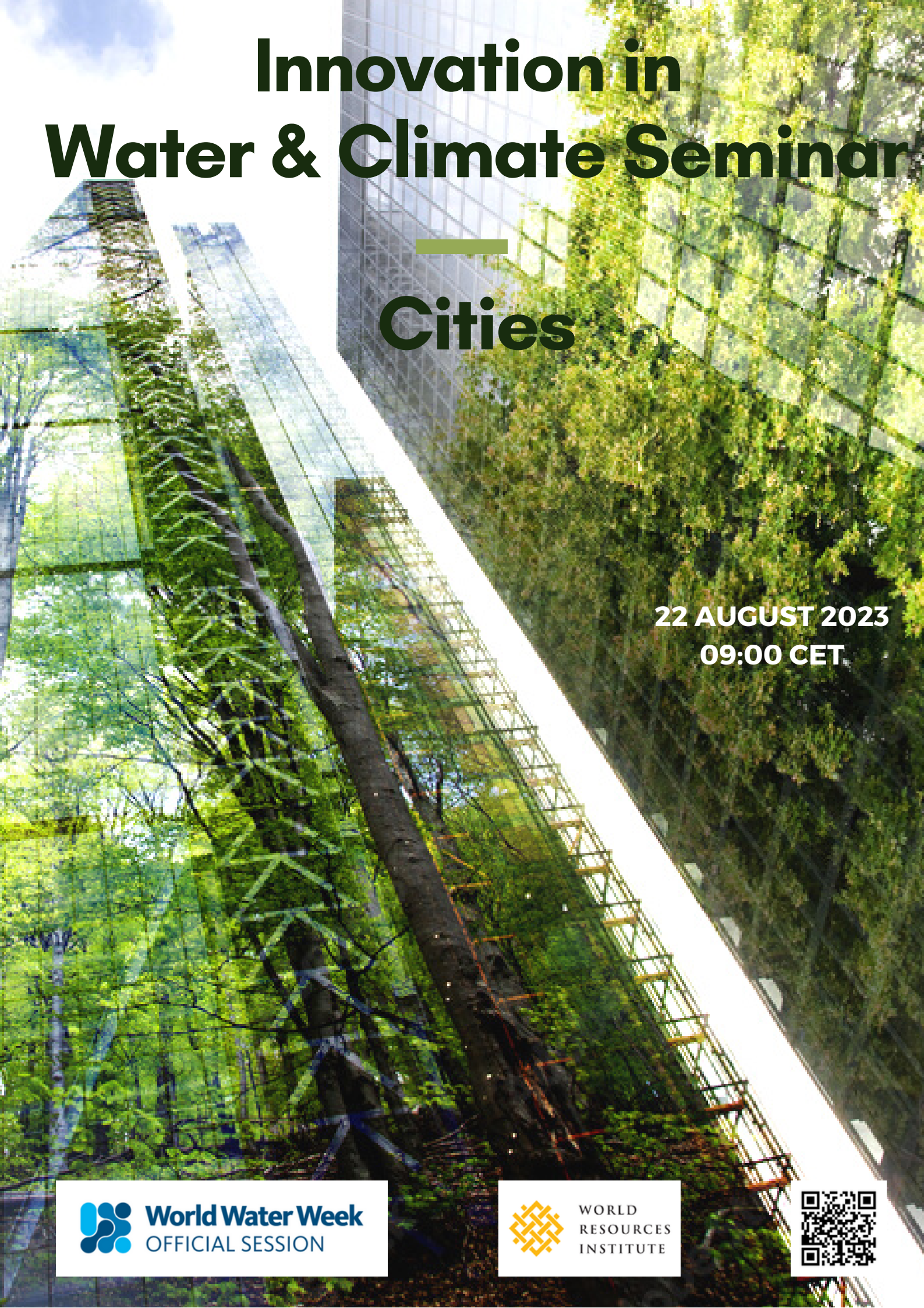
Innovation in Water & Climate Seminar

Cities

22 AUGUST 2023
09:00 CET



World Water Week
OFFICIAL SESSION

WORLD RESOURCES INSTITUTE

Programme

SETTING THE SCENE - **DHESIGEN NAIDOO, CLIMATE COMMISSIONER**

KEYNOTE - OPPORTUNITIES AND CHALLENGES FOR CLIMATE ACCELERATED TRANSFORMATION IN WATER RESILIENCE IN CITIES

KARTIK CHANDRAN, COLUMBIA UNIVERSITY

PART I: CASE STUDIES SHOWCASING INNOVATION AND VALUES IN THE WATER SECTOR

TECHNOLOGICAL/DIGITAL INNOVATION

- **SHAURYA CHAUHAN & NIKHIL SANJAY-SHAH** - PROJECT CONNECT: A SMART DIGITAL APPROACH TOWARDS URBAN WATER RESILIENCE (INDIA)
- **JOSE CASTRO** - WATER QUALITY AND AI: INNOVATION FOR MITIGATION
- **SOFIA BABANOVA** - BIOELECTROCHEMICAL TREATMENT TECHNOLOGY WASTEWATER MANAGEMENT AND GHG EMISSIONS REDUCTION

POLICY INNOVATIONS

- **ILIAS MACHAIRAS** - AN URBAN DROUGHT CATEGORAIZATION FRAMEWORK
- **MATTEO DELL'AMICO** - A DIGITAL TWIN FOR LOCAL WATER STRESS MANAGMENT AND FORECAST

FINANCING INNOVATIONS

- **JASON LOPEZ** - DETERMINING THE VIABILITY AND SCALE FOR CARBON OFFSET REVENUE IN THE WATER SECTOR (KENYA AND ETHIOPIA)
- **JOHANNES WAGNER** - SOLAR WATER KIOSKS AS A CLIMATE ADAPTATION RESPONSE IN MALI

Programme

PART II: ROUNDTABLE DISCUSSIONS - TOD GARTNER, WRI

PANELLISTS

- **HAMID ASSEFAR, HEAD OF ASSET MANAGERS INVESCO**
- **SRIDHAR SAMPATH, DIRECTOR - INFRASTRUCTURE INVESTMENTS, WATER EQUITY/WATER.ORG**
- **MAARTEN GISCHLER, SENIOR WATER ADVISOR, MINISTRY OF FOREIGN AFFAIRS NETHERLANDS**
- **YVONNE AKI-SAWYERR, MAYOR OF FREETOWN, SIERRA LEONE**
- **TOM MOLLENKOPF, PRESIDENT IWA**

KEY QUESTIONS

- WHAT IS THE ENABLING ENVIRONMENT THAT WILL UNLOCK RESOURCES TO IMPLEMENT AND SUSTAIN INNOVATION?

- WHAT ARE THE RESOURCES NEEDED TO SCALE, SUSTAIN AND IMPLEMENT THESE SOLUTIONS?

AUDIENCE Q&A - AMANDA GCANGA, WRI

SUMMARIZING REMARDS & PATH FORWARD FROM WWW TO COP28

DHESIGEN NAIDOO, CLIMATE COMMISSIONER, SOUTH AFRICA

PAINTING A PICTURE OF WHAT THE DISCUSSION MEANS IN TERMS OF THE UN WATER AGENDA - PATH FORWARD

