#### Meera Mehta

Professor Emeritus, Faculty of Planning, CEPT University Centre for water and Sanitation, CEPT University

International Consultant - Infrastructure Policies and Finance, Water Supply and Sanitation, and Urban Development

### **Professional Experience**

I have over four and a half decades of extensive experience in diverse fields: institution development and finance for water and sanitation; urban development policy and finance; infrastructure finance; sector monitoring systems; housing; private sector participation; community finance and NGO support. I have led School of Planning and Center for Water and Sanitation at CEPT University and been on several boards and committees, in India and globally.

I have worked on policy support, project development and management, research, teaching and training for a wide array of institutions including governments (National WSS, Urban and Finance Ministries, Water and Sewerage Utilities, provincial and municipal governments), international agencies (World Bank, WSP, WHO, AfDB, ADB, UNICEF, USAID, DFID, Netherlands Government, UNDP, EU Water Initiative, etc.), domestic financial institutions (K-Rep Bank, HDFC, HUDCO, NHB, IL&FS, IDFC, etc.) and non-governmental and academic organizations (School of Planning, SEWA Bank, Bill and Melinda Gates Foundation, Habitat International Coalition, SPARC, WaterAid, Overseas Development Institute (UK), YUVA, INTRAC (UK), etc.).

#### **Countries and Regions of Experience:**

India, Nepal, Kenya, Ethiopia, Uganda, Zambia, South Africa, Mozambique, Senegal, Benin, Mali; Regions: South Asia, Sub-Saharan Africa and South-East Asia

# Capabilities:

- Water Supply and Sanitation sector institutional and finance assessments, public finance systems, poverty reduction strategies, sector monitoring and evaluation systems, micro-finance, project development
- Infrastructure Finance public finance reviews, local government finance, micro-finance, market finance and municipal bond development, project development and structuring, output-based aid, housing finance and market analysis
- Urban Development and Planning urban development plans, urban housing, decentralization, urban poor policies and projects, project development

## **Education**

PhD in Economics

S. P. Institute of Economic and Social Research
Gujarat University, Ahmedabad, India, 1986

Masters in Planning

Urban and Regional Planning with Honours

School of Planning, CEPT, Ahmedabad, 1974

Bachelor of Architecture Sir J.J. School of Architecture, University of Bombay, 1972

### **Professional Experience:**

#### **Projects, Policy Support and Analytic Studies**

- Performance Assessment System for Urban Water and Sanitation in India (Co-Project Director for 10year action research funded by the Bill and Melinda Gates Foundation, ongoing since 2008).
- Citywide Inclusive Sanitation Wai (Co-Project Director for action research funded by the Bill and Melinda Gates Foundation, ongoing since 2018)
- Financing Faecal sludge and septage management services in the state of Maharashtra (Co-Project Director for a project funded by the Bill and Melinda Gates Foundation, India, ongoing since 2018).
- Technical support to the state government of Maharashtra on urban sanitation and FSSM (Co-Project Director for action research funded by the Bill and Melinda Gates Foundation, ongoing since 2019).
- Support for Anjar and Gandhidham in Kutch to move towards water security (Co-Project Director for action research funded by Empowerment Foundation through Dasra, USA, 2022-2025)
- Support to Kolhapur and Satara for FSSM (Co-Project Director for action research funded by the HT Parekh Foundation, 2020 - 2023)
- Making Sinnar ODF+ and Ensuring Sustainability (Co-Project Director for a project under CSR funding by the HSBC, India, 2017-2021).
- Bringing sustainable and equitable sanitation services to small and medium towns in India (Co-Project Director for action research funded by the Bill and Melinda Gates Foundation and DFID, 2014-2021).
- Supporting sustainable sanitation services at scale in India (Co-Project Director for action research funded by the Bill and Melinda Gates Foundation, 2016-2019)
- Swachh Maharashtra Platform Facilitating CSR investments in safe sanitation (Co-Project Director for action research funded by the Collective Good Foundation (CGF, the non-profit arm of Samhita Social Ventures) and India Sanitation Coalition, 2018)
- Knowledge Management and Advocacy Partnership for Participatory Ground Water Management in Bhuj (Co-Project Director for action research funded by the Arghyam, 2015-2017)
- Assessing the potential of microfinance for small investments for water and sanitation in Asia and Africa (Consulting assignment for Bill and Melinda Gates Foundation, 2008).
- Studies on public and market finance (credit rating) and sector monitoring for water supply and sanitation in Africa (Water and Sanitation Program, 2006-09).
- Co-Team leader for a 15-country study of decentralization and local financing of water supply and sanitation (for WaterAid, UK, 2007).

