

Under the Patronage of
the President of the Council of Ministers of Lebanon

H.E. Mr. Saad Hariri

Middle East and North Africa
Regional Urban
Resilience Conference

April 2–4, 2019 | Beirut, Lebanon

PROCEEDINGS
REPORT



Table of Contents

3	FOREWORD
5	INTRODUCTION
6	The Urban Challenge in the Middle East and North Africa (MENA) Region
7	Strengthening Urban Resilience in the MENA Region
8	The MENA Regional Urban Resilience Conference April 2–4, 2019
9	THE BEIRUT COMMUNIQUE
10	Background
11	The Beirut Communique
12	SUMMARY OF PROCEEDINGS
13	Agenda
18	Opening and Session 1: The Importance of Resilience in Urban Growth and Regeneration
19	Session 2: Resilience Frameworks for Investment Decisions
20	Session 3: Collaboration between Local, National, and International Actors
21	Session 4: The Way Forward
22	Session 5: City Challenges and Risks
23	Session 6: Designing, Prioritizing, and Implementing Strategy
24	Session 7: Financing Urban Resilience
25	Session 8: Social Resilience and Youth
26	Session 9A: Water and Agriculture
27	Session 9B: Housing
28	Session 10A: Nature-Based Solutions for City Resilience
29	Session 10B: Competitive Cities
30	SPEAKERS BIOS
52	LIST OF PARTICIPANTS



FOREWORD



Dear Distinguished Guests,

It was with great pleasure to have welcomed you to Beirut and to the Middle East and North Africa Regional Urban Resilience Conference.

The Municipality of Beirut was honoured to host this conference **under the Patronage of His Excellency Mr. Saad Hariri, President of the Council of Ministers of Lebanon**, and in collaboration with the World Bank Group.

The Conference proved to be a memorable event, enriched with thought-provoking discourse, engaging speakers, and interactive panel discussions on the latest thinking and experiences related to urban resilience.

The Conference provided an excellent opportunity to connect and exchange views and good practices, as well as establish partnerships and ways for collective action.

Beirut offered an ideal setting for discussions around resilience, as the city has withstood a multitude of shocks and stresses and has always managed to overcome challenges.

I would like to thank you all for participating and enriching this regional initiative with your experience and expertise, and I hope that this will be the first of many future gatherings to shed light on our region's tremendous potential to build strong, safe, and resilient cities.

Distinguished regards,

Jamal Itani

Jamal Itani
Mayor of Beirut

INTRODUCTION



The Urban Challenge in the Middle East and North Africa (MENA) Region

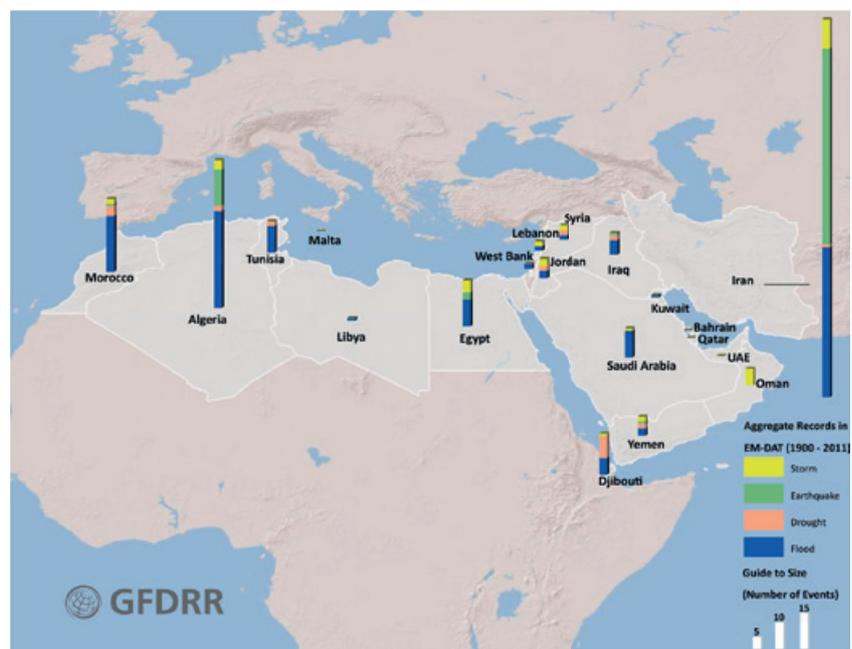
65%

of the MENA population lives in cities (more than 280 million people)

The Middle East and North Africa (MENA) region is defined by its urbanizing, and highly concentrated populations. Sixty-five percent of the region's inhabitants live in cities (more than 280 million people), while 92 percent are concentrated on three percent of the land. City populations are expected to nearly double by 2040, amplifying the exposure of their residents to unprecedented natural and social hazards. Against this backdrop, the region has been stricken by recent conflicts in which half-a-million people have died and fifteen million have been displaced. Refugees have often fled to already-stressed urban destinations in neighboring countries, marked by limited infrastructure, poor service delivery and high population densities. Moreover many of the region's largest cities and urban economies are located in fragile coastal zones in which informal settlements have expanded into and degraded sensitive environments, and are prone to flooding.

The effects of urbanization, population density, conflict and displacement mesh with those of climate change and environmental degradation, intensifying their many impacts. In recent decades, this complex web of interactions has affected approximately 40 million people in MENA countries, and cost their economies nearly US\$20 billion. While 2018 has seen upturns in some social and economic indicators, rapid growth of cities, and political and environmental instability confirm the region's need for adaptation support. Risk-informed planning and urban resilience investment are critical to promoting sustainable development and poverty reduction in the MENA region.

**MENA REGION:
NUMBER OF DISASTERS,
BY DISASTER TYPE,
1980-2006**



Strengthening Urban Resilience in the MENA Region

WHAT IS URBAN RESILIENCE?

Resilience is the ability of a system, entity, community, or person to adapt to a variety of changing conditions and to withstand shocks while still maintaining its essential functions (World Bank 2014). While there is no standard, internationally accepted definition at the moment, generally speaking, as a city functions as a spatial convergence of multiple socio-economic and technological systems, the resilience of a city is based on the ability of these inter-connected systems to adapt, withstand and maintain basic services in the face of a variety of hazards and shocks.

Globally, urban resilience has increasingly become a fundamental platform for meeting national development goals. However, in the MENA region in particular, natural disasters and climate change are not the only resilience challenges. Economic stresses, violent conflict, displacement and refugee influxes have required a broadened approach to strengthening urban resilience, and to urban development, in general. Increasingly, the World Bank's work on urban resilience aims to help cities move from development pathways focused on siloed, sectoral priorities, to ones focused on integrated and spatially informed approaches addressing the interplay between multiple systems and dynamics.

While most MENA countries have historically prioritized post-disaster relief and recovery activities, national and municipal governments are now working more towards proactive risk management and vulnerability reduction which anticipates the interplay between socio-economic, environmental and societal risks in urban settings. The scale of such challenges means that strengthening urban resilience in the MENA region is a multibillion dollar endeavour requiring strong partnerships and new sources of capital. However, risk-informed territorial planning and participatory approaches to decision-making are low-cost solutions that can have long-term resilience payoffs as well. Municipal policies which promote ease of business can further add to the competitiveness of MENA cities and contribute to their overall economic resilience.

