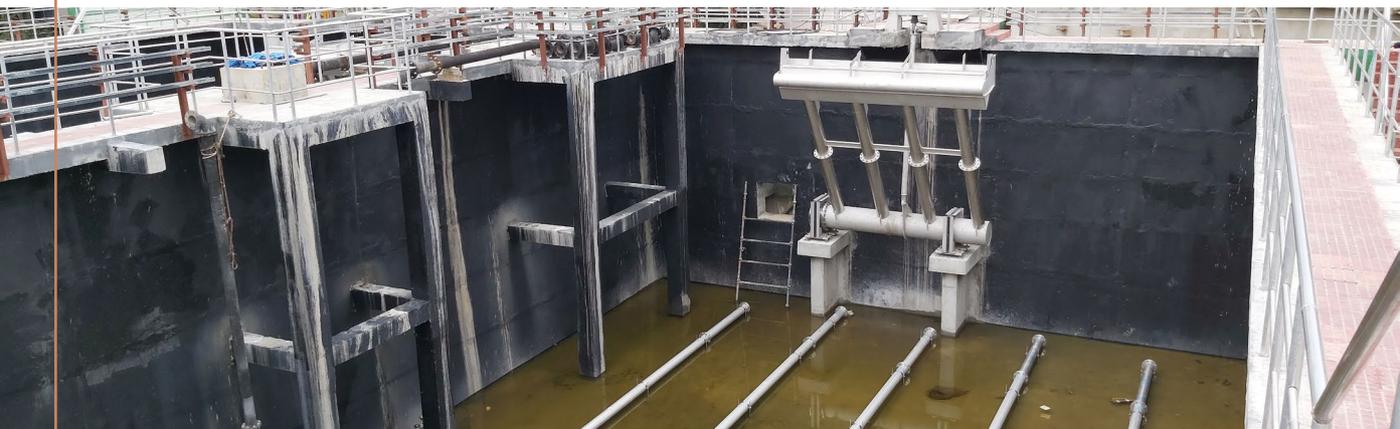
Key Outputs

- ✓ 81 water treatment plants (487 MLD capacity), 1,700km transmission mains, 430 storage reservoirs (300 Mn litres capacity), 13,400km distribution networks, and 900,000 service connections.
- ✓ 229 public parks, with a total area exceeding 1 Mn square metres.
- ✓ Rejuvenation of 180 urban waterbodies, ranging from temple tanks to large lakes.

Project Development and Management Consultants (PDMC) for Atal Mission for Rejuvenation and Urban Transformation (AMRUT) in Jammu & Kashmir, Chhattisgarh, and Karnataka (AMRUT), (2016-2023)

To meet the UN SDG 6 on water and sanitation and to improve ease of living, the Government of India launched the AMRUT mission in 2015, covering 500 urban local bodies with a population above 1 lakh. The objectives of the mission were to provide water supply through functional household tap connections to urban households, develop sewerage and stormwater drainage networks, and improve public parks and green spaces.

Scope of Services : As the PDMC for the AMRUT mission in three states, we provided comprehensive services covering project planning, feasibility studies, preliminary and detailed engineering designs, procurement assistance, construction supervision, contract administration and management, project monitoring and management, for approximately 9% of the national mission portfolio.



Karnataka Urban Water Supply & Drainage Board (KUWS&DB) | PDMC for AMRUT Mission in Karnataka (2016-2023)

Project scope covered 23 large cities across Karnataka, including Bengaluru—396 projects implemented with a value of INR 4,467 Cr (USD 539 Mn)

Key Outputs

- ✓ 82 WTPs (487 MLD), 1,750km transmission mains, 430 storage reservoirs (3,000 lakh litres), 13500km distribution networks, approx. 9 lakh service connections.
- ✓ 27 STPs (346 MLD), 40 sewage pumping stations, 2,000km sewer networks, approx. 2 lakh service connections.
- ✓ 181 urban parks and gardens with a surface area of 1 Mn sq.m.
- ✓ 84 stormwater drains

Housing & Urban Development Department, Government of Jammu & Kashmir | PDMC for AMRUT Mission in Jammu & Kashmir, (2016-2021)

Project scope covered 5 cities viz. Srinagar, Jammu, Leh, Kargil, and Anantnag. 59 projects implemented with value of INR 593 Cr (USD 71.45 Mn)

Key Outputs

- ✓ 2 storage reservoirs (18 lakh litres), 15 km distribution network
- ✓ 2 STPs (8 MLD), 81km sewer network, 7,500+ service connections, 4 FSTPs (520 KLD), 43 nos. suction/jetting machines and vacuum emptiers.
- ✓ Rejuvenation of Brari Nambal Lake, construction of de-watering stations and drains.
- ✓ Multi-level car parkings, intelligent transportation system, walkways, footpaths, cycle tracks, foot over-bridges, procurement of buses.
- ✓ Development of parks and gardens, including Srinagar's famous Tulip Garden.

