

Infrastructure Professionals Enterprise (P) Ltd. (IPE) is a leading development sector consultancy providing services in the fields of international development, public policy, institutional strengthening and capacity building, governance and public sector reforms, public-private-partnership, fiscal and economic studies, monitoring and evaluation, infrastructure development, legal & regulatory framework, health and social sector and environment initiatives. IPE has been focusing on governance reforms through improving participation, transparency and accountability especially in the pro-poor spending.

With offices across India and United Kingdom, and a representative office in Manila, IPE brings with it a rare mix of international and regional expertise. It has a multi-disciplinary team of experts who have substantial relevant experience and knowledge of ground level realities, problems and issues in the different parts of the world. IPE's pool of resources with staff strength of over 200 full-time professionals and around 300 empanelled consultants brings together experts from diverse disciplines.

IPE has undertaken about 300 assignments across Asia, Africa and Europe in about 20 countries. IPE is an employee owned company and has a current annual turnover of around US\$ 20 million.

Vision Statement

To be respected as an "ideas powerhouse" successfully bringing together cutting edge knowledge and management skills to enable policy changes and reforms in the development sector globally.

Mission Statement

To shape the changing development sector needs to achieve the twin objectives of economic growth and social equity.

Quality Policy

To exceed client expectation by delivering value for money services that lead to the twin objectives of economic growth and social equity through continual improvement of the quality management system.

IPE is a ISO 9001:2000 certified company.



Our Clients Include:

▶ The World Bank (WB)	
▶ Asian Development Bank (ADB)	
▶ United Nations Development Program (UNDP)	
▶ Department for International Development (DFID)	
▶ Japanese Bank for International Cooperation (JBIC)	
▶ United States Agency for International Development (USAID)	
▶ United Nations International Children's Emergency Fund (UNICEF)	
▶ Japanese International Cooperation Agency (JICA)	
▶ Africa Capacity Building Foundation (ACBF)	
▶ Central, provincial and local governments of various countries	

Sectoral Expertise:

- ▶ Solid Waste Management
- ▶ Urban Infrastructure and Engineering
- ▶ Project Management and Supervision
- ▶ Public Sector Management and Administration
- ▶ Environment Climate Change & Disaster Management
- ▶ Institutional Strengthening and Capacity Building
- ▶ Social Sector and Resettlement
- ▶ Governance and Decentralization
- ▶ Public Private Partnership
- ▶ Monitoring and Evaluation
- ▶ Urban Development
- ▶ Health

Country Expertise

Some of the countries where IPE and its core staff have worked and are working:

- ▶ India
- ▶ Bangladesh
- ▶ Maldives
- ▶ Sri Lanka
- ▶ Bhutan
- ▶ Pakistan
- ▶ Nepal
- ▶ Afghanistan
- ▶ Iraq
- ▶ Vietnam
- ▶ Zimbabwe
- ▶ Kenya
- ▶ Switzerland
- ▶ Palestine
- ▶ Jordan
- ▶ Indonesia
- ▶ Ghana
- ▶ Tanzania
- ▶ United Kingdom
- ▶ Thailand

Solid Waste Management

"The starting point for the better world is the belief that it is possible."

IPE, a company dedicated to cause and business of preserving the environment, contributes to enhancing the quality of life – solutions that ultimately improve the way people live.

Our unmatched capability to offer integrated solutions for all environmental engineering related problems and issues, have earned accolades for the commitment to excellence.

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London, United Kingdom
Manila, Philippines





IPE Project Profile:



ADB TA 4986 BAN: Urban Primary Health Care Sector Development Program (Supplementary)

The TA is a supplementary package of the Urban Public and Environmental Health Sector Development Program (UPEHSDP) involving the improvement of Solid Waste Management (SWM) and Medical Waste Management (MWM) services. The main objective of this assignment is to conduct upstream work through (1) supporting policy reform and (2) developing a plan for improving SWM/MWM. Under the TA, IPE reviewed the existing policies, acts, rules and strategies including the Draft National SWM Handling Rules (2008), the National Strategies on 3R (2008), and the Medical Waste Management Rules (2008) in Bangladesh and made recommendations to improve these policy documents in consultation with various stakeholders. IPE also recommended various working models for (i) delivering SWM services to low-income communities and (ii) delivering medical waste management services in targeted municipal corporations. The team also developed typical engineering design of SWM facilities, layout plans for landfills in various cities, technical guidelines for landfills, typical engineering design of STS, estimation of cost, and improved design of tricycle vans. A sample project development document was developed for city corporations to attract CDM financing.