Cities are often unable to implement resilience-building policies and investments because they lack the technical expertise and/or capital to finance them. Thus, a growing focus for the World Bank is to strengthen public sector capacities along this broadened approach and to foster enabling environments to mobilize public and private sector finance (in addition to development finance) towards resilience projects.

Recently, the World Bank established the City Resilience Program (CRP) in June 2017, which has engaged more than 45 cities around the world (including cities in MENA) on developing investment programs that can be supported through a range of financial instruments. In FY18, the Global Facility for Disaster Reduction and Recovery (GFDRR) supported activities in more than nine MENA countries which have leveraged nearly \$60 million in development finance. While work at the regional level continues, GFDRR is increasingly working at the country-level, with a greater focus on cities – given both development needs and government requests. Main hazards addressed include extreme heat, flooding and water scarcity, while a broadened approach to risk management is employed that includes crisis response, refugees as well as development in fragile, conflict and violent (FCV) settings.

“

THIS CONFERENCE IS THE FIRST OF ITS KIND IN THE REGION AND WILL BECOME, IN ITS SUCCESSIVE EDITIONS, AN IMPORTANT PLATFORM FOR EXCHANGING EXPERIENCES AND PRESENTING SUCCESSFUL INTERNATIONAL PRACTICES TO BUILD RESILIENT SOCIETIES CAPABLE OF MEETING THE CHALLENGES OF DEVELOPMENT AND CLIMATE CHANGE AS THEY ARISE.”

– **H.E. MS. RAYA HAFFAR EL HASSAN**
Minister of Interior and Municipalities, Lebanon



The MENA Regional Urban Resilience Conference

April 2–4, 2019

Beirut, the capital of Lebanon, is a key proponent and early implementor of the resilience agenda in the MENA region.

Held under the Patronage of His Excellency Mr. Saad Hariri, President of the Council of Ministers of Lebanon, the Municipality of Beirut organized and hosted the MENA Regional Urban Resilience Conference in April 2019 – together with the World Bank, with support from GFDRR and in partnership with 100 Resilient Cities.

The conference followed the development of Phase I of Beirut’s urban resilience master plan, bringing together 49 municipal and national representatives from thirteen countries and territories across the MENA region (Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Somalia, Tunisia, West Bank-Gaza and Yemen) as well as resilience experts and practitioners from developed and developing countries beyond the region (France, Georgia, India, Italy, Japan, Panama and the United States).

The conference responded to the need for regional co-operation and common frameworks for city resilience strategies, while allowing Beirut to share its own experiences and exchange lessons learned with other cities.

OBJECTIVES OF THE MENA REGIONAL URBAN RESILIENCE CONFERENCE

- Strengthen the understanding of urban resilience and its implementation in the MENA region, and globally
- Help cities understand different aspects of urban resilience (social resilience, resilience to natural disasters, and financial resilience)
- Foster sharing among technical experts at the regional level
- Discuss the way forward for collaboration/coordination to strengthen urban resilience in the region



THE BEIRUT COMMUNIQUE



Background

The Municipality of Beirut, and participating municipal, regional and national governments from the MENA region, the World Bank Group (WBG), the Global Facility for Disaster Reduction and Resilience (GFDRR), the 100 Resilient Cities, and other participants concluded the high-level **Middle East and North Africa (MENA) Regional Urban Resilience Conference**, the first of its kind for urban centers in the region.

In concluding the conference, delegates authored a collaborative summation of the scope of urban resilience as it pertains to cities in the MENA region. This technical communique distilled both the conference participants' shared understanding of urban resilience challenges, and their agreed practical recommendations for pursuing resilience goals. These principles of practice offer a foundation for promoting and advancing the urban resilience agenda regionally, and evaluating progress in the discipline as it matures. The communique is given here, and offers a brief overview of key conference messages.

All conference participants express their appreciation to the Municipality of Beirut for hosting the event in Beirut, Lebanon.



The Beirut Communique

1. The conference participants reaffirm the critical importance of urban resilience to the safety, inclusiveness, and livability of cities in the MENA region. The conference participants:
 - a. Note the myriad challenges and risks faced by urban centers in the region, including natural, technological, health, and socioeconomic shocks and stresses;
 - b. Acknowledge the relationship between, but not limited to, demography, urbanization, conflict, food security, water access, quality of life, coping capacity, capital markets, and ageing infrastructure which undermine current efforts aimed at the prosperity, inclusiveness, safety, and sustainability of cities;
 - c. Agree that the right balance between response, and risk reduction and preparedness in the long-term is crucial to ensuring the safety and resilience of MENA cities;
 - d. Value that building resilience to shocks and stresses is an effective way to tackle the underlying causes of vulnerability and disasters;
 - e. Underline the crucial role of prevention, preparedness, financial and technical innovation, awareness raising, and public-private partnerships as tools for disaster and climate resilience;
 - f. Highlight the importance of an inclusive, participatory, 'whole-of-society' planning and management approach including measurable indicators that involves a variety of stakeholder groups from all levels of society including women, persons living with disability, youth, the elderly, the private sector, civil society, and the vulnerable and poor; and
 - g. Emphasize the importance of exploring a range of financing options for city resilience and risk management.
2. The conference participants express interest in collaboration between local, national, and international actors and stakeholders. We welcome the initiative of local governments in initiating and driving the process. The conference participants also acknowledge the importance of forward-thinking planning in urban resilience, in considering ways forward for effective risk management.
3. Noting the large-scale social impacts of shocks and stresses, the conference participants affirm our support for both social resilience and the resilience of youth in the face of shocks and stresses, as well as support for social and youth engagement for effective risk management. We also believe that investments in resilience building are needed in tandem with ensuring that all investments and policies for urban development are risk-informed.
4. We recognize the need for the cities of the MENA region to both address and respond to issues of conflict and forced displacement which will require empowerment, capacity building, knowledge sharing, and financing.
5. We believe in the value of holding future regional dialogues in order to promote and improve the agenda of resilient cities and encourage communication and networking between cities.

In order to achieve the above, we need to recognize and accommodate the difference between the time horizon for resilience actions and the political and budgetary calendar.