- Task Manager and coordinator for the Water and Sanitation Program's Global Practice Team for Water and Sanitation Sector Finance (Water and Sanitation Program, 2005-06).
- Task Manager for Regional thematic activities for water and sanitation sector finance, PRSPs and Sector Monitoring, and several projects with the GPOBA and PPIAF (Water and Sanitation Program, Africa, 2001-06).
- Task Manager for economic and sector work on 'Decentralization and Local Service Delivery in Kenya" (World Bank, AFTU1. 2002).
- Task Manager for a global review paper on "Financing Mechanisms for the WSS sector", (Water and Sanitation Program, Washington. 2003).
- Co-task manager for development of a World Bank Group Urban Sector Operational Strategy for India (World Bank, India. 2002).
- Task Manager for Policy Approach Paper on Private Finance for Community Infrastructure for the Government of India (World Bank, India. 2003).
- Development of model TORs for municipal accounting reforms, capacity building for municipal financial management, property tax reforms, decentralization and urban finance (Technical Assistance Project for Economic Reforms. World Bank, India. 2001).
- Country Strategy for Urban Water and Sanitation India (Consultant to the World Bank. 1997-98).
- Country Cooperation Plan for UNDP in India for Strategy for Urban Infrastructure and Roads (Consultant to the UNDP. 1997-98).
- Development of municipal bond system in India inputs on municipal bonds for the National Committee on Commercialization of Infrastructure; coordinator for international workshop for municipal bonds (Indo-USAID FIRE project. 1995-99).
- State of Sanitation Report for Nepal (Consultant to the World Bank and UNICEF. 1998-99).
- Proposal for an Urban Environmental Infrastructure Finance Facility (Consultant to the Asian Development Bank. 1998-99).
- Strategic review of Public-Private-Partnerships in Water and Environmental Services for India -(Consultant to the Department for International Development, 1999).
- Core member of project preparation/ supervision teams for Rural Water Supply and Sanitation projects for **four** states/provinces (Kerala, Karnataka, Punjab and Tamilnadu) in India with responsibility for decentralization, finance, sectorwide approach and sector monitoring systems and results framework (World Bank, India. 2002-06).
- Task manager for a GPOBA output-based aid pilot project for 'Kenya Micro-finance for Water Services' (Kenya, 2005-06)

- Task manager for World Bank 'India Community Infrastructure Project' (World Bank, India. 2001-02).
- Member of emergency/ disaster projects in Orissa and Gujarat, India (Word Bank, India).
- Project development for several integrated municipal infrastructure projects (Indo-USAID FIRE project. 1997-98).

#### **Board / Steering committee memberships**

- National Faecal Sludge and Septage Management (NFSSM) Alliance, Member of the Steering Committee, since 2018, and co-chair of the Municipal Strengthening Task Force.
- IRC Netherlands, international institution, member of the Supervisory Board, from June 2014 to May 2022.
- Global Water Partnership, Inter-governmental Organization, Stockholm, member of the Steering Committee – November 2011 to December 2017.
- Arusha-Homes, Hyderabad social enterprise focused on rental housing solutions for the low and middle-income groups, member of the Board, November 2011 to January 2018.
- Mashal, Pune NGO focused on shelter and living environment for the poor, member of the Board of Trustees from 2009 to 2016.