State Urban Development Agency (SUDA), Government of Chhattisgarh | PDMC for AMRUT Mission in Chhattisgarh, (2016-2023)

Project scope covered 9 cities across Chhattisgarh viz. Raipur, Bilaspur, Bhilai, Durg, Rajnandgaon, Ambikapur, Jagdalpur, Raigarh and Korba. 235 projects implemented with a value of INR 2004 Cr (USD 241.45 Mn)

Key Outputs

- ✓ 11 WTPs (387 MLD), 300 km transmission mains, 80 storage reservoirs (136 lakh litres), 3,500 km distribution networks, approx. 3 lakh service connections
- ✓ 4 STPs (63 MLD), 19 km interceptor sewers, 48 nos. suction machines & vacuum emptiers procured
- ✓ 75 urban parks and gardens with a surface area of 5 lakh sq.m





Berhampur Municipal Corporation | Project Management Consultancy Services for Odisha Disaster Recovery Project (ODRP), (2016-2020)

The ODRP was implemented by the Berhampur Municipal Corporation (BeMC) under the aegis of the Housing and Urban Development (H&UD) of the Government of Odisha. The objective of the PMC assignment was to support in implementing the works included in 'Component 2 of ODRP: Community Infrastructure Investments in Berhampur'. The project included water supply, stormwater drainage, and transport infrastructure.

Scope of Services

Comprehensive technical and management support covering baseline surveys, review of designs and drawings, assistance in procurement and complete bid process management, construction supervision of works, consumer indexing, and asset mapping. Our responsibilities included developing an electronic dashboard for progress monitoring, providing QA/QC and certification of works and supporting contract management. The scope covered monitoring the implementation of the Resettlement Action Plan (RAP), Environmental and Social Management Plans, and obtaining necessary approvals and clearances from concerned departments.

Key Outputs

- ✓ Replacement of old water pipelines, construction of roads and stormwater drains
- ✓ The project strengthened Berhampur's resilience against future disasters, improving the quality of life for residents and ensuring long-term urban sustainability

Jammu & Kashmir Economic Reconstruction Agency (ERA), Government of Jammu & Kashmir | Design and Supervision Consulting Services, Jammu and Kashmir Urban Sector Development Investment Program (JKUSDIP)– Project 2 (Phase-1 & 2), (2016-2020)

The Asian Development Bank (ADB)-funded Jammu & Kashmir Urban Sector Development Investment Programme (JKUSDIP), with an outlay of INR 1,950 Cr (USD 300 Mn), was designed to foster sustainable economic growth in urban areas by promoting commerce and improving the livelihoods of vulnerable communities. The programme focused on strengthening critical urban infrastructure across water supply, sewerage, drainage, roads, and transportation sectors, improving service delivery, reducing vulnerabilities, and strengthening the urban economy.

Scope of Services

End-to-end technical and management support covering project formulation, appraisal of proposed sub-projects (technical, financial, environmental, and social), detailed engineering design, procurement assistance, construction supervision, monitoring and evaluation, and overall implementation support.

Key Outputs

- ✓ 1.5km long flyover and 7-level mechanised car parking facility
- ✓ 30 MLD STP, 250 km sewers, 35,000 service connections
- ✓ 19 tube wells, 148 water pumping stations, 8 overhead reservoirs, 165km distribution networks, 1,800 domestic water meters
- ✓ Stormwater drainage systems in flood-prone areas



Kolkata Metropolitan Development Authority (KMDA) | Project Management Consultants (PMC), including Project Management Unit (PMU) support to Kolkata Metropolitan Development Authority (KMDA) for Implementation of JNNURM Projects in Kolkata and Asansol in West Bengal, (2008-2017)

The Jawaharlal Nehru National Urban Renewal Mission (JnNURM) aimed to strengthen urban infrastructure and improve service delivery across multiple cities. With a total outlay of INR 7,620 Cr (USD 914.4 Mn) in West Bengal, the programme included 75 infrastructure projects across water supply, sewerage, drainage, solid waste management, transport, and heritage conservation sectors. These projects sought to modernise essential urban services, address infrastructure gaps, and enhance the quality of life in urban areas.