SUMMARY OF PROCEEDINGS



Agenda

DAY 1: TUESDAY, APRIL 2, 2019

08:15–08:45 Conference Registration

09:00–11:00 **Opening and Session 1 | The Importance of Resilience in Urban Growth and Regeneration**

WELCOME ADDRESSES:

Mr. Jamal Itani, Mayor of Beirut, Lebanon

Dr. Sameh Naguib Wahba, Director, Social, Urban, Rural, and Resilience Global Practice (SURR GP), World Bank Group (WBG)

H.E. Ms. Raya Haffar El Hassan, Minister of Interior, Lebanon

KEYNOTE ADDRESSES:

Prof. Jamal Saghir, Professor, McGill University; Affiliated Scholar, Issam Fares Institute, American University of Beirut

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

PANELISTS:

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

Ms. Kazuko Ishigaki, Director for Disaster Preparedness, Disaster Management Bureau, Cabinet Office, Japan

Dr. Youssef AlShawarbeh, Mayor of Amman, Jordan

Ms. Elizabeth Yee, Vice President, Resilience Finance, 100 Resilient Cities

MODERATOR:

Mr. Philip Karp, Lead Knowledge Management Specialist, SURR GP, WBG

11:00–11:10 **Presentation of the Beirut Resilience Strategy**

Ms. Matilda Khoury, Councilor, Municipal Council of Beirut, Lebanon

11:10–11:30 Coffee Break

11:30–12:45 **Session 2 | Resilience Frameworks for Investment Decisions**

Ms. Elizabeth Yee, Vice President, Resilience Finance, 100 Resilient Cities

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France

Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Panama City, Panama

Ms. Bilge Cakir, Investment Officer, International Finance Corporation (IFC), MENA, WBG

Dr. Nadim Munla, Adviser to the Prime Minister, Lebanon

Dr. Wafa Charafeddine, Head of Funding Division, Council for Development and Reconstruction (CDR)

MODERATOR:

Dr. Josef Leitmann, Lead Disaster Risk Management (DRM) Specialist, Global Facility for Disaster Reduction and Recovery (GFDRR), WBG

12:45–13:30 Lunch

13:30–15:00 **Session 3 | Collaboration between Local, National, and International Actors**

Mr. Sujit Kumar Mohanty, Chief of the Arab States Regional Office, United Nations Office for Disaster Risk Reduction (UNISDR)

Ms. Hart Ford, Director, ACTED, Lebanon

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

MODERATOR:

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

15:00–15:15 Coffee Break

15:15–16:30 **Session 4 | The Way Forward**

KEYNOTE ADDRESS:

Ms. Kazuko Ishigaki, Director for Disaster Preparedness, Disaster Management Bureau, Cabinet Office, Japan

PANELISTS:

Mr. Jamal Itani, Mayor of Beirut, Lebanon

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France

Dr. Sufyan Al-Issa, Regional Head of Operations, IFC, MENA, WBG

Ms. Souad Abderrahim, Mayor of Tunis, Tunisia

MODERATOR:

Ms. Dana Omran, Managing Director, City Resilience Delivery - Africa, 100 Resilient Cities

CLOSING REMARKS FOR THE DAY:

Mr. Jamal Itani, Mayor of Beirut, Lebanon

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

17:00–19:00 Site Visit – Downtown Beirut



DAY 2: WEDNESDAY, APRIL 3, 2019**09:00–10:00** Session 5 | City Challenges and Risks

Ms. Isabel Margarita Cantada, City Scans, WBG
Dr. Ali Al-Hemoud, Research Scientist, Kuwait Institute of Scientific Research
Mr. Tony Sfeir, Chief Resilience Officer, Byblos, Lebanon

MODERATOR:

Mr. Salim Rouhana, Senior Urban Development Specialist, SURR GP, WBG

10:00–11:00 Session 6 | Designing, Prioritizing, and Implementing Your Strategy

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France
Ms. Ana Ardelean, Chief Resilience Officer, Tbilisi, Georgia
Mr. Anton Salman, Mayor, Bethlehem, Palestine
Ms. Dana Omran, Managing Director, City Resilience Delivery - Africa, 100 Resilient Cities

MODERATOR:

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

11:00–11:15 Coffee Break**11:15–12:15** Session 6 (Continued) | Designing, Prioritizing, and Implementing Your Strategy

Mr. Eric Wilson, Deputy Director, Land Use and Buildings, New York City, United States of America
Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Panama City, Panama
Dr. Nabil S. Itani, Project Manager, Cultural Heritage and Urban Development (CHUD) Project, Council for Development and Reconstruction (CDR)
Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

MODERATOR:

Ms. Dana Omran, Managing Director, City Resilience Delivery - Africa, 100 Resilient Cities

12:15–13:15 Breakout Session: Shift and Share
Cities to identify and discuss individual challenges and lessons learned**MODERATOR:**

Mr. Philip Karp, Lead Knowledge Management Specialist, SURR GP, WBG

13:15–14:00 Lunch

14:00–15:30 **Session 7 | Financing Urban Resilience**

Mr. Steven Rubinyi, DRM Specialist, WBG

15:30–15:50 Coffee Break and Cultural Bingo

15:50–17:30 **Session 8 | Social Resilience and Youth**

Ms. Nisreen Alaraj, Chief Resilience Officer, Greater Amman, Jordan

Mr. Abdullahi Ali Watiin, Mayor of Baidoa, Somalia

Mr. Saed Zawahrah, Zarqa City Youth Council, Jordan

Ms. Cynthia Bakkalian, WB Youth Advisory Group, Lebanon

Mr. Behzad Ali Adam, Deputy Governor, Dohuk Governorate, Iraq/Kurdistan Regional Government

Ms. Khadije Nasser, Senior Regional Manager, Strong Cities Network

MODERATOR:

Ms. Naila Ahmed, Senior Social Development Specialist, WBG



DAY 3: THURSDAY, APRIL 4, 2019

09:00–10:00 **Breakout Session: Shift and Share**
Cities to identify and discuss resilience challenges and lessons learned

MODERATOR:

Mr. Philip Karp, Lead Knowledge Management Specialist, SURR GP, WBG

10:00–11:00 **Session 9A | Water and Agriculture**

Ms. Fatma Aglan, Agricultural Specialist,
 WBG
Prof. Ezio Todini, Consultant, WBG

Session 9B | Housing

Ms. Sarah Antos, Data Scientist,
 Global Program for Resilient Housing, WBG
Mr. Eric Wilson, Deputy Director, Land Use
 and Buildings, New York City, USA
Mr. Hazem Abdelfattah, Senior Urban
 Development Specialist, WBG

MODERATOR:

Dr. Ede Jorge Ijjasz-Vasquez, Senior Director,
 SURR GP, WBG

11:00–11:15 Coffee Break

11:15–12:15 **Session 10A | Nature-Based
 Solutions for City Resilience**

Mr. Denis Jordy, Lead DRM Specialist,
 WBG
Dr. Arturo Dominici Arosemena,
 Chief Resilience Officer, Panama City,
 Panama

Session 10B | Competitive Cities

Mr. Jade Sahlab, Senior Private
 Sector Specialist, WBG
Ms. Zina Bdeir Dajani, Founder & CEO, Antwork
Ms. Amira Solh, Urban and Cultural Heritage
 Planning Consultant
Mr. Karim Chaya, Managing Partner,
 Abillama Chaya Industrial Design

12:15–12:35 **Reporting back**

12:35–13:30 **Reflection Session on Technical Communique**

MODERATOR:

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

13:30–14:30 **Presentation of the Technical Communique and Closing of the Conference**

CLOSING REMARKS:

Dr. Ede Jorge Ijjasz-Vasquez, Senior Director, SURR GP, WBG
Mr. Saroj Kumar Jha, Regional Director, Mashreq, WBG
Mr. Jamal Itani, Mayor of Beirut, Lebanon

DAY 1: TUESDAY, APRIL 2, 2019

Opening and Session 1

The Importance of Resilience in Urban Growth and Regeneration

WELCOME ADDRESSES

Mr. Jamal Itani, Mayor, Beirut, Lebanon

Dr. Sameh Naguib Wahba, Director, Social, Urban, Rural, and Resilience Global Practice (SURR GP), WBG

