

The Solutions Lab

Scaling for Sustainable Infrastructure

November 2019 to July 2020



ONBOARDING & PREPARATION

October 2019

1ST LAB MEETING "KICK OFF"

Berlin, Germany: 19-22 November 2019

VIRTUAL CO-CREATION PHASE I

November 2019 - February 2020

2ND LAB MEETING "DEEP DIVE"

Mexico City, Mexico: 18-21 February 2020

VIRTUAL CO-CREATION PHASE II

February - June 2020

SOUNDING BOARDS & OUTREACH EVENTS

Throughout 2020

(e.g. The Global Solutions Summit in Berlin 20-21 April 2020)

3RD LAB MEETING "SCALE UP"

Milan, Italy: 29 June - 2 July 2020

IMPLEMENTATION PHASE

Starting July 2020

THE SOLUTIONS LAB

SCALING FOR SUSTAINABLE INFRASTRUCTURE

Sustainable infrastructure is globally recognized as key to realizing the Sustainable Development Goals and Paris Agreement. Over the last years, more and more strategies, policies and tools have been developed to unleash this potential for sustainable development. Yet, public and private sector still struggle to put in place infrastructure that meets the four principles of sustainability: economic and financial, environmental, social and institutional. To analyze what hinders broad uptake of existing sustainable infrastructure solutions, to identify approaches that work, and to devise context-sensitive strategies for their scaling, the Global Solutions Initiative (GSI) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH are launching The Solutions Lab “Scaling for Sustainable Infrastructure”.

RATIONALE

Inadequate transportation and energy networks, a lack of basic sanitation facilities and insufficient communication infrastructure still affect the well-being of billions of people. To close this gap, and thus to lay the very foundation on which societies can build the prospects of a more prosperous and inclusive future, additional investments of \$15 trillion must be mobilized until 2040, according to G20's Global Infrastructure Hub.

At the same time, it is becoming increasingly clear that infrastructure can also incur negative effects on people and planet, including through involuntary resettlements or climate change. In both positive ways and negative, infrastructure touches upon all dimensions of sustainability: economic, institutional, social and environmental. Therefore, the G20's Osaka Declaration underlines that while "infrastructure is a driver of economic growth", what is needed is not simply 'more infrastructure' but 'more and quality infrastructure'.

As evidenced by the G20 Osaka Leaders' Declaration, sustainable infrastructure development is recognized by policy makers as key to realizing the Sustainable Development Goals (SDGs) and Paris Agreement. To this end, more and more sustainability tools, policies and strategies have been developed. Yet, public and private sector still struggle to put in place infrastructure that serves the overarching goal of a recoupling of economic and social progress within our planetary boundaries. To change this, the Lab will address two challenges in particular: First, sustainability considerations need to be systematically integrated at every step in the planning of infrastructures. Second, the benefits of sustainable infrastructure need to be quantified to strengthen the business case for sustainability.

To address these challenges, the Global Solutions Initiative (GSI) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH are launching The Solutions Lab "Scaling for Sustainable Infrastructure". The 8-month process brings together app. 25 experts from academia, policy, finance and infrastructure development to overcome implementation challenges and upscale sustainable infrastructure solutions.

OBJECTIVES

The Solutions Lab **promotes dialogue and mutual learning** amongst a diverse set of stakeholders from the sustainable infrastructure ecosystem: The program stimulates the exchange of experiences across regional and professional boundaries (peer learning). This allows participants to thoroughly understand and appreciate the perspectives of a diverse set of players including the private, public and financial sectors as well as academia – a key prerequisite to create and scale innovative solutions for sustainable infrastructure. The process aims to develop viable networks which can be drawn on even after the official Lab process has come to an end.

Inspiring participants to take action: To move from dialogue to action participants will, in a first step, collectively analyze what has been hampering the scaling of sustainable infrastructure solutions to date. Here, the goal is to identify specific target areas where changes and innovation are needed. In a second step, the process will enable participants to develop concrete steps and recommendations to overcome these obstacles. The process will be accompanied by experienced change facilitators – but ownership ultimately rests with the participants.

Equips participants to take leadership as change agents: Finally, The Solutions Lab will inspire participants to take leadership and support them in their role as change agents.