Scope of Services

Project planning, appraisal, stakeholder engagement, detailed engineering, bid process management, and contract management. We supported project implementation monitoring, ensured quality, timelines, and budgets adherence, and facilitated coordination with the JnNURM National Mission Directorate and urban local bodies. In addition, we supported the integration of environmental and social safeguards, gender and community awareness initiatives, monitoring & evaluation studies to strengthen mission monitoring and sustainability.

Key Outputs

- ✓ Development of flyovers, interchanges, bus terminals, and upgradation/widening of city roads
- ✓ Development of 24/7 water supply schemes for several municipalities
- ✓ Improvements and expansion of drainage, sewerage and solid waste management systems

FCDO & PwC-UK | Green Cities & Infrastructure Program (GCIP), Ghana, (2024-2025)

Cities in Ghana are increasingly vulnerable to the effects of climate change especially floods, droughts and heat stress brought about by increasingly erratic rainfall patterns, and increased intensity in rainfall and rising temperatures. Cities and urban communities in Northern Ghana are particularly susceptible to heat stress, amplifying water security risks, especially for women in low-income settlements who bear most responsibility for household water. Meanwhile, cities in the South are prone to flooding and coastal erosion, impacting most on women and disabled living in low-lying settlements. Additionally, the lack of data on service levels and climate risks hinders Ghana's climate resilience efforts. With the support of FCDO Ghana's urban portfolio – GCIP is a critical initiative aimed at addressing these pressing issues and transforming Ghana's cities into sustainable and resilient hubs. By investing in climate-resilient infrastructure and early warning systems and promoting sustainable urban development, the program seeks to create inclusive, equitable, and resilient cities.

Scope of Services

IPE Global, through Triple Line Consulting, is supporting the GCIP on specific workstreams:

- Water supply workstream includes system inventories and technical diagnostics of existing infrastructure; operational performance review using hydraulic modeling, flow and pressure measurements; non-revenue water and water loss assessment; future needs assessment and gap analysis; engineering design for rehabilitation and expansion of infrastructure, for ensuring water security for vulnerable urban communities in Wa Municipality.
- Flood resilience workstream includes identification of bouquet of investment options; preliminary and detailed engineering designs of priority investments; stormwater drainage network design for priority flood hotspots; planning and design of buffer zones, retention basins, wetlands and other nature-based solutions (NBS), for improving flood resilience of vulnerable communities and green economic corridors in Sekondi-Takoradi.

Key Outputs

- ✓ Designs for rehabilitation of existing water supply systems including a 15 MLD water treatment plant, 4 reservoirs, 28 km distribution networks, and 10,500 service connections
- ✓ Designs for new systems comprising of 1.5 km transmission mains, 3 reservoirs, 1120km distribution networks, solar plant for decarbonisation, 24,500 service connections, energy-efficient pumps, and online monitoring system
- ✓ Designs for 150 cross-drainage structures (culverts, bridges), stormwater drainage networks in priority flood hotspot areas, and nature-based solutions for flood mitigation

The World Bank | Nepal Urban Governance and Infrastructure Project (NUGIP), (2018-2019)

The objective of the NUGIP was to strengthen core municipal services and urban infrastructure and to build the institutional capacity of newly formed urban local governments in Nepal. The project covered 17 cities across two priority strategic urban clusters in the Eastern Terai region (Provinces 1 and 3) and the Central-hill region (Province 4). The project focused on preparing priority investments for rehabilitating and expanding urban infrastructure, including climate-resilient urban systems, under a total outlay of USD 150 Mn.

Scope of Services

We provided comprehensive technical assistance for sub-project identification and preparation of infrastructure investments in urban roads, stormwater drainage, water supply, wastewater, and solid waste management, with particular focus on embedding climate and disaster-resilience. Key services provided include city-level infrastructure and service level assessment with gap analysis; sector-wise investment needs identification; preparation of technical guidance notes; review of feasibility reports and engineering designs prepared by DPR consultants engaged by the Government of Nepal; incorporation of environmental and social safeguards, gender inclusion and citizen engagement measures into sub-project designs; technical inputs to bid documents to ensure alignment with construction and operational requirements of each sub-project.