H.E. Ms. Raya Haffar El Hassan, Minister of Interior and Municipalities, Lebanon

KEYNOTE ADDRESSES

Prof. Jamal Saghir, Professor, McGill University; Affiliated Scholar, American University of Beirut

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

PANELISTS

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

Ms. Kazuko Ishigaki, Director for Disaster Preparedness, Disaster Management Bureau, Cabinet Office, Japan

Dr. Youssef AlShawarbeh, Mayor of Amman, Jordan

Ms. Elizabeth Yee, Resilience Finance Vice President, 100 Resilient Cities

MODERATOR

Mr. Phil Karp, Lead Knowledge Specialist, WBG

PRESENTER

Ms Matilda Khoury, Councilor, Municipal Council of Beirut

Resilience was framed as a key element when planning for urban growth and regeneration, with clear reference to the MENA region, given its high rate of urbanization. This situation exposes urban dwellers to natural hazards which are compounded by climate change and environmental degradation. Speakers noted that MENA cities are also stressed by population density, water scarcity, migration and political instability, and urgently need to build resilience and strengthen urban governance.

The keynote speaker, Prof. Jamal Saghir, suggested the following pathways to accomplishing this aspiration:

- Index and standardize understanding of urban resilience
- Market resilience as an investment criterion to attract finance
- Guide investment and governance decisions with resilience indices
- Support spatial and infrastructural plans to mitigate hazards and maintain city services
- Pursue accountable local-level policies and budgets

Implementing urban resilience solutions was described as a contextual, collaborative and iterative process requiring an integrated approach; notable in all situations is the inability of Governments to effect resilience alone, and a need for private sector and civil society input.



Session 2

Resilience Frameworks for Investment Decisions

PRESENTERS:

Ms. Elizabeth Yee, Vice President, Resilience Finance, 100 Resilient Cities

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France

Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Panama City, Panama

Ms. Bilge Cakir, Investment Officer, International Finance Corporation (IFC), MENA, WBG

Dr. Nadim Munla, Adviser to the Prime Minister, Lebanon

Dr. Wafa Charafeddine, Head of Funding Division, Council for Development and Reconstruction (CDR)

MODERATOR:

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

Input from 100 Resilient Cities revealed the role of resilience 'layers' such as policy and enabling environment, procurement and budgeting as key elements that drive decision-making towards resilience outcomes. There is also a need to embed resilience into repayment structures as well as clearly articulate co-benefits to draw investors. Experience sharing was recommended, as was risk-informed budgeting to improve the resilience of municipal budgets to external shocks and stresses. Participants were encouraged to find innovative ways to improve existing infrastructure rather than prioritizing new construction. Financing was addressed, notably the need for diverse funding sources for resilience investments, including from the public and private sectors, foundations and multilateral development banks; the need to screen municipal investments for resilience outcomes was raised.

A concluding panel discussion reviewed Lebanon's approach to Syrian refugees, which included the development of resilience-informed policies and capital investments enhanced by technical and financial support from the international community. The International Finance Corporation (IFC), the private sector arm of the World Bank, was also highlighted for its private sector knowledge and financing to help address cities' resilience challenges.

“

URBAN RESILIENCE IS THE ABILITY OF CITIES TO ADAPT TO A VARIETY OF PRESSURES, SHOCKS AND RISKS, RANGING FROM NATURAL DISASTERS TO SOCIAL, ECONOMIC, POLITICAL AND CULTURAL CHANGES.”

– **MR. JAMAL ITANI**
Mayor of Beirut, Lebanon



Session 3

Collaboration between Local, National, and International Actors

PRESENTERS:

Mr. Sujit Kumar Mohanty, Chief of the Arab States Regional Office, UN Office for Disaster Risk Reduction (UNDRR)

Ms. Hart Ford, Director, ACTED Lebanon

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

MODERATOR:

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

Session three highlighted collaboration – local, national and international – as a cornerstone of resilience, together with community engagement and shared understandings of risk management. This perspective was re-iterated in the Sendai Framework, which employs pre-emptive risk-reduction perspectives to paint resilience as a development issue requiring government and all-of-society participation. Such perspectives focus capacity-building across civil society, introducing levels of participation with the potential to effect paradigm changes in resilience policy development. Panelists returned again to finance, noting the World Bank's leveraging of finance through facilitation of multiple stakeholder designs of bankable projects.

“

THE WORLD BANK HAS DEVELOPED AND APPLIED NEW INNOVATIVE TECHNOLOGIES TO QUICKLY AND COST EFFECTIVELY MAP EXISTING HAZARDS AND RISKS WITHIN AN ENTIRE CITY, WHICH WOULD HELP INFORM THE IDENTIFICATION OF GOVERNMENT POLICIES AND INCENTIVES FOR CITIZENS TO INVEST IN RESILIENCE – SO WHEN A DISASTER STRIKES, CASUALTIES AND AFFECTED ASSETS ARE MINIMIZED.”

– **DR. SAMEH NAGUIB WAHBA**
Director, Social, Urban, Rural, and Resilience Global Practice (SURR GP), WBG



Session 4

The Way Forward

KEYNOTE ADDRESS

Ms. Kazuko Ishigaki, Director for Disaster Preparedness, Disaster Management Bureau, Cabinet Office, Japan

PANELISTS:

Mr. Jamal Itani, Mayor of Beirut, Lebanon

Dr. Sameh Naguib Wahba, Director, SURR GP, WBG

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France

Dr. Sufyan Al-Issa, Regional Head of Operations, IFC, MENA, WBG

Ms. Souad Abderrahim, Mayor of Tunis, Tunisia

MODERATOR:

Ms. Dana Omran, Managing Director for Africa, 100 Resilient Cities

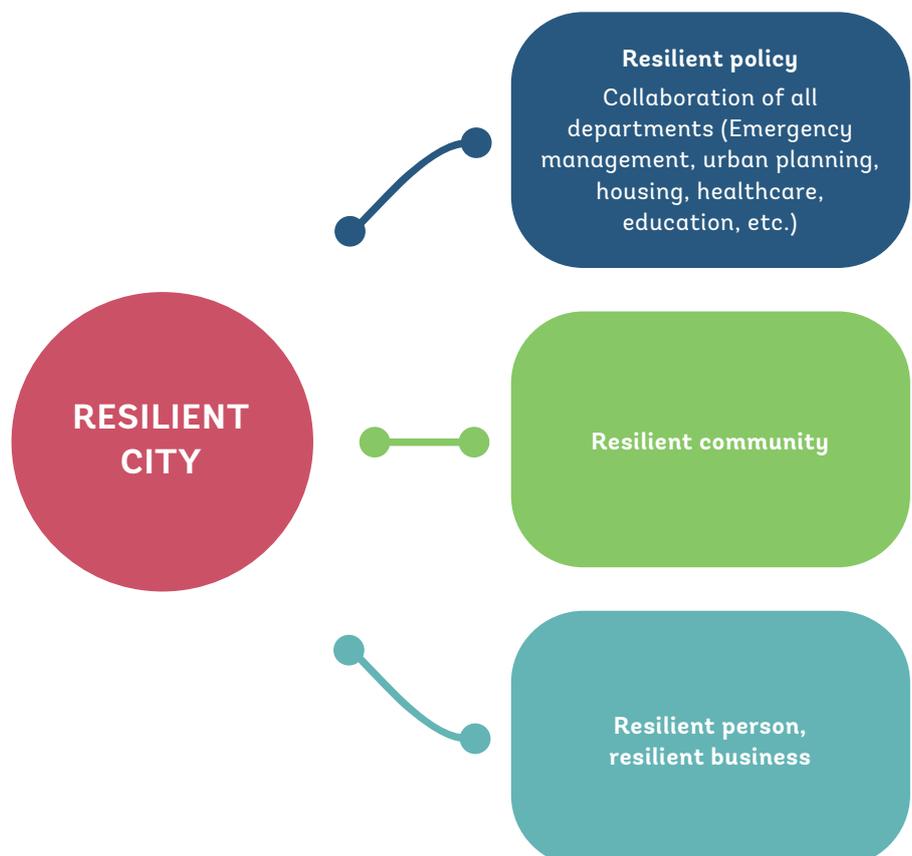
The session looked at resilience improvement programs. A description of approaches in Tokyo, Japan covered enhanced collaboration with local communities and the private sector, the usefulness of neighborhood-scale, community-based disaster management plans, and government support for 'urban regeneration safety assurance plans' supported by private companies. In Tunisia, strategies in Tunis included cross-sectoral participation, public-private funding, and government co-operation between local and national levels to improve post-disaster responses.

Private finance needs and concerns were stressed by the IFC, given MENA's uneven economic growth, the state of its job market and high public debt. Other proposals for private sector involvement included policy reforms relevant to public-private partnerships, and innovative public finance initiatives. The inadequacy of stand-alone public sector initiatives was raised again in the context of Paris, France, where private sector motivations for involvement were deemed potentially difficult because of its primary interest in short-term gains.

“

BEFORE RECONSTRUCTION, PREVENTION IS A VERY CRUCIAL COMPONENT IN MANAGING DISASTERS.”

– **MS. SOUAD ABDERRAHIM**
Mayor of Tunis, Tunisia



DAY 2: WEDNESDAY, APRIL 3, 2019

Session 5

City Challenges and Risks

PANELISTS:

Ms. Isabel Margarita Cantada,
City Scans, WBG

Dr. Ali Al-Hemoud, Research
Scientist, Kuwait Institute of
Scientific Research

Mr. Tony Sfeir, Chief Resilience
Officer, Byblos, Lebanon

MODERATOR:

Mr. Salim Rouhana, Senior Urban
Development Specialist, GSURR,
WBG

A panel discussed case studies from Kuwait; Byblos, Lebanon; and Safaqis, Tunisia – cities with notable risk management policies, risk assessment and modeling, and cost-benefit-based ranking of investments. City presentations covered the protection of oil pipelines in Kuwait, the evolution of a five-pillar resilience strategy in Byblos, and the use of technology to engage city officials and the World Bank in Safaqis. The City Resilience Program (CRP) introduced its City Scan tool which employs technology to shift resilience thinking from sectoral to spatial perspectives, and shared its work with investment programs in Zanzibar, Tanzania; and Abidjan, Cote d'Ivoire.



Session 6

Designing, Prioritizing, and Implementing Strategy

PRESENTERS:

Mr. Sébastien Maire, Chief Resilience Officer, Paris, France

Ms. Ana Ardelean, Chief Resilience Officer, Tbilisi, Georgia

Mr. Anton Salman, Mayor of Bethlehem, Palestine

Ms. Dana Omran, Managing Director, City Resilience Delivery - Africa, 100 Resilient Cities

Mr. Eric Wilson, Deputy Director, Land Use and Buildings, New York City, USA

Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Panama City, Panama

Dr. Nabil S. Itani, Project Manager, Cultural Heritage and Urban Development (CHUD) Project, CDR

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

MODERATORS:

Dr. Josef Leitmann, Lead DRM Specialist, GFDRR, WBG

Ms. Dana Omran, Managing Director, City Resilience Delivery - Africa, 100 Resilient Cities

Mr. Philip Karp, Lead Knowledge Management Specialist, SURR GP, WBG

A two-panel session dealt with design, prioritization and implementation. Participants heard how Tbilisi, Georgia developed its strategy using the 100 Resilient Cities framework, moving from agenda-setting to preliminary resilience assessments. In addition, the city developed and implemented a stakeholder engagement plan including focus group discussions, interviews and workshops. Bethlehem explained how municipal fragmentation and regulatory difficulties in Palestine hindered service delivery beyond municipal boundaries.

The ensuing discussions revealed that resilience needs were most reliably identified through evidential methods, that technical assessments alone were insufficient for strategy development, and that chosen actions needed to coalesce with the political agendas of municipalities. Lastly, the panel stressed that resilience strategies were ideally ongoing, adaptive and flexible, and required regular re-appraisal against emerging evidence.

The second panel took participants to New York, USA, where the city's legal code includes a resilience strategy as a mandatory requirement, leading to effective institutionalization of the strategy development process. From Panama City, Panama, with its concern for flood mitigation infrastructure and improvement of public open spaces, emerged the need to consult with communities and stakeholders prior to implementation, an insight corroborated from Lebanon where interventions in informal settlements have required co-ordination across local and central government layers, and with stakeholders. Panelists also stressed the use of robust monitoring and evaluation as a tool to track and adjust strategies.



Session 7

Financing Urban Resilience

PRESENTER:

Mr. Steven Rubinyi, Disaster Risk Management (DRM) Specialist, WBG

This session featured a presentation and Q&A on city financing frameworks, leveraging modalities, borrowing instruments, rapid capital assessments, capital mobilization, transaction structures and CRP city engagements. Participants were reminded that financing frameworks should distinguish between financing and funding, and that different modes of finance acquisition led to different outcomes for city finances and revenues, as did loan versus bond-based borrowing. The main obstacles to financing urban resilience were given as:

- City government's lack of funds to invest in resilience infrastructure
- Lack of projects and investments attractive to private finance
- Limited market mechanisms to enable flow of funds from private investors to cities

The remainder of the Q&A looked at improving credit worthiness and different options for borrowing, and noted that the CRP offered a paradigm shift in financing infrastructure and closing infrastructure gaps.



Session 8

Social Resilience and Youth

PRESENTERS:

Ms. Nisreen Alaraj, Chief Resilience Officer, Greater Amman, Jordan

Mr. Abdullahi Ali Watiin, Mayor, Baidoa, Somalia

Mr. Saed Zawahrah, Zarqa City Youth Council, Jordan

Ms. Cynthia Bakkalian, WB Youth Advisory Group, Lebanon

Mr. Behgad Ali Adam, Deputy Governor, Dohuk governorate, Iraq/ KRG

Ms. Khadije Nasser, Senior Regional Manager, Strong Cities Network

MODERATOR:

Ms. Naila Ahmed, Senior Social Development Specialist, WBG

This session portrayed human well-being and social cohesion as vital aspects of adaptive societies, and as crucial capacities in times of instability. In MENA, the social contract has been frayed by shocks and stresses, heightening the need to include social vulnerability as a factor in resilience planning. In addition to natural disasters, MENA cities suffer poor economies, conflict, crime, violence and large scale displacement of people, all of which exacerbate vulnerability. Such stresses profoundly affect human development and well-being. Participants heard from the Strong Cities Network (SCN) about the Strong Cities Initiative, a global framework for building community resilience to violent extremism, operating between cities and municipalities globally. In 2016, the SCN launched six Community Prevention Networks across Lebanon and Jordan to cultivate trust between youth and municipalities.