ROGIER VAN DER BERG, WRI

Mr. Dhesigen Naidoo is a World Bank Senior Advisor of Adaptation to the South African Presidential Climate Commission and Senior Research Associate at the Institute for Security Studies Africa. He is a leader, a scientist and an activist for positive social change. He is also a member of the Presidential Climate Change Commission, President of the global NGO Human Right 2 Water and a Founding Member of the Water Policy Group. He has led the Water Research Commission (WRC), South Africa's dedicated national Water and Sanitation Innovation, Research and Development Agency for 10 years. He has previously served in senior positions in the South African national government and South African universities having begun his career as a medical scientist in a specialist children's hospital. He is a Councillor of the South African National Advisory Council on Innovation (NACI) and a Fellow of the Mapangubwe Institute for Strategic Reflection (MISTRA). He counts his lovely wife and beautiful children as both his primary source of inspiration and vanguard of his humility

Kartik Chandran is a Professor in the Department of Earth and Environmental Engineering at Columbia University and a global leader in sustainable wastewater treatment and engineered resource recovery. Chandran's work is enabled through understanding and harnessing the biochemical potential and metabolism of microbial communities and developing appropriate technologies towards addressing global environmental and societal needs. Applications of his work have ranged from energy and resource efficient treatment of nitrogen containing wastewater streams, development and implementation of sustainable approaches to sanitation to novel models for. Under his stewardship, the directions of biological wastewater treatment and biological nutrient removal were initiated at Columbia University in 2005. More details on his work can be found at www.columbia.edu/~kc2288.