Key Outputs

- ✓ Gap assessment and long-term investment programming for 17 urban local bodies
- ✓ Investment projects totalling USD 900 Mn identified across water supply, drainage, roads, liquid and solid waste management sectors
- ✓ Technical notes for design of climate and disaster-resilient urban infrastructure developed
- ✓ Designs of road improvement projects finalised for major cities

Department of Tourism and Civil Aviation, Government of Himachal Pradesh | Project Management Consultant (PMC) & Project Management, Design and Supervision Consultant (PMDSC) for Infrastructure Development Investment Programme for Tourism (IDIPT), Himachal Pradesh, (2011-2020)

The ADB-funded Infrastructure Development Investment Programme for Tourism (IDIPT) promoted environmentally sustainable, culturally inclusive, and community-driven tourism in Himachal Pradesh. Implemented between 2011 and 2020 in multiple tranches, the programme implemented heritage conservation, tourist infrastructure development, and community-based tourism projects across Shimla, Mandi, Kullu, Hamirpur, Kangra, Bilaspur, Solan and Una districts. The programme also involved the assessment of 543 destinations to identify infrastructure gaps, environmentally sensitive zones, and potential tourism circuits, and promoted inclusive growth through community participation and support for women-led self-help groups. Our support covered 19 sub-projects worth USD 19.5 Mn (INR 170 Cr.) under Tranche-I, and 11 sub-projects worth USD 34 Mn (INR 295 Cr.) under Tranche-III.

Scope of Services : We provided end-to-end technical advisory and project management support including project identification, planning, appraisal, detailed designs, procurement assistance, implementation support, contract management, construction supervision, and environmental and social safeguard compliance monitoring. Signature projects, investment plans, and PPP models were identified to enhance sustainable tourism, establishing a strategic roadmap for tourism development.

Key Outputs

- ✓ Restoration of Shimla Mall Road and Heritage Buildings in Shimla
- ✓ Conservation of temple precincts in Bilaspur, Jwalaji, Dharamshala, Shimla
- ✓ Development of cultural centres at Janjheli & Nagrota and eco-tourism parks at Naldehra
- ✓ Jetty Development at Pong Dam & Ranser, and Karu Island
- ✓ Multi-level car parking facilities in Shimla, Chintpurni, and Naina Devi
- ✓ Forest rest house upgrades and camping sites at Nagrota, Dhameta, and Pong Dam
- ✓ Information and interpretation centres and tourist facilities across the state





Department of Tourism and Civil Aviation, Government of Himachal Pradesh | Consultancy for Tourism Infrastructure Development Projects, Himachal Pradesh, (2021-2024)

The Sustainable and Inclusive Tourism Development Project (SITDP) in Himachal Pradesh, financed by the Asian Development Bank (ADB) with a total investment of USD 162 Mn, aims to enhance the state's tourism potential and stimulate the local economy. The project is being implemented across five districts viz. Shimla, Mandi, Kullu, Hamirpur, and Kangra, with a focus on developing sustainable and eco-sensitive tourism infrastructure while promoting community participation. Expected outcomes are a vibrant tourism economy, improvement in sustainability of destinations, resilience to seasonality, effectiveness in spreading economic benefits and an enhanced profile as a preferred tourism destination.

Scope of Services

We provided technical services to the Department of Tourism to ensure readiness before ADB project approval. Our team identified, conceptualised and designed a range of sub-projects, covering wellness centres-cum-resorts, eco-tourism resorts, convention centres, conservation and restoration of heritage buildings, wayside tourist amenities, golf courses, etc. Key services provided include site assessments, engineering surveys and investigations, environmental baseline surveys, formulation of sub-project concepts, environmental and social due diligence, financial and economic appraisal and feasibility studies, detailed engineering designs (covering architectural, structural, MEP), tender engineering and bid process management. We helped the client ensure compliance with international best practices and ADB loan requirements.

Key Outputs

- ✓ Preparation of ten sub-projects valued at INR 470 Cr (USD 56.4 Mn), unlocking project readiness for securing ADB loan financing
- ✓ Community-based tourism initiatives by facilitating engagement with local self-help groups
- ✓ Destination management guidelines for ensuring sustainable tourism planning

The Sustainable Cities & Infrastructure practice continues to provide solutions for urban development & management and climate-resilient infrastructure for ensuring improved liveability and livelihood opportunities.