Other presenters spoke about the specific needs of children and women, and the challenges posed by the influx of refugees into under-prepared cities.

“

WE WANT TO MAKE SURE WE ARE CAUSING A CHANGE IN OUR COMMUNITIES THROUGH GRASSROOTS, COMMUNITY PROJECTS, AND TO ENSURING THAT THE VOICE OF EACH AND EVERY YOUTH IS COMMUNICATED AND HEARD.”

– **MS. CYNTHIA BAKKALIAN**
World Bank Youth Advisory Group, Lebanon



DAY 3: THURSDAY, APRIL 4, 2019

Session 9A Water and Agriculture

PRESENTERS:

Ms. Fatma Aglan, Agricultural Specialist, WBG

Prof. Ezio Todini, Consultant, WBG

This session addressed key themes in the provision of food to urban areas. Participants heard that, while investments in data and data analysis, and cellular, digital and ICT-driven innovations are coming to the fore, they need to be balanced by support for human and institutional capacity. In addition, partnerships and alliances, and local knowledge and experience were deemed critical in supplying affordable, safe and nutritious food. The session also re-visited a common workshop theme – that the financing of resilience, in this case urban food supply, required policies and incentives to attract private investment capital.

Discussions on urban water scarcity indicated a need for shifts in mindset towards resilience-informed and non-linear thinking, and the embrace of more comprehensive and integrated methods. The World Bank's Water Scarce Cities Initiative has pioneered such approaches across the MENA region and merits further attention, as do examples of water resilience management from southern California, Malta and Namibia, which were discussed.



Dades Valley, Morocco

Session 9B

Housing

PRESENTERS:

Ms. Sarah Antos, Data Scientist,
Global Program for Resilient
Housing, WBG

Mr. Eric Wilson, Deputy Director,
Land Use and Buildings,
New York City, USA

Mr. Hazem Abdelfattah, Urban
Development Specialist, WBG

MODERATOR:

Dr. Ede Jorge Ijjasz-Vasquez,
Senior Director, SURR GP, WBG

This session addressed the vulnerability of urban dwellings, noting the need for risk assessment of housing stocks, identification of at-risk houses, retro-fitting, and housing recovery and reconstruction. Discussions touched on New York's aid to a disadvantaged neighborhood flooded during Hurricane Sandy, in which a public-private partnership (PPP) was formed to engage a private developer to build climate-resilient and affordable housing on public land.

Where houses require pre-emptive retro-fitting, drone and street view technologies were highlighted as important identifier tools to assess natural hazard vulnerability, quantify retro-fitting needs and speed assessment. The State's role in promoting resilience includes regulation of building codes, consumer protection, financial oversight and management of informal settlements.

The session concluded with a discussion on housing recovery and reconstruction, noting the need to select financial models (grants or loans) that are appropriate to local needs and capacities, and able to identify beneficiaries and clarify legal concerns. When home repair and building commence, procurement and monitoring skills become important.



Session 10A

Nature-Based Solutions for City Resilience

PRESENTERS:

Mr. Denis Jordy, Lead DRM Specialist, WBG

Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Panama City, Panama

Nature-based solutions (NBS) were introduced as a means of addressing natural hazards in urban areas. Best practice examples from Panama, Kuwait, Sri Lanka and Senegal were shared, and resources made available for design and implementation. A central tenet is that ecosystem-based solutions to urban hazards warrant investment both for their efficacy and for their co-benefits, such as improved air quality, aesthetics and amenity values. However, barriers to implementation include the need to engage communities to care for green infrastructure, large infrastructure footprints and land ownership issues, prohibitive institutional and legal environments, lack of capacity and lack of promotional and illustrative materials.

In Panama City, Panama, anticipated benefits from nature-based solutions included reduced flood risks, pollution control, enhanced open space amenity and human well-being, ecosystem connectivity and conservation, heat reduction and fishery protection through coastal wetland conservation. However, standing in the way of such benefits in Panama City are existing coastal developments, lack of clear regulations, lack of prioritization of financial resources and political transitions. As take aways, the relevance and under-utilization of ecosystem-based infrastructure was noted, as was the case specificity of NBS interventions, the need to include communities in maintenance and land ownership issues, and the need to grow the profile of NBS.



Laqlouq lakes, Mount Lebanon, Lebanon

Session 10B

Competitive Cities

PRESENTERS:

Mr. Jade Salhab, Senior Private Sector Specialist, WBG

Ms. Zina Bdeir Dajani, Founder and CEO, Antwork

Ms. Amira Solh, Urban and Cultural Heritage Planning Consultant

Mr. Karim Chaya, Managing Partner, Abillama Chaya Industrial Design

MODERATOR:

Dr. Josef Leitmann, GFDRR, WBG

CLOSING REMARKS:

Dr. Ede Jorge Ijjasz-Vasquez, Senior Director, SURR GP, WBG

Mr. Saroj Kumar Jha, Regional Director, Mashreq, WBG

Mr. Jamal Itani, Mayor of Beirut, Lebanon

The final session attempted to define competitive cities, and to clarify links between competitiveness and resilience. It was proposed that regional stability is linked to city competitiveness, and Beirut was discussed as an example of this due to its ease of exports, business-enabling environment and quality of life. In turn, however, these attractions were offset by business costs, licensing difficulties and quality of life risks posed by refugees.

“

RESILIENCE IS AN INTEGRAL PART OF COMPETITIVENESS; THEREFORE, THE INVESTMENT OF THE PRIVATE SECTOR TO LEVERAGE PUBLIC RESOURCES AND TO MAKE CITIES MORE RESILIENT REVERTS IN THOSE CITIES BEING MORE COMPETITIVE.”

– DR. EDE JORGE IJJASZ-VASQUEZ

Senior Director, Social, Urban, Rural, and Resilience Global Practice (SURR GP), The World Bank Group





SPEAKERS BIOS



H.E. MS. RAYA HAFFAR EL HASSAN

Minister of Interior and
Municipalities, Lebanon

In January 2019, H.E. Ms. Raya Haffar El Hassan was appointed as Minister of Interior and Municipalities in the Government of H.E. Mr. Saad Hariri, President of the Council of Ministers.

Before her appointment, she served as the Chairman-General Manager of the Tripoli Special Economic Zone Authority.

Since 2013, H.E. Ms. El Hassan has served as member of the board of directors of Bank Med, Méditerranée Investment Bank, and Saudi Lebanese Bank. She also serves on the advisory committees of the Rafic Hariri University-Business School and the Beirut Arab University-Northern Branch.

From November 2009 until June 2011, she has served as Minister of Finance, the first female in the Arab world to assume such a post. During her tenure GDP growth averaged 8 percent.