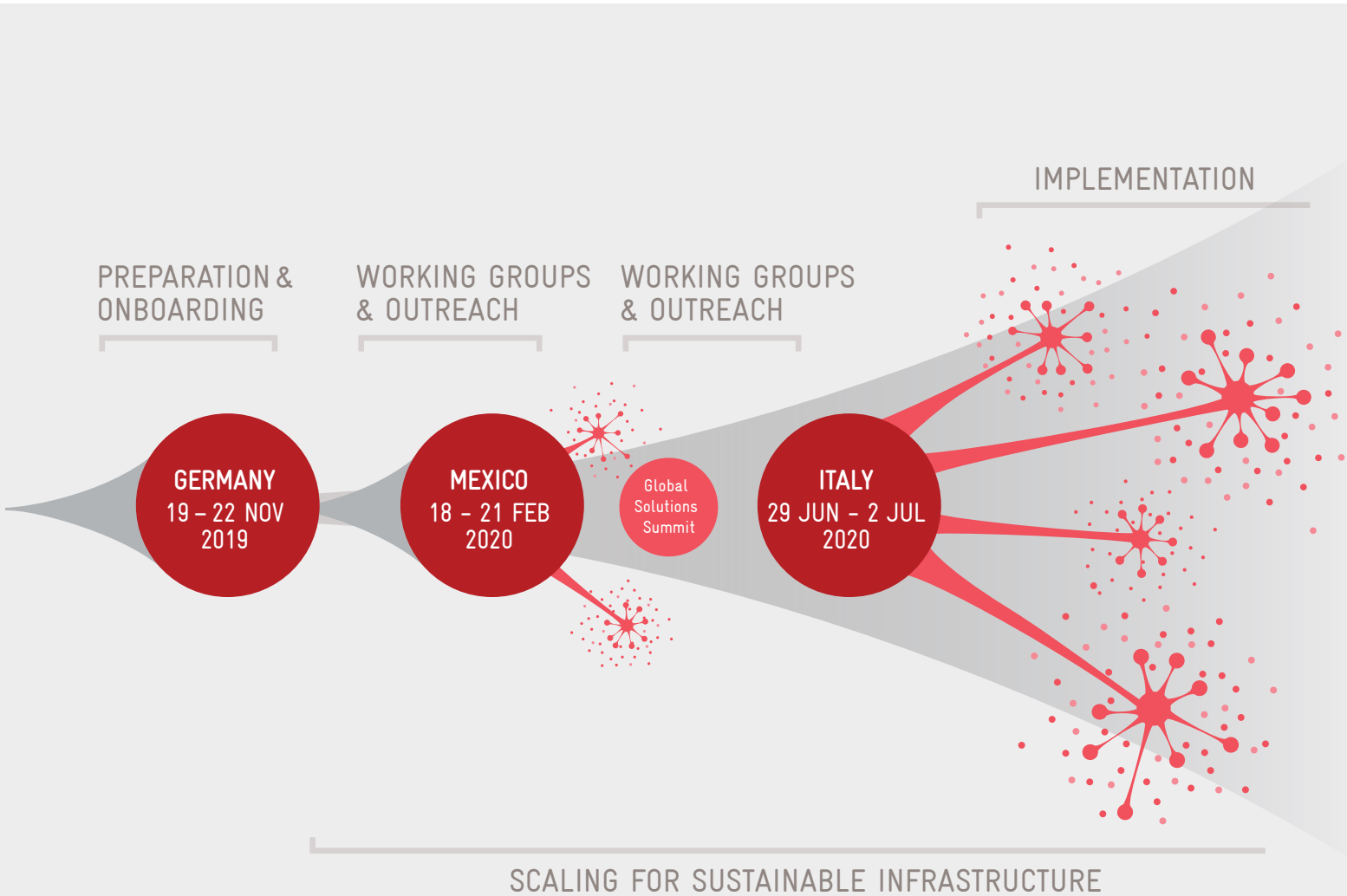
EXPECTED OUTPUTS

Implementation Strategies: How can sustainability solutions be scaled across work streams of public and private sector infrastructure development?

Tools and Approaches: How to adjust existing sustainability solutions to overcome the implementation gap?

Policy Briefs: What policies are needed to allow for a global uptake of innovative sustainability solutions?

THE PROCESS



METHODOLOGY & APPROACH

METHODOLOGY

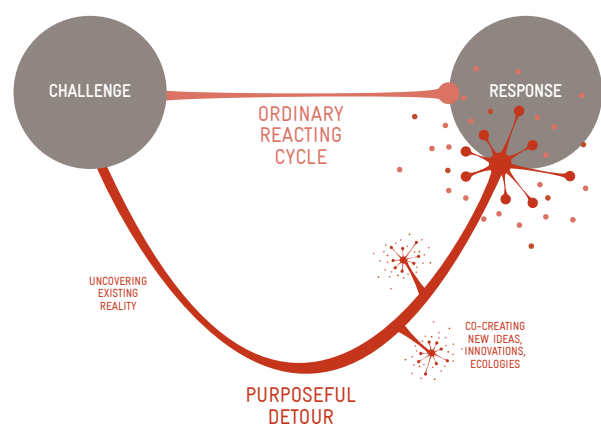
In today's world, economic, social and environmental issues are strongly interrelated. No matter the topic, an increasing number of actors is involved, cause and effect can be far away in space or time. Yet, most of our approaches are still developed and implemented in sectoral and organisational silos: the way we respond to our challenges no longer matches the complexity and dynamics of our most pressing challenges.

With the 2030 Agenda for Sustainable Development, the international community recognized the strong interlinkages between all dimensions of sustainability and called for a holistic approach to global development. The SDGs represent a global realisation that the current situation is unacceptable, it cannot be transformed unilaterally or immediately, and there is a need for spaces that allow for a collective search for new approaches. The Solutions Lab creates such a space on the basis of the "Social Lab approach".

A Social Lab is systemic and participatory. Where leaders and change agents have diverse perspectives on how to address their shared area of concern and no single actor has the solution, it fosters collaboration across organisations, sectors and often national borders. This helps create the necessary commitment of different stakeholders to work together towards common goals in the long run.

Rather than a linear and reactive approach (conventional planning, development and strategic responses have proven inadequate), addressing such complexity as outlined above requires an approach that is emergent and responsive to the changing nature of the challenge being addressed. The Lab thus provides a space for a purposeful detour that enables the group of participants to explore and uncover the existing reality, to co-create new ideas and to scale innovative solutions. (see graph)

TWO WAYS OF ADDRESSING CHALLENGES



APPROACH

The Solutions Lab consists of three face-to-face meetings as well as a virtual dialogue process along the way. The 2020 Global Solutions Summit in Berlin will be an additional mile-stone which allows a delegation (tbd) to present the Lab process and interim result to a high-rank policy audience. In addition, there will be space and potential funding throughout the Lab process to organize (1) sounding boards which serve to test ideas amongst a specific target group and (2) outreach events which will help to advocate for Lab results and ideas. The Solutions Lab will run from November 2019 until summer 2020. Yet, implementation is expected to continue organically beyond the last Lab meeting in Milan.



PARTICIPANTS

The Solutions Lab is designed for leaders and change agents from the worlds of policymaking, business, development practice, academia and civil society. The participants come from diverse backgrounds and are united by their passion for sustainable infrastructure and their commitment to transformation and scaling solutions. In this Lab, they share their knowledge and perspectives of sustainable infrastructure, discovering new angles and approaches to change and put scaling ideas and solutions to action.

PARTICIPANTS

25



PARTICIPANTS

15



COUNTRIES



SAUD AYID ALSHAMMARI
SAUDI ARABIA

The Saudi Fund for Development Project Manager

Saud Alshammari is a Civil Engineer who works in the Saudi Fund for Development (SFD) as a Projects Manager. During his 10 years working with SFD, Saud oversaw the preparation and implementation of many development projects in developing countries by granting them the technical aids necessary. Saud holds a PhD in construction engineering and management.

I am passionate about Sustainable Infrastructure...

and now proud to be a part of The Solutions Lab „Scaling for Sustainable Infrastructure“ to better meet the 17 interrelated Sustainable Development Goals (SDGs). This plan may seem too ambitious, but building a better world requires a bold vision and hard work. During my career, I have worked on many SDGs, but the question of how to achieve impact at scale remained. The question I continued to ask myself is: „How do we make development more sustainable?“



RYAN BARTLETT
UNITED STATES OF AMERICA

World Wide Fund for Nature
Director of Climate Risk Management
& Resilience

Ryan Bartlett has been working in climate risk and resilience for 10 years, training WWF staff and partners around the world, developing tools, and improving and translating science to better understand and prepare for the risks and impacts of climate change. He has worked with a broad array of stakeholders and partners, from local communities to the UN and the private sector in priority WWF conservation landscapes in Central America, Coastal East Africa, and South and Southeast Asia. He currently manages projects focused on integrating climate and ecosystem services data and information to support improved landscape and regional planning for resilience. He previously worked in international water policy at Duke University's Environmental Law and Policy Institute and received his master's degree in environmental management from Duke's Nicholas School in 2010.