Hamid Asseffar is head of Asset Managers, UK and leading climate finance initiatives at Invesco. He joined from Amundi and brings his expertise and experience in conceptualizing innovative products and solutions such as blended finance, raising capital, building strategic partnerships, designing, and implementing distribution strategies. Prior to Amundi, Hamid also worked for Société Générale Gestion in Paris and Credit Suisse in London. Hamid graduated from EDHEC Business School and holds the CFA ESG certificate and he is Certified Financial Technician (CFTe) with a diploma from the Society of Technical Analysts (STA).

Amanda Gcanga is a Country Lead for the Urban Water Resilience Initiative and a Senior Urban Policy Analyst working with WRI teams in Africa and the headquarters. In her capacity as a policy analyst, she plays a central role in liaising with key stakeholders at the national government and local government level to create conducive ground for WRI's support on the urban development policy, providing technical support to key partners and identification of WRI's policy-level interventions in Africa. As a Country Lead, she guides the implementation of the Urban Water Resilience initiative in South Africa, including the identification of strategic intervention and collaboration areas for WRI city's work. Amanda has experience in water governance as a practitioner and a researcher. Prior to joining WRI, Amanda led a water programme at the Western Cape Economic Development Partnership based in Cape Town. Before joining the Western Cape Economic Development Partnership, she co-lead water governance research projects with the Water Institute of Stellenbosch University, the Centre for Sustainability Transitions, and the Centre for Water and Sanitation Research. Amanda holds a master's degree in International Land and Water Management at Wageningen University in the Netherlands.

Maarten Gischler is a water adviser in the Netherlands Ministry of Foreign Affairs, working at different scales from local to global, on both resource management and water service delivery. From his multi-level experience two insights emerge: how important functionality is at each level of governance, and how important – and underrated – good communication and coordination are between the various levels in the governance chain. Deep dives in Maarten's work include an ongoing urban resilience partnership with the city of Beira in Mozambique since 2011; preparing for, living through and recovering from cyclone devastation, and enhancing resilience in the face of future climate risk. They also include 10 years of support to transboundary collaboration and policy dialogues between the countries sharing the Nile River, and work with the Global Commission on the Economics of Water. Maarten spent around 16 years in the Middle East, Central Asia and Africa. Before joining the Foreign Ministry in 2001, he worked as a consultant for 13 years.

T**om Mollenkopf** took up the Presidency of the International Water Association in April 2021, having been a Senior Vice-President and a Board Member for seven years. He is an advisor on water sector strategy, policy and governance; a Senior Associate with the Aither consultancy; and a Member of the Australian Water Partnership Expert Review Panel. Tom is passionate about the central role played by water and sanitation in the social, environmental, and economic well-being of society. He is also a firm believer in the power of constructive engagement and evidence-based decision-making as the foundation of sustainable water policy.

As Director-Infrastructure Investments at WaterEquity since March 2022, **Sridhar Sampath** is responsible for planning WaterEquity's investments into water & sanitation infrastructure, building a team and creating a pipeline of investible opportunities. During 2018-22 he was Regional Director, South Asia at WaterEquity, responsible for investments into financial institutions. During 2001–2018, he ran a small boutique investment banking and consulting firm, advising and raising funds for small and medium sized companies in India. Simultaneously he has also been adviser to DFIs from Denmark and Poland as well a few impact investment funds. He has represented some of these funds on the boards of investee companies as director. He was an independent director on the boards of a couple of companies. During 1998-2001 he worked as Investment Officer with Danish DFI IFU. During 1989-98 he worked with the ICICI group, in project finance as well as working capital finance. He was part of the small team that set up ICICI Bank in 1994. He qualified as Chemical Engineer from Indian Institute of Technology (IIT), New Delhi in 1985 and obtained a Post Graduate Diploma in Management (PGDM) from Indian Institute of Management (IIM), Bangalore in 1989.