Solid Waste Management Learning Program in India, World Bank, 2009

The program aims at improving the capacity of government officials and solid waste specialists to implement integrated and sustainable SWM systems. It also aims at promoting national and regional networks of specialists and practitioners to improve the exchange of ideas and dissemination of best practices, linking those with existing international solid waste associations, and upgrading the profession of local solid waste managers, operators, contractors, and consultants.



Pilot Project on SWM under National Strategy for Urban Poor- NCR Component, UNDP-GOI Project, 2005-2007

The aim of the project is to establish an effective, efficient, affordable, safe and sustainable waste management system in the resettlement area and establish linkages with waste recycling options to promote income generation activities. This would be achieved by implementing a reform action plan for the SWM system, explore linkages of revenue generation activities with community waste management systems and creating linkages between community and service providers, by conducting citizen surveys.



Pilot Project on Segregation of Household Waste, Delhi, JICA – MCD, 2003

The Municipal Corporation of Delhi (MCD) with support from the JICA initiated a 'Pilot Project for Household Segregation of Solid Waste' in New Delhi. This Project had a dual objective of tracing process of household waste segregation and collection of data and related information, to chart out MCD's actual implementation plan in near future. The present assignment undertook development of an effective system of household waste segregation and collection as a pilot project.

Preparation of Detailed Project Report on Solid Waste Management for Dehradun, Haridwar, Varanasi, Lucknow, Coimbatore and 8 towns of Tamil Nadu, India, 2006-09

The aim of the project is to establish the Integrated Solid Waste Management System in the City in compliance with MSW Rules 2000. The present project has been prepared with a view to augment existing Solid Waste Management system by adopting integrated approach. The Detailed Project Report on Solid Waste Management is aimed at achieving 100% compliance to the Municipal Solid Waste (Management and Handling) Rules, 2000. The various steps to be taken by municipal authorities include storage of waste at source in a segregated manner, primary collection of waste from the door steps, street sweeping on a daily basis, secondary storage in covered containers, transportation in covered vehicles, processing of organic matter and disposal of waste at an engineered landfill.



Support Programme for Urban Reforms in Bihar (SPUR), India, 2008 – 2016 (ongoing)

The Support Programme for Urban Reforms in Bihar (SPUR) is a six-year partnership programme (2010-2016) between the Government of Bihar and the United Kingdom's Department for International Development (DFID, UK). The TA team is providing expertise on the areas of Policy and Strategic Planning, legal advisory, urban governance – institutional strengthening, organizational development, human resource development, training and capacity building, local economic development & strategy and implementation, social development, community mobilisation, livelihoods improvements and poverty alleviation. Solid waste management is the major area of intervention including public private partnerships for primary collection, secondary storage, transportation and also establishment of treatment and disposal systems.



Preparation of City Development Plans (CDP): 6 towns of Gujarat & 10 towns of Tamil Nadu, The Government of India, Ministry of Environment have framed rules under the Environment Protection Act incorporating mandatory provisions for all the urban local bodies in the country for the management and handling of municipal solid waste. CDP provides estimation of waste generated in the ULB, complying to the CPHEEO rules it provides planning, designing and estimates of the equipment, machineries and vehicles required in all stages of operation in SWM, from door to door collection to waste treatment and landfill.

Consultancy services for SWM schemes in J & K at Doda, Bhaderwah, Poonch, Akhnour, Sunderbani, Kathua & Samba and Mandi in Himachal Pradesh, 2008

The project involves the preparation of standard drawings and designs for SWM treatment and processing plant. This includes preparation of site layouts, detailed cost estimates and bid documents.