I am passionate about Sustainable Infrastructure..

because it presents an incredible opportunity to work across the typically hardened silos of sectors and fields of expertise and set a new course for development in the 21st century. It demands that we develop new models that learn from the mistakes of the past and plan and build social-ecological systems that not only maintain natural capital reduce emissions, but take advantage of the incredible benefits and services nature provides for people and economies in a world increasingly defined by shock and disturbance.



AMAR BHATTARCHARYA
UNITED STATES OF AMERICA

Brooking Institution
Senior Fellow

Amar Bhattacharya is Senior Fellow at the Global Economy and Development Program at Brookings Institution. His focus areas are the global economy, development finance, global governance, and the links between climate and development with a focus on the role of sustainable infrastructure. He also co- leads the Sustainable Finance and Growth Initiative of the New Climate Economy. From April 2007 until September 2014 he was Director of the Group of 24. Prior to that, Mr Bhattacharya had a long-standing career in the World Bank. He completed his undergraduate studies at the University of Delhi and Brandeis University and his graduate education at Princeton University.

I am passionate about Sustainable Infrastructure...

because it is the essential foundation for inclusive growth, sustainable development and meeting the climate goals. We are at a moment of history because of the scale and urgency of the challenge. Unlocking investments in sustainable infrastructure, ensuring that these investments meet high standards, and mobilizing the finance that is needed at scale is a complex task even in advanced countries. I believe that the lab can help facilitate the search for solutions that can enable us to raise ambition and accelerate actions on this important agenda.



NICOLAS BUCHOUD
FRANCE

Grand Paris Alliance President

Nicolas J.A. Buchoud is the president of the Grand Paris Alliance, an independent, non-profit and awarded think-tank on sustainable metropolitan development and investment policies. He is the founding principal of Renaissance Urbaine strategic advisory with a track record of achievements in complex cross-cultural, scientific, entrepreneurial and institutional contexts from Vancouver to Vladivostok. A member of the board and advisory committee of several global companies, research centers, civic organizations, he is a trusted partner and negotiator. He served as chief of staff of a city mayor and advisor for planning and climate change to the President of Paris Ile de France Region and he regularly publishes and lectures on urbanization and infrastructure development, innovation, social capital and inclusion. Nicolas J.A. Buchoud is an alumnus of Sciences Po Paris in public law, public administration and urban affairs. He holds a master degree from Paris La Sorbonne University in 17th Century Chinese history.

I am passionate about Sustainable Infrastructure...

as I believe it is the backbone for a new climate economy. Now is the time to think about the infrastructures we need for our common future and to explore uncharted territories such as the convergence of infrastructure investments and the development of social K in an era of deep digitalisation and metropolitan fragmentation. There will be no sustainable urbanisation without sustainable and resilient infrastructure to recouple growth with people.



GABRIELA CANALES GALLARDO
MEXICO

Institute of Planning and Development Management of the Metropolitan Area of Guadalajara Development Management Director

Gabriela is Director of Development Management at the Institute of Planning and Development Management of the Metropolitan Area of Guadalajara (IMEPLAN, by its acronym in Spanish). She is responsible for the development and implementation of the Projects Bank and the Metropolitan Impact Ruling, as well as international cooperation initiatives, environment, sustainability, climate change and information technologies, within the nine municipalities of the Metropolitan Area of Guadalajara.

Gabriela has a Master's in Environmental Management from Yale University and one in Peace Studies from Kyung Hee University in the Republic of Korea, where she specialized in Peace Education. She has a degree in International Relations and is experienced Project Manager with a demonstrated history of working in the government sector and skilled in Nonprofit Organizations, Sustainable Development, Conflict Resolution, Facilitation, and Environmental Awareness.

I am passionate about Sustainable Infrastructure...

because it has enormous potential to promote inclusive development. Not only does it allow us to have access to basic services, key for development, such as clean water, health, education, transportation, etc., but if properly planned, it beautifully reflects the worth of interlinking different sectors, institutions and policy levels.



CRISTINA CONTRERAS CASADO
UNITED STATES OF AMERICA

Harvard University
Research Associate

I am a Research Associate in the Zofnass Program for Sustainable Infrastructure at Harvard University, where I focus on promoting sustainable practices in infrastructure projects on a global scale and where I have collaborated on the development and application of tools to quantify sustainable infrastructure. In my efforts to build capacity around sustainable infrastructure, I also work as an independent expert consultant for international financial institutions and public agencies in the US and Europe. This work has allowed me to focus on how the different tools and systems to quantify SI have evolved at the global scale and to reflect on the main impediments to streamline sustainability in infrastructure projects.

I am a member of several working groups including the "UNEP Expert Working Group on integrated approaches to sustainable infrastructure", American Society of Civil Engineers' (ASCE), "Sustainable Infrastructure Standards Committee" and the "Planning Committee on Global Sustainability".

I am passionate about Sustainable Infrastructure...

because I truly believe that this is the only possible path to development while minimizing the impact that the development of infrastructure projects have in our communities and the environment as a whole.



EDOARDO CROCI
ITALY

Bocconi University
Coordinator Green Economy Observatory

Member of the Managing Committee of GREEN - Centre for Research in Geography, Resources, Environment, Energy and Networks of Bocconi University - where he is coordinator of the Green Economy Observatory (GEO) and of the Smart City Observatory. He also teaches "Carbon Markets and Carbon Management" at Bocconi. He coordinates research activities in several national and European projects on green and circular economy, energy efficiency, smart cities and urban green infrastructures. He is member of the Thematic Network on Sustainable Cities of UN-SDSN (Sustainable Development Solutions Network). He is president of Italia Nostra Milan's delegation. He served as Milan City Deputy Mayor for Mobility, Transport and Environment and President of the environmental protection agency of Lombardy Region.

I am passionate about Sustainable Infrastructure...

because as a teacher and researcher in environmental economics, I consider the sustainability of infrastructures a key topic related to the transition of our economic systems. Sustainable infrastructures should include low carbon, green and smart infrastructures, in order to minimize emissions, generate ecosystem services and optimize processes."