Previously, H.E. Ms. El Hassan was a senior member of the Prime Minister's Cabinet at the Presidency of the Council of Ministers. Earlier in her career, she was Advisor to the Minister of Economy and Trade and a program specialist for the Economic Governance and Pro-Poor portfolio at UNDP Lebanon.

H.E. Ms. El Hassan holds an MBA degree in Finance and Investments from George Washington University and a bachelor's degree in Business Administration from the American University of Beirut.



MR. JAMAL ITANI

Mayor of Beirut

Mr. Jamal Itani, Mayor of Beirut, received a bachelor's degree in civil engineering from George Washington University and a master's degree in Civil Engineering from the University of Pennsylvania.

He began his career as a consultant engineer in Saudi Arabia and then moved to Dubai where he worked in business development and trade with several Arab and foreign companies across the Middle East and Europe. He then assumed the position of President of the Council for Development and Reconstruction (CDR) in Lebanon.

Furthermore, he developed and managed major urban development projects in Jordan and Saudi Arabia. He then assumed the role of Executive Director of Solidere in Lebanon before being elected Mayor of Beirut in 2016.



MR. SAROJ KUMAR JHA

Regional Director,
Mashreq,
World Bank Group

Mr. Saroj Kumar Jha is the Regional Director of the World Bank Group's Mashreq Department (Lebanon, Iraq, Syria, Jordan and Iran) since 2017.

Before his appointment to the Mashreq region, Mr. Jha was the Senior Director for the Fragility, Conflict and Violence Global Practice at the World Bank Group. In that position, he provided strategic leadership for addressing the challenge of fragility, conflict and violence, working across the World Bank Group and in close collaboration with partners.

In his position as the World Bank's Regional Director for Central Asia based in Almaty, he led the Bank's strategic engagements in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, with particular focus on cooperative management of water and energy, and regional action on climate adaptation and mitigation.

Additionally, Mr. Jha served as the World Bank's Global Manager for the Disaster Risk Management Practice and as Head of the Global Facility for Disaster Reduction and Recovery (GFDRR), which he founded in 2006. GFDRR is now the world's largest global fund for disaster prevention and post-disaster recovery operations.



DR. EDE IJJASZ- VASQUEZ

Senior Director, Global
Practice for Social, Urban,
Rural and Resilience,
World Bank Group

Dr. Ede Ijjasz-Vasquez is the Senior Director for the World Bank Group's Social, Urban, Rural and Resilience Global Practice.

In this position, Mr. Ijjasz-Vasquez leads a team of over 600 technical experts deployed across the world, leveraging global knowledge and collaborating with partners to help tackle the world's most complex development challenges in: social inclusion and sustainability; mainstreaming resilience in all dimensions development; territorial and rural development; and urban planning, services and institutions.

Before this, he was Director for Sustainable Development of the Latin America and Caribbean Region since November 2011, covering infrastructure, environment and climate change, social development, agriculture and rural development, disaster risk management, and urban development.

From 2007 to 2011, he was based in Beijing, where he managed the Sustainable Development Unit for China and Mongolia. Earlier in his career, he managed the global trust-funded programs ESMAP and WSP in energy and water and sanitation, respectively.



DR. SAMEH NAGUIB WAHBA

Director, Social, Urban,
Rural and Resilience
Global Practice,
World Bank Group

Dr. Sameh Naguib Wahba is the Director of the World Bank Group's Social, Rural, Urban and Resilience Global Practice, based in Washington in DC, where he oversees the formulation of the World Bank's strategy and the design and delivery of all lending, technical assistance, policy advisory activities, and partnerships at the global level.

Prior to this position, he was Practice Manager for the Urban and Disaster Risk Management unit in Africa and the Global Urban and Resilience Unit, and he served as Acting Director of Operations and Strategy for the Global Practice. He also worked as Sustainable Development Sector Leader for Brazil, based in Brasilia, and worked as an urban specialist focused on housing, land, local economic development, and municipal management and service delivery in Latin America and the Caribbean and the Middle East and North Africa Regions. Prior to joining the Bank in 2004, he worked at the Institute of Housing and Urban Development Studies in Rotterdam and at the Harvard Center for Urban Development Studies.

Dr. Wahba holds a Ph.D. and master's degree in Urban Planning from Harvard University, and a B.Sc and M.Sc in Architectural Engineering from Cairo University.



PROF. JAMAL SAGHIR

Professor, McGill
University
Affiliated Scholar, Issam
Fares Institute, American
University of Beirut

Professor Jamal Saghir is an expert in infrastructure and international finance. He is currently Professor of Practice at the Institute for the Study of International Development at McGill University, Montreal, Affiliated Scholar at the American University of Beirut and Non-Resident Senior Fellow at the Payne Institute, Colorado School of Mines. He is member of Board of Directors of CICA S.A; SATRAM-HUILES SA; SAMC-COMBUSTIBLES SA and S + M TANK, Switzerland; member of the Advisory Board of AMEA Power LLC, Dubai; MAN S.A, Lebanon; GRV Global Ltd, London and member of the Council for Sustainable Development Goals 1, End Poverty, and The World Government Summit, Dubai. He is also Special Advisor to the Executive Committee of Bolloré Transport and Logistics, France.

From 2010 to 2016, he was Director of Sustainable Development and Senior Regional Adviser at the World Bank. From 2000 to 2010, he was Director and Chair of the World Bank Group's Boards for Energy, Transport, and Water.

Prof. Saghir was appointed in 2009 by the UN Secretary General Mr. Ban Ki-moon as core member of the United Nations Energy and Climate Change Advisory Group. He was also appointed as core member of the Global Energy Assessment from 2008-2011.



MS. KAZUKO ISHIGAKI

Director for Disaster
Preparedness, Disaster
Management Bureau,
Cabinet Office, Japan

Ms. Kazuko Ishigaki served 20 years at the Japanese Government and has engaged in national spatial planning, disaster risk management planning, and a wide array of urban and regional development policies.

Currently, she is in charge of national policies to promote community-based disaster risk management, building of volunteer management system and international cooperation for global disaster risk reduction, as Director for Disaster Preparedness, Cabinet Office for Disaster Management, Government of Japan.

Prior to her current position, she served three years as Director for International Planning on Construction Industry, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Government of Japan. She significantly enhanced MLIT'S relationship with African countries by establishing Japan-Africa Infrastructure Development Association and with Asian countries by establishing Japan-ASEAN Smart City Association. She also served three years as Risk Knowledge Economist of the United Nations Office for Disaster Risk Reduction (UNISDR).

Ms. Kazuko Ishigaki has a master's degree in Public Policy and Urban Planning from the Kennedy School of Government, Harvard University, and a master's degree in Economics from Waseda University, Tokyo, Japan.



DR. YOUSEF ALSHAWARBEH

Mayor of Amman, Jordan

Dr. Yousef AlShawarbeh was appointed the new Mayor of Amman in 2017.

He started his career as a lawyer and a legal advisor then decided to be part of the community efforts serving his city and his country. He then ran for the municipal elections and was elected as a city council member in Greater Amman Municipality from 2003 to 2007 and from 2013 to 2015. The city council also elected him as the Deputy Mayor of Amman during the same period. In the year 2015, he was appointed Minister for Political and Parliament Affairs.