Todd Gartner is the Director of Cities4Forests and WRI's Natural Infrastructure Initiative, where he leads a multidisciplinary team with a mission to better conserve, manage and restore forests, working landscapes, urban green infrastructure, and other natural ecosystems. In his role, Todd is responsible for overall strategy, leadership, management, partnerships, and fundraising for these initiatives. Todd directs Cities4Forests, which provides technical support for 90+ cities from around the world to invest in their inner forests (such as city trees, urban parks, and green infrastructure), nearby forests (such as watersheds) and faraway forests (such as tropical forests in the Amazon, Congo Basin, and SE Asia). Todd coordinates a network of experts and partners who provide cities with technical assistance to align local policies, conduct knowledge exchange and peer-to-peer learning, access financing for project implementation, and raise awareness of the value of nature among city governments and urban residents. Todd also leads WRI's Natural Infrastructure Initiative, which works to scale up nature-based solutions for water, climate and disaster risk mitigation, through project development, economic analysis and financing strategies. His team works closely with key decision-makers, such as utilities, investors and local and national governments to finance green infrastructure, pilot innovative projects and scale successful approaches.

Dr. Sofia Babanova is the CTO and co-founder of Aquacycl and leads the interdisciplinary team of engineers, researchers, and system operation personnel conducting development and operation of biological, electrochemical and bioelectrochemical systems for wastewater treatment and purification. Dr. Babanova holds a PhD in Inorganic Chemistry (Electrochemistry) and an MS in Organic and Analytical Chemistry and Measurement Science in Chemistry. She has a broad expertise and experience in analytical chemistry, electrochemistry, biochemistry, microbiology and material science. Her research interests are focused in bioelectrolcatalysis as a key component in the development of bioelectrochemical systems for: wastewater treatment, energy harvesting, environmental and biosensing applications, and as monitoring systems of human health. She is an inventor of 12 patent applications, nine of which have been issued. She is a recipient of 2015 STC.UNM Innovation Award and recognized as 2022 Woman of Influence in Engineering. Dr. Babanova's research and development work has resulted in 48 journal publications and one book chapter.

José Castro is the CEO and Co-Founder of Advanced Water Testing, an Oxford-based startup working with cutting edge electrochemistry and AI to develop decentralized water quality testing and analytics tools. He is also the president and Co-Founder of the Central American Youth Parliament for Water which launched earlier this year and is aiming to connect the region with the international water sector. He has a background in analytical chemistry and A.I. and holds an MSc in Water Science, Policy & Management from the University of Oxford, an American Chemical Society certified bachelors in Chemistry and is an alum of the United World Colleges. Born in Guatemala, he has lived and worked in five countries including India, Brazil, the US and the UK, with organizations such as the International Water Management Institute and UNEP through the World Water Quality Alliance. His areas of domain are in technology for decentralized water quality monitoring, with a particular focus on heavy metals, PFAs, E. coli and emergent pollutants.

Shaurya Chauhan is an architect, urbanist & green building professional based in New Delhi. He currently serves as Local Pathways Fellow in the United Nations' Sustainable Development Solutions Network and previously engaged in India Smart Cities Mission, Ministry of Housing & Urban Affairs, India. He is an Accredited Professional with the Indian & U.S. Green Building Councils (D.C.), an International Metropolitan Fellow (Madrid) & a member of International Society of City & Regional Planners (Hague). Shaurya is recipient of the ISOCARP Student Award (Abu Dhabi), UniATA Award for Best Project in West & South Asia Region and Saint Gobain National Scholarship. He has previously represented India at the AGORA PAUMME Awards held at the German University in Cairo and represented his University at global forums such as RIBA President's Medals (London). With professional experience in pan-South Asia projects for global urban development firms and Government of India, Shaurya is concerned with the widening gap between the top-down built environment initiatives & the ground-reality of the citizens in the contemporary city. He is attempting to bridge this gap through his interpretations of 'Urban Open Source'; 'Localization of the U.N. 2030 Agenda.'