STEVEN CROSSKEY
DENMARK

United Nations Office for Projects Services
Head of Strategic Initiatives, Infrastructure
and Project Management

Steve Crosskey is a Civil Engineer with nearly 30 years of experience in both the private and development sectors. Steve has worked primarily in the planning and management of infrastructure projects involving urban and rural development initiatives, with a focus on road infrastructure and relating to access to markets, food security, and conflict sensitivity. A major focus area for Steve has been infrastructure that is sustainable, resilient and inclusive.

Steve joined UNOPS in September 2014. In his current position, Steve has worked to assist governments in providing infrastructure and project management solutions in the context of the 2030 Agenda for Sustainable Development. He has also developed guidance and innovative tools to enhance the capacity of governments to plan, deliver and manage infrastructure systems to meet development challenges.

Steve holds a BEng. Honours in Civil Engineering from Oxford Brookes University.

I am passionate about Sustainable Infrastructure...

as it is critical for sustainable, resilient and inclusive development. Infrastructure decisions can lock in positive or negative development pathways for decades, if not longer. The coming decades will see massive investment in infrastructure to meet demands such as access to services and economic opportunities and the need to work with nature. We must learn from past mistakes and change how we handle infrastructure projects to achieve the sustainable future we all strive for.



PARAMITA DATTA DEY
INDIA

National Institute of Urban Affairs
Senior Research Officer

Paramita is a city planner with over 22 years of experience in the urban development sector. Currently, she works for the National Institute of Urban Affairs, a premier think tank organization of the Government of India. She leads the capacity building programme for scaling up sustainable infrastructure on waste management in 4041 Indian cities - the Swachh Bharat Mission, Urban (SBM-U). She has worked to bridge the gap between infrastructure policy and practice in four countries (India, Nepal, Bangladesh and Sri Lanka) through the South Asia Urban Knowledge Hub. She has helped create Innovation labs on Urban WASH solutions in Indian cities. Her work experience spans multiple stakeholders. She has worked with several Ministries of the Government of India in internationally funded projects by BMGF, ADB, UNDP, CIDA, USAID, World Bank and many others. She has also participated with leading think tank organizations like the Centre for Policy Research (CPR) and the Centre for Science and Environment (CSE).

I am passionate about Sustainable Infrastructure...

because we need to overcome the existing hurdles to ensure sustainable infrastructure and the lack of adequate investment in renewable energy, cleaner transport, efficient and resilient water system, waste management, etc. This is coupled by the limited capacity of functionaries for green procurement, operation and maintenance of this kind of infrastructure. These hurdles can be overcome through collaborative knowledge sharing, innovative approaches, capacity building and assistance in implementation through partnerships. I see myself as a change agent and catalyst in this process.



SERGIO FORTE
MEXICO

Banco Nacional de Obras y Servicios Públicos, S.N.C.
Deputy Chief Executive Officer of
Investment Banking

Sergio is Deputy Chief Executive Officer of Investment Banking at Banco Nacional de Obras y Servicios Públicos, S.N.C. (BANOBRAS), where he is responsible for the administration of the National Infrastructure Fund (FONADIN), and the promotion of Mexico's infrastructure agenda through the platform Mexico Projects Hub.

Mr. Forte holds a bachelor degree in business administration from the ITAM, with broad experience in both, the public and private sectors in fields such as stock markets, banking and project finance.

Prior to his current position, Mr. Forte held executive positions at Banca Mifel, the National Infrastructure Fund, the Institute for the Protection of Bank Savings (IPAB), and Bancomext.

I am passionate about Sustainable Infrastructure...

because I have personally witness the deteriorating quality of life in my home country. I have seen plenty of white elephants constructed over the years and how good infrastructure became useless because of lack of maintenance, and I do not want that for my teen children.



LORI BENITA KERR
UNITED STATES OF AMERICA

Global Infrastructure Facility
Senior Infrastructure Finance Specialist

With more than two decades of leadership in international development and infrastructure investment, Lori joined the Global Infrastructure Facility (GIF) in 2018. GIF provides transaction advisory to developing countries to build pipelines of bankable sustainable infrastructure programs / projects that attract private capital. Before, Lori was Senior Director at Climate Finance Advisors advising investors, governments and DFIs on climate-smart investment strategies and blended finance solutions. Lori held management and senior roles at IDB Group. She was private sector focal point for CIFs and GEF, investment committee chair of a \$250M blended climate finance fund, oversaw loan and equity portfolios, and reviewed risk / return of proposed loans and investments. As senior advisor to VP Private Sector, she led initiatives to enhance development impact of IDBG's private sector activities. As senior investment officer, she led the organization, structuring, negotiation and execution of project finance, corporate finance and guarantee transactions.

I am passionate about Sustainable Infrastructure...

because decisions we make today about infrastructure assets lock us into decades of consequences. Therefore, we have a unique opportunity and critical responsibility to ensure that today's infrastructure decisions maximise tomorrow's development impacts along economic, social, environmental, and climate dimensions. Moreover, public and private sectors have important roles to play-at different points along the project cycle-spanning planning, design, structuring, financing, operations and maintenance, and decommissioning.



PETER HEAD
UNITED KINGDOM

Resilience Brokers
Chair and Founder

Peter is a civil and structural engineer who has become a recognised world leader in major bridges, advanced composite technology and in sustainable development in cities and regions. In 2008, he was named by the Guardian as one of 50 people that could 'save the planet'. He was cited by Time in 2008 as one of 30 global eco-heroes.

In April 2011, he left Arup to set up Resilience Brokers, a Charity which has brought together top scientists, engineers, economists, financiers, health, ecology and other specialists to create, demonstrate and scale a CHEER (Collaborative Human-Ecological-Economics-Resource systems) Geographic Information System (GIS) platform to enable city regions to plan, design and implement inclusive resilient growth using low carbon development approaches which are energy, water and food secure. Peter is the editor of Roadmap 2030, Financing and implementing the Global Goals in Human Settlements and City Regions.

Peter is visiting professor in sustainable systems engineering at University of Bristol.

I am passionate about Sustainable Infrastructure...

because it is key to supporting transformation to a more resilient world in which global goals and Paris Agreement targets can be met, while addressing and mitigating the risks from climate change. I am working on an integrated planning and financing approach in which the total investment costs can be reduced by 40% through decentralised systems combined with nature based solutions. I have practical experience of delivery of sustainable infrastructure over 40 years.