### Editor / Advisory / Technical committee memberships

- Editor, Journal of Water, Sanitation and Hygiene for Development, IWA Publishing, March 2015 to May 2023.
- Member of the Project Advisory Board for the USAID funded Global project on "Urban resilience by building partnerships and applying new evidence in water, sanitation and Hygiene (Urban WASH)" – 2022 to 2026.
- Member of the External Reference Group for WaterAid Global Strategy, 2020-21.
- Member of the International Advisory Board for the UKRI and GCRF funded project for Water Security and Sustainable Development Hub. University of Newcastle, Since 2020.
- Member of the China India Visiting Scholars Fellowship Advisory Council, Ashoka University, India, 2021.
- Member of the Project Advisory Group for the BBC Media Action Group Project on Urban Sanitation TV Drama, 2018.
- Member of the Technical Advisory Group for the Small-Scale Sanitation Scaling-Up (4S) Project of SANDEC, EAWAG and BORDA, 2016-2018.

- Member of the Steering Committee for the UNICEF study of 'Economic Benefits of SBM Gramin", 2017.
- Member of the Consortium Advisory Group (CAG) for the SHARE Consortium for applied research in sanitation and hygiene, 2012-2015.
- Member of the Technical Advisory Group of the WHO-TrackFin Initiative, 2013-2014.
- Member of the GIZ Technical Advisory Committee for India Program of Support to NUSP, 2012-2014.
- Member of the National Jury for the National Award for Excellence in Water Management by Industries by the Confederation of Indian Industry (CII) and Green Business Centre:, 2010, 2011, 2012.
- Member of the Advisory Panel for the National Awards for excellence in Urban Water by the Ministry of Urban Development, Government of India and Administrative Staff College of India: 2008, 2009, 2010, 2011.
- Member of the JMP Working Group on Equity and Non-discrimination for post2015 global targets and indicators for water and sanitation, 2011-2012; Member of the JMP Technical Task Force on monitoring progress in urban water supply and sanitation, 2011; Peer reviewer of the UN GLAAS Report, 2008, 2010.
- Member of the National Support Group for State Finance Commissions on Resource Mobilization for Municipalities, under the Decentralization policy, 1995.

### **Academic Management, Teaching and Training**

- Development and teaching of module/ course on 'Sanitation Financing' at the IHE, Delft, Netherlands each year from 2018 to 2022.
- External Examiner for the M. Sc course on International Planning and Sustainable Urban Management at the Reading University, UK, March 2013 to 2015.
- Advisor for City Infrastructure Planning for Student Projects at the Infrastructure Planning Program,
   Ph.D and Masters Dissertations, Faculty of Planning and Public Policy, CEPT University, 2009 onwards.
- Development and delivery of training (including course materials) for Project Development for Urban Infrastructure (for School of Planning at Centre for Environmental Planning and Technology at Ahmedabad, 1996)
- Development and delivery of training (including course materials) for *Urban Infrastructure Development and Finance*, (Dutch funded Indian Human Settlements Program, at Housing and Urban Development Corporation, New Delhi, 1993)
- Academic management, supervision of administration, institutional development and financial management as the Director of School of Planning, CEPT, Ahmedabad, 1992
- Chair, Academic affairs at School of Planning, 1988-1991.