Ilias Machairas is a water resources engineer focused on urban water management and flood protection. He holds a MSc in Water Management from TU Delft, Netherlands. His interests include climate adaptation strategies regarding floods, droughts, and urban heat island (UHI). His MSc thesis was about the vulnerability of cities to groundwater droughts. He is experienced in hydrological modelling on Python and loves learning about data science. His current position is about remote sensing and smart farming; his duties include tasks to optimize the performance of agricultural fields. He is also a passionate enthusiast of Geographical Information Systems & is an active member of gistackexchange.com. He loves volunteering and contributes to Water Youth Network, and Water Youth Parliament of Water (WYPW) to protect vulnerable communities from extreme climate events.

Nikhil Sanjay Shah, is a Researcher, Architect and Urban Designer. His research interests are in urban design, indigenous studies, urbanism of Himalayan settlements, agro-ecology, heritage conservation, sustainable (de)development, gender studies, community participation, and earth architecture. He was previously associated with the Smart Cities Mission, Ministry of Housing and Urban Affair as an India Smart Cities Fellow & developed Urban Water Resilience Platform for the Smart City Surat. Prior to that he was a Nagar-Nadi Research Fellow with People's Resource Centre, Delhi, IN, a research fellow with SVNIT, IN and Salford University, UK working on IT Indian Heritage Platform Project, and a research fellow at UNESCO Sahapedia working on the historic core of Surat. He was a recipient of ISOCARP 2020 award for his graduation thesis; Ecological Urban Commons, Augmenting climatic and social resilience, Surat and Shriya Anand award from Landscape Foundation for his work Minutiae; An Empathetic Narrative. He plans to work on Urban Water Plan for the Coastal cities of the Indian subcontinent and research on diverse issues exploring multi-disciplinary pedagogical frameworks to evolve co-learning processes. He holds a Masters in Urban Design from the School of Planning and Architecture, Delhi, IN.

Jason Lopez is a WASH professional with over 15 years of experience in environmental health and climate change issues. Currently serving as the Deputy Director of the Millennium Water Alliance, he brings extensive international development expertise and a strong commitment to advancing water initiatives. Jason oversees programs in Kenya and Ethiopia, while also driving knowledge management efforts. Notably, he played a crucial role as an Advisor with Save the Children, leading programming strategy for WASH and infection prevention and control in healthcare facilities across multiple countries. With Catholic Relief Services, he supervised the creation of sustainable WASH facilities in schools, prioritizing long-term maintenance and usability. As an urban sanitation specialist with Oxfam Great Britain, he established public-private partnerships for urban public sanitation administration. Jason specializes in climate change adaptation, WASH, health systems strengthening, social behavior change, human-centered design, and monitoring, evaluation, and learning. His extensive experience in Latin America, Sub-Saharan Africa, and Southeast Asia has allowed him to build strong relationships with diverse stakeholders. Jason remains dedicated to professional growth and continuously seeks opportunities to expand his knowledge and expertise

Matteo Dall'Amico is an intrepreneur and a professional with more than 15 years of experience in water resources analysis. He holds a PhD in environmental engineering with a specialization in hydrology on mountain environments. He has authored publications in scientific journals and has contributed to the development of hydrological models in the international community. In 2014 he founded MobyGIS and won numerous awards in start-up competitions achieving success in the Water, Energy and Space sectors. In recent years he launched the Waterjade project, a software system capable of predicting water inflows, currently used in the Hydropower and Utilities sector for water supply planning

Johannes Wagner is a doctoral researcher at the University of Oxford. His research examines the payment behaviours of rural water users in sub-Saharan Africa. His field-based study focuses on policy issues informing how rural users pay for water across service delivery models, payment methods, and infrastructure types using both qualitative and quantitative methods. His work contributes to global knowledge on performance-based models for professional rural water services. Johannes' research is part of the NEWAVE project, a Marie Skłodowska-Curie Innovative Training Network, led by Vrije Universiteit Amsterdam. Prior to joining his PhD program, Johannes worked for four years as a policy advisor on behalf of the German Development Cooperation (GIZ) for the sustainable development of the water and sanitation sector in Mali. His work focused mainly on sector steering, pro-poor regulation, and performance monitoring mechanisms as well as drinking water quality.