GABRIEL LANFRANCHI
ARGENTINA

Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento
Cities Program Director

I am an architect and urban planner by training. I hold a master's degree in urban economics from Torcuato Di Tella University and a MIT SPURS fellowship in urban and regional studies.

Currently I am the Director of the Cities Programme at CIPPEC. We focus on urban inequality, climate change, digitalization, and metropolitan governance. I have been co-leading T20 task forces related to infrastructure and climate change in Argentina and Japan.

I am an affiliate researcher at ESI MIT where I founded the MIT Metro Lab course. I currently direct the Postgraduate course on Metropolitan Urbanism at the University of Buenos Aires.

I co-edited Steering the Metropolis, an IDB publication on Metropolitan Governance, and participated as lecturer and key note speaker to many International conferences and courses such as the 9th World Urban Forum, Habitat III, the Moscow Urban Forum, the Metropolis Summit, Smart City Expo Puebla, IDB Transport sector annual Meeting, and Harvard University.

I am passionate about Sustainable Infrastructure...

because shifting towards a low carbon emissions society is one of the most pressing issues our global community will face in the years to come. It is expected that infrastructure will grow exponentially in the next decade, so finding new financial mechanisms is key to develop quality infrastructure. We also need to create a new narrative in order to make happen the paradigm shift that the world needs.



ANUJ MALHOTRA
INDIA

Centre for Green Mobility Chief Executive Officer

Anuj Malhotra is a technocrat and urban infrastructure professional with over 18 years of experience in transport and urban development. Anuj is the CEO of non-profit Centre for Green Mobility and is also serving as the Transportation Advisor to the Government of Jammu & Kashmir (J&K), as knowledge partner to the High Powered Committee of the Ministry of Home Affairs, and Senior Planning Consultant to the Sabarmati Riverfront Development Corporation in Ahmedabad. Presently he is based in Delhi. During his Kashmir assignment, Anuj provided technical input and oversight to all the projects related to planning, design and implementation of traffic-transport, urban design, urban (transport & land use) planning and urban landscape design projects in the cities of J&K. He brought into the public sector his multi-dimensional, multi-disciplinary experience for the formulation and implementation of policies, projects and internal capacity building.

I am passionate about Sustainable Infrastructure...

because sustainable infrastructure puts equality at the forefront of all urban transport dialogues, which according to me, is the most important aspect of considering "sustainability". We are not going to be able to build a future if we only build for the rich and for the haves. Also, sustainable infrastructure is fun as it summons a lot of creativity in being able to solve urban transport problems and is not as straight jacket as it might seem. Being able to build ground-up solutions is a challenge and an exercise for innovation.



ELIAS OTIENO
KENYA

Insurance Regulatory Authority Actuary

Elias advises, designs and implement policies and regulations on risk based regulatory frameworks at the Insurance Regulatory Authority. He has been at the forefront in developing policies for the public and private sector on economic and social issues especially in integrating sustainability in infrastructure development and quantifying benefits of sustainable infrastructure in Kenya's government Big Four Agenda.

Elias has also worked on various international technical assistance projects, designing and implementing risk based regulatory frameworks for the World Bank Group, IMF, Vizor Software Limited and Extremis Global Risk Consulting. He assisted in the automation process of the regulatory reporting templates in Asia, Africa and Caribbean to establish regimes of risk-based supervision.

The Lab inspires and promotes inclusive innovative insurance solutions to vulnerable communities and business. Elias holds a bachelor's degree in Actuarial Science, a Diploma in IT and a Master of Science (MSc) in Actuarial Management from Cass Business School, United Kingdom.

I am passionate about Sustainable Infrastructure...

because Kenya is currently implementing the Big Four Agenda where infrastructure development is a key driver for progress and a critical enabler for productivity and sustainable economic growth. Kenya and Africa as a whole still have a vast infrastructure deficit which is a major constraint on its growth. There is a need to develop and integrate sustainable infrastructure development. As an actuary and an insurance expert, I will provide knowledge and expertise on how sustainable finance can be systematically integrated in the planning of infrastructures that will shape the future we live in.



ROWAN PALMER
SWITZERLAND

UN Environment Programme Programme Specialist

Rowan Palmer is a Programme Specialist at UN Environment's Resources and Markets Branch in Geneva. He works primarily on sustainable infrastructure in the context of inclusive green economy transitions and the 2030 Agenda for Sustainable Development. Prior to joining UN Environment in 2014, Rowan did environmental management for large-scale transportation infrastructure projects in his home province of British Columbia, Canada. Rowan holds a Bachelor's degree in International Development and Environment Studies from McGill University in Montreal and a Master's degree in International Relations from Instituto de Empresa in Madrid.

I am passionate about Sustainable Infrastructure...

because it is the key to the success of the Sustainable Development Goals. It provides the backbone for the global economy and is essential for providing services that are essential to human health and wellbeing, but at the same time can have major negative impacts on people and the environment. Balancing the benefits and risks from infrastructure development is therefore the "make or break" challenge for the SDGs.



SUNITA PITAMBER
PORTUGAL

Savanas e Enseadas LDA Director of Operations

Sunita Pitamber has over 20 years experience in development in Africa. She has held several positions at the African Development Bank, including Director of Human Capital, Skills Development and Youth Employment. Sunita has also led the AfDB Gender and Sustainable Development Unit where she has supported the design of continental gender responsive investments and sector strategies including policy dialogue tools. She also has extensive experience in supporting sustainable development in post-conflict countries. She has supported the G20 process focusing on addressing the migration crisis through youth employment and increasing private sector investments. Sunita has also led the design of the Climate Risk Management and Adaptation strategy and contributed to supporting country efforts to design climate resilient infrastructure. Currently she is supporting the African Union Commission and the African Union Development Agency to develop the African Women in Infrastructure Network (ANWIn).

I am passionate about Sustainable Infrastructure...

as an important element to improved inclusion, increasing economic and social opportunities, better regional integration and enabling shared prosperity and growth.



RICARDO RIVERA
PERU

Derecho, Ambiente y Recursos Naturales Consultant

Ricardo (age 29) obtained his law degree from the Peruvian Amazonian Public University (2013) and is currently pursuing a Master's degree in Government and Public Policies at the Pontifical Catholic University of Peru, as well as a specialization in Public Management at the same university. He has a Diploma in Strategy and Political Communication by the Graduate School of Business.