### **Work Profile:**

2007 onwards	Professor Emeritus, CEPT University, Ahmedabad, India (Pro-Bono).
	International Consultant: Water and Sanitation, Urban Development, Infrastructure Finance, Municipal development and strengthening
2010 onwards	Executive Director, Center for Water and Sanitation at CEPT.
2000 - 2006	Senior Financial Specialist, Water and Sanitation Program, Africa. World Bank, Nairobi.
1999 – 2000	Urban Specialist, World Bank, New Delhi.
1995 - 1999	Senior Urban Finance Advisor, New Delhi Indo-USAID Financial Institutions Reform and Expansion- FIRE Project
1992 - 1994	Senior Fellow - Coordinator, Research Cell, Human Settlement Management Institute, HUDCO, New Delhi.
1979 - 1992	School of Planning, CEPT, Ahmedabad. Director, 1992, and Senior Professor from 1988 to 1991.
1987	Visiting Professor, Georgia Institute of Technology, Georgia, USA.
1976 - 1978	Research Associate, Gujarat Institute of Area Planning, Ahmedabad.
1975 - 1976	Research Associate, International Comparison Project of the United Nations at the Department of Economics, University of Pennsylvania, USA.
1974 – 75	Research Associate, Centre for Population Studies, Harvard University, Cambridge.

# **Selected Papers and Publications**

# Sanitation, Water and Finance

- "Impact of scheduled desludging on quality of water and wastewater in Wai city, India" jointly with Jigisha Jaiswal and Dinesh Mehta, Environment and Planning B: Urban Analytics and City Science Journal. (Link), https://doi.org/10.1177%2F23998083221078596
- "Urban drinking water security in Gujarat", in Journal of Social and Economic Development (2021) 23 (Suppl 1): S166–S180, jointly with Dinesh Mehta and Jaladhi Vavaliya. (Link), DOI- 10.1007/s40847-020-00122-0
- "Strengthening Finances of Municipal Governments", paper prepared for the ULB-Strengthening Task Force of the NFFSSM Alliance for a White paper on 'Strengthening Municipal Governments for urban Services', jointly with Dinesh Mehta, Dhruv Bhavsar, Upasana Yadav and Jigisha Jaiswal, Center for Water and Sanitation, CEPT University, August, 2020. (Link)
- "How can we support sanitation workers during COVID-19", in India Development Review, 2020, jointly with Abhinav Akhilesh and Zara Juneja, April 10. (Link).

- "15th Finance Commission: Covid-19 warrants rethink of local government allocations" in Ideas for India, jointly with Dinesh Mehta, April 27, 2020. (Link)
- "Citywide Inclusive Sanitation Through Scheduled Desludging Services: Emerging Experience from India", in Frontiers in Environmental Science, 27 November 2019, jointly with Dinesh Mehta and Upasana Yadav. (Link)
- "Public finance at scale for rural sanitation: A case of Swachh Bharat Mission, India", in International Journal
  of Water Sanitation and Hygiene for Development, June 2018. (Link),
  https://doi.org/10.2166/washdev.2018.002
- "Assessing credit options for household sanitation in urban areas", CEPT University, jointly with Dinesh Mehta, June 2016. (Link)
- "14th Finance Commission: A trust-based approach towards local governments", in Ideas for India, jointly with Dinesh Mehta, April 27, 2015. (Link)
- "Financing Sanitation", in Ideas for India, jointly with Dinesh Mehta, November 11, 2014. (Link)
- "Open defecation in India: A faltering India story", in Ideas for India, jointly with Dinesh Mehta, April 14, 2013.
   (Link)
- "City sanitation ladder: moving from household to citywide sanitation assessment", in Journal for Water, Sanitation and Hygiene for Development, jointly with Dinesh Mehta, 2013. (Link) https://doi.org/10.2166/washdev.2013.134
- "Capturing Spatial Analysis of Slums in Global Monitoring", paper prepared for the JMP Post-2015 Working Group for Equity and non-discrimination, 2012. <u>Link1</u>, <u>Link2</u>
- "Urban Drinking Water Security and Sustainability in Gujarat", Chapter 25, Dholakia R and R Parthsarthy (eds) Sardar Sarovar Project on the River Narmada: Impacts so Far and Ways Forward, Volume III, Concept Publishing Company, 2011. Link
- "Financing and monitoring urban water supply and sanitation in Gujarat", report jointly with other authors, for the PAS Project, India, 2011. Link
- "Benchmarking in Emerging Economies: The Performance Assessment System in India", paper presented at IWA conference on Performance Indicators 2011 in Spain, jointly with Dinesh Mehta and Anita Immanuel, 2011. Link
- "A Glass Half Full? Urban Development from 1990s to 2010", in Economic and Political Weekly, July 10, 2010, Vol. XLV No 28, pp. 20-23 (Jointly with Dinesh Mehta). <u>Link</u>
- Accountability and Incentives for Improving Performance in Urban Water Supply and Sanitation in India, (jointly with Dinesh Mehta), July 2010, Paper presented at the Singapore Water Week. <u>Link</u>
- "Assessing Microfinance for Water and Sanitation: Exploring opportunities for sustainable scaling up", Report for the Bill and Melinda Gates Foundation, July 2008. <u>Link</u>
- "Aid Effectiveness in the Water and Sanitation Sector a case study of Uganda", Paper for the Water and Sanitation Program, Africa, February 2008.
- "Microfinance for Rural Piped Water Services in Kenya Using an Output based Aid Approach for Leveraging and Increasing Sustainability", jointly with Kameel Virjee, 2007. Link