Consultancy Services for SWM Schemes at Patna Agglomeration Area, and Arrah in Bihar, 2008-09

The aim of the project is to establish the Integrated Solid Waste Management System in the City in compliance with MSW Rules 2000. The present project has been prepared with a view to augment existing Solid Waste Management system by adopting integrated approach. The Detailed Project Report on Solid Waste Management is aimed at achieving 100% compliance to the Municipal Solid Waste (Management and Handling) Rules, 2000. The various steps to be taken by municipal authorities include storage of waste at source in a segregated manner, primary collection of waste from the door steps, street sweeping on a daily basis, secondary storage in covered containers, transportation in covered vehicles, processing of organic matter and disposal of waste at an engineered landfill.



Design Management Consultants for Preparation of Detailed Project Report, BSIDP, Sri Lanka, 2007

The project involved preparation for five sample projects identified during AOTA SRI-4703 Strengthening Local Government Infrastructure Financing including (1) Road development, (2) drainage rehabilitation, (3) water supply improvement, (4) sanitation and hygiene development, and (5) solid waste management projects -(i) update available information on the composition and volume of waste generated; (ii) preparation of a SWM plan; (iii) prepare collection and transportation program including vehicle routing; (iv) ascertain preferred options for collection and WTP and determine the potential for PPP in waste collection, recycling, transportation and disposal..

Implementation of Reform Action Plan under Yamuna Action Plan Phase-II in Delhi, MCD – RAP, 2007

The objectives have been defined under YAP-II to enable Municipal Corporation of Delhi (MCD) to take higher responsibilities as the custodians of the assets created under the project. The objectives of the reform process was to ensure proper management of solid waste by reviewing SWM master plan 2004 & develop a comprehensive action plan for developing a detailed design document for integrated SMW in Delhi; implementing door to door collection in selected areas involving RWAs/CBOs with facilitation by NGOs; creating awareness for segregation of waste at the source through campaigns using IEC material.



Monitoring and Facilitation consultancy- Implementation of Reform Action Plan under YAP-II in UP, 2009-10

Yamuna Action Plan Phase II (YAP II) was initiated to fill in the gaps in infrastructure provisioning, ensure proper management of solid waste, ensure operations and maintenance of existing and new assets, and analyze financing needs for creation of new infrastructure while exploring PPP options, in order to achieve sustainable development of the YAP towns and facilitate balanced regional development, while lowering pressure on growing cities



Capacity Development of the National Capital Region Planning Board (Comp. A & C), 2008-09

The objective of the technical assistance is to strengthen the capacity at NCRPB, state-level National Capital Region (NCR) Cells and other implementing agencies in the area of planning for urban infrastructure and to impart necessary skills to conceive, design, develop, appraise and implement good quality infrastructure projects for planned development of the NCR leading to (i) improvement of the quality of basic urban services including solid waste management, (ii) development of counter magnet towns, (iii) reduction of in-migration into Delhi and orderly development, and (iv) acceleration of economic growth in the NCR. IPE not only developed a PPP toolkit for the EA, but is also assisting in setting up a project development fund as a mechanism of financing pilot PPP projects to serve as bankable and replicable models.



Project Processing, Capacity Development Project: RUIDP II, UDD, Government of Rajasthan, 2007-08

The three primary objectives of the project are: first, to provide necessary technical assistance in designing and implementing pilot subprojects ensuring they contribute to overall economic growth and poverty reduction. Second, to ensure that subprojects are compliant to all necessary Government of Rajasthan/ Gol, and ADB norms and guidelines on the same ensuring a participatory approach to development. Third, to build capacities within the local Public Health Engineering Departments (PHEDs), and the UDD; Government of Rajasthan. One of our major task was to prepare a comprehensive solid waste management plan in three phases and suggest areas for private sector participation and CDM activities