His work experience includes: productive conservancy of natural resources; design, implementation and monitoring of public policies at local, regional and national levels; environmental impact of public policies and infrastructure projects in the Amazonian basin and land use plans in Latin America and the Caribbean through case studies of mega projects of infrastructure across borderlines; and strategic thinking to achieve development within transparent, inclusive and participatory process.

I am passionate about Sustainable Infrastructure...

because in my home country, and specially in my region of origin, the state is absent in its roles as guarantor of human rights through the provision of public services, in which infrastructure plays an important role. At the same time, existing mega projects often remain ineffective because the infrastructure built is not consistent with the needs of the local population and the country's vision towards development, mainly due to decentralization policy at a subnational level. What would be required is a joint vision and improved capabilities for the development of sustainable infrastructure.



KATHARINA SCHNEIDER-ROOS
SWITZERLAND

Global Infrastructure Basel Foundation CEO

Katharina's team has assessed over one hundred infrastructure projects across the world applying the Global Infrastructure Basel (GIB) Grading for Sustainable Infrastructure. This tool helped to highlight the environmental, social and economic risks and potential impacts of projects and provided investors and project owners a framework for decision-making. Katharina was responsible for organizing an annual investment forum during GIB Summits, and led the publication of the Sustainable Infrastructure Capacity Building Handbook and a Scoping Study for the Early Stage Project Preparation. She co-chairs the Cities Climate Leadership Alliance's (CCFLA) Working Group on Project Preparation Facilities, was member of the CCFLA Steering Board and is a member of the ICLEI Resilient Cities Conference Program Committee.

In support of the Swiss Government and international experts, she is currently working with a project team to establish SuRe – The Standard for Sustainable and Resilient Infrastructure. Katharina is member of the Steering Board of the Resilience Measurement, Evidence and Learning Community of Practice funded by the Rockefeller Foundation.

I am passionate about Sustainable Infrastructure...

because infrastructure is our key to achieving the SDGs. In the next 30 years, the world will construct the same amount of infrastructure as it did over the past 150 years. Compounded by a projected global population of 9.5 billion by 2050 and an annual shortfall of USD 350 billion to meet infrastructure needs, millions more people will live without adequate access to critical infrastructure such as water, housing, healthcare, transport, and basic economic opportunities.



GAMELIHLE SIBANDA
SOUTH AFRICA

International Labour Organisation
Chief Technical Adviser

Gamelihle is a systems thinker and rapid ideator who fuses his skills in civil engineering, business, ethical artificial intelligence and biomimicry (innovation inspired by nature) towards the creation of a regenerative planet; that provides enough for all forever. He has over 27 years of international professional experience, mainly in infrastructure investment and development in 13 countries. 20 of which have been spent working with the United Nations in Africa and the rest in Government, Consulting and Applied Research.

Gamelihle has worked in various capacities; liaising with Governments, Universities, Infrastructure Authorities, Employers' Organizations, Unions, Donors, United Nations Agencies, Consultants, Contractors and Communities on the policy, financing, feasibility, research, design, training, employment creation, Just Transition to a greener economy and implementation of infrastructure and environmental projects in both rural and urban environments

I am passionate about Sustainable Infrastructure...

because, in addition to providing a productive asset, it supports service delivery that contributes to social and economic development without leaving an environmental debt for future generations. During its planning, design, construction and operation phases it can create green jobs and provide beneficiary communities with resilience in a changing climate.



ÖZLEM TASKIN
FRANCE

Organisation for Economic Cooperation and Development
Policy Analyst

Ms. Özlem Taskin is Policy Analyst at the OECD Development Co-operation Directorate. Her work focuses on promoting climate-compatible infrastructure in developing countries and on targeting the catalytic potential of development finance towards climate action - and thereby sustainable development.

Özlem leads the work programme on green investment and development banks in the OECD Development Co-operation Directorate. Within this capacity, she has been lead author of the OECD flagship report 'Aligning Development Co-operation and Climate Action: The Only Way Forward' and the OECD-UN Environment-World Bank report 'Scaling up climate-compatible infrastructure: Insights from national development banks in Brazil and South Africa'.

A development banker with ten years of experience in investment operation and policy, she supported the promotion of renewable energy and energy efficiency in India, Serbia and Turkey. She holds a graduate degree in economics from Goethe-University Frankfurt.

I am passionate about Sustainable Infrastructure...

in developing countries because it is the related policy and investment decisions that are going to determine our collective ability to achieve the objectives of the Paris Agreement, meet the SDGs and leave no-one behind.



MOUNTAKA WAHABOU IBRAH
SOUTH AFRICA

**African Union Development Agency -
NEPAD (AUDA-NEPAD)**
Project Manager - Infrastructure Project
Preparation and Private Sector Development

Ibrah is an applied economist with extensive experience in international development focusing on public-private engagements for infrastructure project preparation and financing in Africa.

He is currently working at the African Union Development Agency-NEPAD where he provides policy and technical advisory to various African Governments on regional integration and the implementation of the Program for Infrastructure Development in Africa (PIDA).

He also engages relevant development partners and DFIs to build strategic partnerships on infrastructure finance and risk mitigation for regional projects in Africa.

I am passionate about Sustainable Infrastructure...

as key pillar for our future well-being. Such infrastructure as a must for building inclusive, resilient and sustainable economies in our countries. Today's infrastructures will help shape the life tomorrow, therefore we need to make sure that the design and implementation of these infrastructures have a strong consideration regarding ecological, social and economic equity.



CÉDRIC VAN RIEL
SWITZERLAND

Sustainable Infrastructure Foundation
Program Manager

Graduated from a Global Compact Master in International Management, Cédric has ten years of experience in project management and sustainability in both International Organizations and in multinational companies in Europe, Latin America, Africa and China. Cedric has extensive experience in delivering and managing capacity building programs notably with the Indian Ocean Commission and the United Nations, as well as academic experience with the University of Lille (France). Before joining SIF, Cédric was sustainable development advisor in the Hauts-de-France region, participating in the implementation of the Third Industrial Revolution master plan initiated with Jeremy Rifkin. Cédric is an APMG Certified PPP Professional.

I am passionate about Sustainable Infrastructure...

because we urgently need an energy transition and a more inclusive society.