- "Financing Water and Sanitation at Local Level: A study of 15 countries in Asia and Africa', Report for WaterAid,
   UK, jointly with Dinesh Mehta, October 2007. Link1
- "Helping a new breed of private water operators access infrastructure finance: Microfinance for community water schemes in Kenya" PPIAF Gridlines no. 25, (jointly with K Virjee and S Njoroge, May, 2007, Link
- "Mobilizing Market Finance for water Utilities in Africa", Proceedings of Regional Workshop, August 2006 Link
- Overview paper on "How can reforming African water utilities tap local financial markets? Insights form case studies and workshop", jointly with R Cardone and T Fugelsnes. Link
- "Country-level Sector Information and Monitoring Systems (SIMS) for Water and Sanitation in Africa", Proceedings of Regional Workshop in Nairobi, April 2007. Link
- 'Business Development Services for Community-managed Small Water Enterprises: From Post-Construction Support to Business Development Services in Kenya', based on a study funded by PPIAF, jointly with Kameel Virjee, Barbara Evans and Kingori Wathobio, 2007. Link1, Link2, Link3
- "Financing the Millennium Development Goals for Water and Sanitation: What will it take?" International Journal of Water Resources Development. 21:2:239-252. Jointly with Thomas Fugelsnes and Kameel Virjee. 2005. Link2
- "Mobilising Resources from the Private Domestic Market" Background Paper for the Domestic Private Sector Participation Initiative Workshop held in Nairobi, 20-21 June 2005. WSP-Africa.
- The Challenge of Financing Sanitation: for meeting the Millennium Development Goals. Paper commissioned by the Norwegian Ministry of Environment as a think piece for the Commission on Sustainable Development. Jointly with Andreas Knapp. 2004. Link
- Meeting the Finance Challenge for Water Supply and Sanitation: Incentives to promote reforms, leverage resources and improve targeting. Water and Sanitation Program and World Bank. 2003. World Bank Working Paper 30348 <u>Link1</u>, <u>Link2</u>
- Financing Small WSS Service Providers Exploring the Micro-finance Option in Sub-Saharan Africa? WSP-AF. Jointly with Kameel Virjee. 2004. Link1, Link2
- WSS in PRSPs in Sub-Saharan Africa: A Performance Benchmarking Review. WSP-AF. Jointly with Thomas Fugelsnes. 2003. <u>Link1</u>, <u>Link2</u>
- Water Supply and Sanitation in PRSP Initiatives: A desk Review of emerging experience in Sub-Saharan Africa",
   2002. <u>Link</u>
- Sector Finance and Resource Flows for Water Supply: Kenya. Jointly with Ondari. WSP-AF. 2003. <u>Link1</u>, <u>Link2</u>,
   Link3
- Review of Public-Private-Partnerships in Water and Environmental Services for India, Report for the Department for International Development, 1999.
- Economic Reforms Program of Support Infrastructure: Roads and Urban Infrastructure, Report for the Government of India UNDP Country Co-operation Framework. 1998.
- "Emerging Issues in India's Municipal Bond System: The need for regulatory control", Project Note 10, Indo-USAID FIRE(D) Project.1998; and "Municipal Bonds", a Note for the Government of India Ministry of Finance (Rakesh Mohan Committee on Commercialization of Infrastructure. 1996.