IPE Key Personnel

Mr. Ashwajit Singh

(Masters: Analysis, Design & MIS, London School of Economics, U.K.; Certified Internal Auditor, U.S.A; Company Secretary, ICSI; Chartered Accountant, ICAI; B.Com (Hons))

An urban infrastructure finance and municipal development fund specialist Ashwajit Singh has over 25 years of relevant experience in over 25 large-scale projects as lead sector expert involving areas such as urban infrastructure funds, municipal finance, municipal and infrastructure bonds, financial and fiscal analysis, treasury and cash flow management, private sector participation, capital and debt markets, local government financial management, institutional development and capacity building. As a Team Leader/Project Director/Peer Review, Ashwajit has led many complex urban infrastructure finance projects in India, Sri Lanka, Bangladesh, Bhutan, Afghanistan, Indonesia, Vietnam, Zimbabwe, Ghana and Tanzania.

Mr. P. U. Asnani

(3 months' intensive training on SWM, University of New Castle, Department of Civil Engineering, United Kingdom ; LLB from Sir L A Shah Law College, Ahmedabad, B.Sc from Dharmendra Shinghji College, Rajkot)

P.U.Asnani brings with him around 25 years of relevant experience as a Solid Waste Management (Legal and Policy) Expert. Apart from working as a consultant to donor agencies across Asia on urban management projects, he has served as the Assistant Commissioner of Ahmedabad Municipal Corporation (AMC) for around 15 years, and brings with him hand-on understanding and experience of working in the municipal reform environment. He was appointed on the expert panel to study the existing situation of SWM in 300 Class I cities of India and suggest improvements. He also wrote a major part of the National Manual on SWM and worked on technology advisory group constituted by the Government of India, MoUD.

Mr. Anil Bansal

(M.Tech in Environmental Science & Engineering and M.Sc. in Environmental Sciences, G.J.University Hisar; PGDM, All India Management Association; ISWA certified International Waste Manager)

Anil Kumar Bansal is a certified Waste Manager with International Solid Waste Association (ISWA) has undertaken major assignments in India like - SWM Learning Program being implemented in ten states of India initiated by the World Bank Institute, SWM theme, National Strategy for Urban Poor, UNDP; and Preparation of DPR on Solid Waste Management for various cities of India as part of JNNURM initiative. In the JICA-funded Pilot Project on Waste Management in Delhi, he coordinated the entire team and supervised implementation of the project. He has developed skills on techniques for undertaking experimental data collection & analysis, quantification, composition, characterization, making plans, designs, schedules and budgets for improving BMWM and SWM systems.

Mr. Satish Chand Aggarwal

(Masters in Environment Engineering (Honors) MNIT, Jaipur; B. Tech (Civil), NIT Warangal)

Mr. Satish Aggarwal is a Solid Waste Management and Environmental Engineer with over 26 years of extensive experience in Detailed Project Reports (DPR), Solid Waste Management Master Plan of cities, preparation of Solid Waste Management schemes, quantification, composition and characterization of waste, environmental monitoring of sub projects, preparation of Environmental Management Plan (EMP), preparation & review of bid documents, getting environmental clearances from the governments and State Level Environment Impact Assessment Authority (SEIAA). Satish also has Experience in adoption & implementation of Clean Development Mechanism (CDM) for waste water & solid waste management projects under Rajasthan Urban Sector Development Investment Program (RUSDIP), where he was the Environment Expert and Deputy Project Officer involved with environmental issues like IEE, SIEE, EMP, EIA & SEIA, getting Environmental Clearances, and following up of environmental legislations related to all sub projects in 17 towns under RUSDIP.

Mr Hitesh Vaidya

(Diploma in Urban Management, I H S Rotterdam; Post-Graduate Diploma, Urban Development & Planning, University of Pune; Bachelor of Arts, Public Administration, University of Himachal Pradesh)

An urban management and governance expert by qualification and profession, Hitesh has seventeen years of experience in the field of urban management, urban governance including in its ambit project management, service delivery, local government finance and capacity building