BARBARA WEBER
SWITZERLAND

B Capital Partners
Managing Partner & Founder

Dr. Barbara Weber is the Founding and Managing Partner of B CAPITAL PARTNERS in Zurich, an investment manager focused solely on infrastructure assets, especially on sustainable infrastructure, which comply with strict ESG criteria. Accordingly, B CAPITAL PARTNERS pay high attention to ESG-issues in their due diligence and their ongoing asset monitoring. Barbara has almost 20 years of infrastructure and private equity experience, as well as project finance experience gained during several years with Dresdner Kleinwort Benson, PolyTechnos and, since 2003, with B CAPITAL PARTNERS. She previously worked for the private sector development group of the World Bank in Washington DC. She is author of four books on infrastructure investments. The latest one „Infrastructure as an Asset Class. Second Edition“ (2016), Wiley.

Barbara wrote her Ph.D in Economics at Harvard University and University of St. Gallen. She holds an MSc in Business & Operations Research from Warwick University and a post-graduate degree in International Relations from Mannheim University.

I am passionate about Sustainable Infrastructure...

because many climate change related and ESG related issues like pollution of air, water, earth and health, can be improved or even solved with the help of more sustainability driven – new or updated – infrastructure.

Sustainable infrastructure ideally has both, little or no negative impact on its surroundings (environmental, social, governance, economic), and strong resilience against external physical and/or regulatory / legal changes.



LAURIN WUENNENBERG
SWITZERLAND

**International Institute
for Sustainable Development**
Policy Analyst – Public Procurement
& Infrastructure Finance

Laurin Wuennenberg is a Policy Analyst with IISD's Economic Law and Policy Program. His work focuses on sustainable public procurement, innovation, decarbonization of industries and financing of sustainable infrastructure. Based in Geneva, Laurin has engaged in research and capacity-building projects in Europe, South Africa, Latin America, South Asia and China for diverse clients. Laurin conducts policy-level analysis and in-depth research. He contributes to applying the Sustainable Asset Valuation (SAVi) methodology to a wide range of infrastructure projects by engaging with clients, collecting data, analysing assessment results and developing outreach and communications materials. Laurin also applies his sustainability and infrastructure finance expertise within the Expert Network on Second Opinions (ENSO). He provides second opinions on institutions' and companies' green bond and sustainability bond frameworks.

I am passionate about Sustainable Infrastructure...

because it is an impactful, pioneering, crossdisciplinary and transnational field of work. It bears tremendous potential to contribute towards achieving the SDGs and coping with climate change. Which is why I find it so meaningful and enriching to work with passionate people on demonstrating the business case and the added value of sustainable infrastructure and nature-based solutions. Working on such issues inspires me to think out of the box and transfer acquired knowledge to new fields.

CONVENING PARTNERS



GLOBAL SOLUTIONS INITIATIVE

Secretary General: Markus Engel

Programme Director: Simon Wolf

Research Director: Dennis Görlich

The Global Solutions Initiative is a global collaborative enterprise to propose policy responses to major global problems, addressed by the G20, the G7 and other global governance fora. The policy recommendations and strategic visions are generated through a disciplined research program by leading research organizations, elaborated in policy dialogues between researchers, policymakers, business leaders and civil society representatives. The annual Global Solutions Summit, a stepping stone to the T20 and G20 Summits, brings together international research organizations, thought-leaders and decision-makers from across political, business and civic communities.

www.global-solutions-initiative.org

COMPETENCE CENTRE ECONOMIC POLICY AND PRIVATE SECTOR DEVELOPMENT

Head of Competence Centre: Sonja Kurz

As the central service provider and knowledge broker for all aspects of economic policy and private sector development within GIZ, the Competence Centre Economic Policy and Private Sector Development advises GIZ projects worldwide. We promote productive and decent employment through high-quality economic growth. Governmental bodies profit from our advice in designing and implementing rules governing economic activity. We empower the private sector to comply with these rules and to prosper. We also promote institutions and services for the development of markets. We believe that not only the level but also the quality of economic growth is crucial to generate value. Our approach is therefore committed to providing solutions on various dimensions of qualitative growth by considering the smart, sustainable, inclusive, resilient and integrated dimensions of economic growth as well as governance aspects of economic growth.

www.giz.de



EMERGING MARKETS SUSTAINABILITY DIALOGUES

Programme Director: Brigitte Klein

A global programme of GIZ, EMSD functions as an incubator and knowledge platform for innovative sustainability solutions in and with emerging markets. To this end, EMSD convenes change agents from think tanks as well as the public, private and financial sectors in multi-stakeholder dialogues around three core topics: "Sustainable Infrastructure", "Sustainable Finance" and "Digital Solutions for Sustainability". To ensure lasting impact, EMSD and its partners scale promising solutions across GIZ's global network and through transformation processes such as the G20 engagement groups.

www.emsdialogues.org



THE GLOBAL LEADERSHIP ACADEMY

Programme Director: Wiebke Koenig

The Global Leadership Academy (GLAC) addresses global issues and works with its international partners to provide reflective dialogue spaces ('Leadership and Innovation Labs'). Based on new perspectives and insights, leaders and change agents from the fields of policy-making, business, academia and civil society develop innovative approaches and solutions to problems in their areas of influence. Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), the Global Leadership Academy is a central component in GIZ's range of services for international human capacity development.

www.we-do-change.org

FURTHER GIZ SUPPORTING PARTNERS

We gratefully acknowledge the financial and technical support by several key partners

SUSTAINABLE INFRASTRUCTURE AND CLIMATE CHANGE IN LATIN AMERICA AND THE CARIBBEAN

GIZ supports the Inter-American Development Bank (IDB) in developing and implementing its sustainable infrastructure agenda. As part of this cooperation, two experts from GIZ's programme on "Sustainable Infrastructure and Climate Change in Latin America and the Caribbean" are seconded to the IDB's climate change and infrastructure divisions. They contribute to the operationalization of IDB's sustainable infrastructure strategy, the integration of sustainable infrastructure principles into national project planning, capacity development as well as regional and international cooperation on sustainable infrastructure.

G7 AND G20 DEVELOPMENT AGENDA POLICY SUPPORT PROJECT

The "G7 and G20 Development Agenda Policy Support Project" of GIZ supports the German Federal Ministry for Economic Cooperation and Development (BMZ) in anchoring topics of sustainable development in multilateral development policy and in the agendas of the G7 and G20 in particular. The project also supports dialogue with civil society actors in order to improve communication and integration of their views into the G7 and G20 processes.