- "Increasing Urban Infrastructure Investments through Capital Market", in Singh K. and Steinberg F. (eds.). 1996.
   Urban India in Crisis, New Age International Limited. New Delhi.
- "Pricing and Cost Recovery of Urban Services: A city level perspective Pune case". National Seminar on Pricing and Cost Recovery at New Delhi. 1996.
- "Property Taxation in Developing Countries: Situation Analysis and Potential". International Conference of Property Taxation. 1991. Lincoln Institute of Land Policy, USA.
- Financing Urban Infrastructure and Land Development. Theme Paper for National Urban Land Seminar. 1992. Aurangabad, India. Jointly with Dinesh Mehta.
- Cited as a collaborator. Irving Kravis, et.al. International Comparisons of Real Product and Purchasing Power.
   1978. John Hopkins University Press. World Bank. Link
- "Tubewell Irrigation: Analysis of technical alternatives", Economic and Political Weekly, Dec 1975, pp. 111-113, jointly with Ramesh Bhatia. Link

### Housing

- Down Marketing Housing Finance through Community Based Finance Systems. Indo-USAID Housing Finance Expansion Programme. 1994.
- "Housing finance systems and the urban poor", jointly with Dinesh Mehta, in Economic and Political Weekly, April 27, 1991, pp. 1107-1111, <u>Link</u>
- Spatial Information System for Housing Market: Housing Price Index and Supplies for Metropolitan Areas. Report for Housing Development Finance Corporation, India. 1990.
- Land for Shelter: Delivery of Serviced Land in Metropolitan Areas. U.S. Agency for International Development, 1990. Jointly with Dinesh Mehta.
- Housing Finance Systems in Metropolitan Areas of India. USAID. 1989. Jointly with Dinesh Mehta. <u>Link</u>
- Metropolitan Housing Market A Case of Ahmedabad. Book Sage Publishers, 1989 Jointly with Dinesh Mehta.
   Link Link2
- "Faith in National Housing Policy" jointly with Dinesh Mehta, in Economic and Political Weekly, Aug 22 1987, pp. 1435-36, Link
- "Metropolitan Housing Market Housing Demand, Supplies and Residential Behaviour". National Planning Commission, Government of India. 1987.
- "Metropolitan Housing Markets: A case study of Ahmedabad", jointly with Dinesh Mehta, in Economic and Political Weekly, Oct 3, 1987, pp. 1701-1709, <u>Link</u>.
- "Home Upgradation and Income Generation from Housing". In Raj and Nientied (eds). Housing and Income in Third World Urban Development. Oxford-IBH. 1990. Jointly with Dinesh Mehta. Link to book

### **Urban Development and Planning**

Management Information System for Urban Basic Services for the Poor. Ministry of Urban Development.
 Sponsored by UNICEF. New Delhi. 1995.

- "Participation and Urban Governance". Global Urban Research Initiative. Toronto, 1994. <u>Link</u>
- Convergence in Urban Basic Services for the Poor A Study of Nasik and Aligarh. UNICEF. New Delhi. 1993.
- Employment, Income and the Urban Poor: A Case of Ahmedabad. Book by Harman Publishing House. New Delhi.
   1990.
- "Urban Informal Sector Concepts, Indian Evidence and Policy Implications". Economic and Political Weekly.
   February 23. 1985. <u>Link</u>
- "Implications of Urban Policy and Regulations for Self-employed Workers: Hawkers in Ahmedabad". Workshop on Self Employed Women & Human Resource Development. Ahmedabad. 1988.