HOSTING TEAM

HOSTING TEAM

GSI and GIZ developed The Solutions Lab on the basis of their common vision of a more sustainable and liveable future for all and well as their complementary skillset and networks. GSI provides participants with access to G20 work streams and a chance to present the solutions developed at the 2020 Global Solutions Summit. GIZ's global network offers ample implementation experience and an opportunity to scale innovative solutions across more than 120 countries worldwide. Building on the expertise of the Emerging Markets Sustainability Dialogues (EMSD) programme and GIZ's Working Group on Sustainable Infrastructure, key challenges for the Lab have been identified. This process is designed and facilitated by the Global Leadership Academy of GIZ.

HOSTING TEAM



JOHN HAUERT
GERMANY

**GIZ Emerging Markets
Sustainability Dialogues**
Thematic Lead

John leads the work on Sustainable Infrastructure at GIZ's Emerging Markets Sustainability Dialogues (EMSD). EMSD works with the private and public sectors as well as financial institutions to advance the sustainable infrastructure agenda in emerging markets and scale-up innovative solutions globally.

Previously, John worked as an advisor with GIZ's Economic Policy Forum and led a GIZ project on Eurasian connectivity. From 2014 to 2017, he worked on legal and investment policy issues at the OECD's Investment Division in Paris.

John studied law, politics and economics at Sciences Po, the University of Edinburgh, and Columbia University. He completed his doctorate at the University of Cologne on the legal and policy framework for investments in the extractive industries in West Africa. During his studies, he interned with the German Bundestag, the Federal Ministry of the Interior in Berlin, and international law firms in Paris. John also worked as a research assistant with the Columbia Center on Sustainable Investment.



MANUEL HOLTSMANN
GERMANY

**GIZ Emerging Markets
Sustainability Dialogues**
Thematic Lead

Manuel joined the Emerging Markets Sustainability Dialogues (EMSD) programme of GIZ as an Advisor on Infrastructure and Digital Solutions for Sustainability in 2018. Here, Manuel works with the private and public sectors as well as financial institutions to advance the sustainable infrastructure agenda in emerging markets and scale-up innovative solutions globally.

Previously, Manuel was seconded to the office of former President and head of IMF Horst Köhler. In this function, he provided policy advice and wrote speeches on a range of topics, including the 2030 Agenda, China-Europe Relations and a fair partnership with Africa. Manuel studied Politics, Philosophy and Economics at the University of York (B.A.) and International Affairs at Peking University (M.Sc.) and the London School of Economics (M.Sc.). He was editor of VOX journal at York in 2013-14. Manuel interned with the Global Public Policy Institute (GPPi) in 2013.



HOLGER KUHLE
GERMANY

**GIZ Sectoral Department
Strategic Knowledge
Partnerships**

As policy advisor for strategic knowledge partnerships Holger works at the Sectoral Department which is GIZ's centre of technical and methodological excellence.

With the topic grey and green infrastructure, Holger has dealt in the context of urban spaces; previously as GIZ advisor at the UN-Sustainable Solutions Network. On soft infrastructure, Holger worked on about economic, employment and regional development. The latter as GIZ adviser in the MENA region (Syria / Tunisia), within various OECD - LEED peer reviews and as previous manager at the regional development bank of the Land Berlin (IBB) with application-oriented research on new approaches to support and financing instruments while managing their implementation.

With a PhD on urban development Holger served as expert in the "Enquete Commission" on "Berlin: Fit for the Future" (Berlin House of Representatives - 13th legislative period) and later within the trilateral Jerusalem-Berlin Forum (JBF) in Palestine and Israel.



ISABELLE BERNIS
GERMANY

**GIZ Emerging Markets
Sustainability Dialogues**
Event Management

Isabelle recently joined the Emerging Markets Sustainability Dialogues' (EMSD) sustainable infrastructure team as a project assistant. EMSD works with the private and public sectors as well as financial institutions to advance the sustainable infrastructure agenda in emerging markets and scale-up innovative solutions globally. Isabelle holds a B.Sc. in International Business and is currently completing her M.Sc. in Public Policy and Human Development at United Nations University (Maastricht) with a focus on Foreign Policy and Multi-level Governance. Throughout her studies, she was involved in various projects analysing the effectiveness of governance structures and public private partnerships in sustainable waste management and infrastructure projects more broadly.



EVA PHILIPPI
GERMANY

GIZ Global Leadership Academy
Facilitator

Eva facilitates dialogue processes that support multi-stakeholder groups to address their challenges and find innovative solutions in today's complex transitions. She is convinced that social transformation will take place if we create safe dialogue spaces, meet authentically without hiding behind positions, with a clear mind, an open heart, and a genuine inner presence. Eva believes in the power of collective leadership, deep listening and co-creation and speaking the inner truth.

Before joining the Global Leadership Academy in 2019, Eva has been working as Facilitator and Systemic Coach. Furthermore, she was part of GIZ Academy's group Leadership Development in Bonn in 2014-16 and prior to that head of a GIZ Saarland networking program with Namibia. Eva holds academic qualifications in Intercultural Communication and Education Science, is trained in Leadership Development, Theory U and Transparent Communication. She lived and worked in Australia, Mexico, Namibia and USA.



ELIZABETH MALOBA
KENYA

Nahari
Facilitator

Elizabeth lives in Nairobi, works across the World, and speaks English, Swahili, German and French. She has twenty years' experience in addressing complex challenges - she works in cross-sectoral, trans-professional, multi-stakeholder settings to enable people to make decisions; solve problems; exchange ideas and information; and learn. She has a strong experience in International Cooperation, Development Cooperation, and Private Sector Development.

She works in cross-cultural groups, from grassroots levels to global platforms, to support development of leaders, teams, policies, strategies, plans, and business models that contribute to addressing development challenges. She brings skills in capacity building, knowledge management, facilitation, conflict resolution and management; as well as experience as an entrepreneur to diverse assignments.



JENNIFER HARTMANN
GERMANY

GIZ Global Leadership Academy
Event Management

Jenny started her apprenticeship in 2013 at GIZ and graduated in the beginning of 2016. Since May 2018, she is working at GLAC and is responsible for the event management, contracts and the finances. After her graduation, she gained practical experience in organizing workshops during her time at the GIZ-office in Bangkok. Since 2016, and before she joined GLAC, Jenny has been working in the financial department, overlooking the budget of international projects.

Her task at GLAC is to organize the whole frame of an event and support the project manager as well as the participants. Her work requires her to keep up a good network to the participants as well as to the GIZ country offices, hotels and partners.

Her vision is to connect different people and to build a network that supports everyone without exception.



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<https://www.global-solutions-initiative.org>
<https://www.emsdialogues.org>
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