Dr. AlShawarbeh was also the chairman for Aldustour newspaper board of directors and participated in many committees in the national level and the local city level.

He holds a PhD in constitutional law from Al-Neelain University and a master's degree from the same university and bachelor's degree in law from Al-Ahliyaa Amman University.



MS. SOUAD ABDERRAHIM

Mayor of Tunis, Tunisia

Ms. Souad Abderrahim was elected as the Mayor of Tunis in 2018. She is a member of the Ennahda Movement and the first woman to serve as Tunis's mayor. She is a native of Métouia. In 2011, she joined the Ennahdha party and was elected the same year to the Constituent Assembly for Ennahdha representing of Tunis. She chairs the parliamentary Committee on Human Rights and Freedoms.

Prior to engaging in politics, Ms. Souad Abderrahim worked as CEO for the pharmaceutical wholesaler Presta Pharm.



DR. NADIM MUNLA

Adviser to the Prime
Minister, Lebanon

Dr. Nadim Munla is an Adviser to H.E. Mr. Saad Hariri, President of the Council of Ministers.

Dr. Munla was the Chairman and General Manager of the Future TV Vice Chairman of Beirut Stock Exchange. From 1991 to 1992, he was Senior Manager at Group Med.

Dr. Munla was a Professor of Economics at the American University of Beirut. He holds a Ph.D. in Economics from the University of Southern California, USA.



MS. ELIZABETH YEE

Vice President, Resilience
Finance, 100 Resilient
Cities

As the Vice President of Resilience Finance at 100 Resilient Cities (100RC), Ms. Elizabeth Yee works with 100RC's member cities and external partners to overcome the financial challenges of resilience project development and implementation.

Ms. Yee brings over 16 years of experience in public finance, working with a variety of cities, states, governmental agencies and not-for-profit entities to develop and execute financing strategies to fund their project needs. Her transaction experience includes the financing of energy distribution and generation assets, roads, water and sewer, solid waste facilities, not-for-profit hospitals, and the development of pension financing solutions.

Prior to joining 100RC, she co-led the Public Power and Utilities Team at Barclays where she and her team won Bond Buyer Deal of the Year and Far West Deal of the Year for their innovation in financing the 200 MW Milford Wind Corridor Project for the Southern California Public Power Authority and its members – Los Angeles Department of Water & Power, Burbank Water & Power and Pasadena Water & Power.

Ms. Yee received a Bachelor of Arts in International Relations and German from the University of Pennsylvania.



MR. PHILIP KARP

Lead Knowledge
Management Officer,
Global Practice for
Social, Urban, Rural and
Resilience, World Bank
Group

Mr. Philip Karp is Lead Knowledge Management Officer in the World Bank Group's Social, Urban, Rural Resiliency Global Practice where he is responsible for developing and supporting implementation of various components of the Practice's knowledge, learning and innovation work, including South-South knowledge exchange, Communities of Practice, and knowledge networks and partnerships, along with associated training and capacity building for World Bank staff and clients.

He has more than 20 years of experience in the fields of knowledge, learning, and advisory services, with particular emphasis on practitioner-to-practitioner and South knowledge exchange. He was stationed for over four years in the World Bank's Office in Beijing where he led the World Bank's engagement with China on South-South cooperation, most notably with African countries.

Mr. Karp holds graduate degrees in economics and public policy from the University of California, Berkeley.



MS. MATILDA KHOURY

Councilor, Municipal
Council of Beirut,
Lebanon

Ms. Matilda Khoury is an elected Councilor in the City Council of Beirut, where she oversees the development of projects and programs related to Sustainable Urban Development as well as Culture and Heritage.

Her career was marked by work on projects and programs of a public nature, both on the urban and environmental levels. In particular, she has worked with the United Nations Development Program, as manager of several Environment and Energy projects. Furthermore, she has worked as an environmental consultant on several World Bank funded projects, as well as a lecturer at the American University of Beirut and a practicing Architect in the private sector. Throughout her career, she maintained a commitment to safeguarding the balance between the natural environment and the man-made built environment.

Ms. Khoury Holds a bachelor's degree in architecture from the American University of Beirut, and a master's degree in Environment and Energy Studies from the Architectural Association in London.



MR. SÉBASTIEN MAIRE

Chief Resilience Officer,
Paris, France

Sébastien Maire is an expert in the management of local authorities. From 2001 to 2008, he was elected Deputy Mayor of his hometown Besançon, in charge of university relations and international cooperation. He worked for 10 years in Seine-Saint-Denis, as Director of Economic Development for the City of Pantin and then as Chief of Staff for Dominique Voynet, Mayor of Montreuil, until 2014, where he led the in-depth redesign of the urban project towards more ecology and sustainable development. He then returned to university and obtained a master's degree in Innovation Management Research in Public Organizations and Policies (Mines Paristech/ESCP/Paris X).

From November 2015 to February 2019, he was the first Senior Manager of Resilience for the City of Paris, an ultra-cross-cutting position that aims to better prepare the territory to face the challenges of the century, whether major shocks (attacks, floods, etc.) or more chronic stresses (climate change, inequality, migration, pollution, etc.). As part of the World Network of 100 Resilient Cities, he has developed a long-term resilience strategy that covers both social and urban projects and governance, unanimously adopted by the Paris Council in September 2017 and currently under implementation.

Since February 2019, he has been General Delegate for the Ecological-Ecological Transition and Resilience of the City of Paris and coordinates the implementation of policies related to climate, air quality, circular economy and resilience.



DR. ARTURO DOMINICI AROSEMENA

Chief Resilience Officer,
Panama City, Panama

Dr. Arturo Dominici Arosemena assumed his new role as Panama City Resilience Officer in May 2017. Among his areas of experience are the Financial Management and Environmental Projects, Institutional Management and Public Administration, Science and Research, Teaching and Scientific Communication.

Within his extensive professional experience, Dr. Arosemena worked as Biologist Marine Office of Education Smithsonian Tropical Research Institute (STRI), was Deputy Director of Ordination and Integrated Management and Head of the Environmental Unit in the Aquatic Authority Resources of Panama (ARAP), Senior Coordinator of the Marine Conservation Program at the International Foundation for Sustainable Development of Panama (FUNDESPA), Professor of Environmental Sciences, Marine Ecosystems, Conservation and Sustainable Development at the University of Panama and the International Maritime University Panama and Executive Director of the Ramsar Regional Center for Training and Research on Wetlands for the Western Hemisphere.

Since 2008, he has been the National Focal Point of Panama for the Scientific and Technical Review Panel of the Ramsar Convention.

He holds a bachelor's degree in biology from de University of Panama, a master's degree in Biology from the University of Costa Rica and a Ph.D. in Natural Sciences from the Leibnitz Center of Tropical Marine Research and the University of Bremen, Germany.



MS. BILGE CAKIR

Investment Officer,
International Finance
Corporation (IFC) MENA,
World Bank Group

Ms. Bilge Cakir joined IFC in 2008 and worked across multiple sectors including municipal financing, infrastructure and manufacturing within Eastern Europe, Latin America, Sub-Saharan Africa and Middle Eastern regions.

She has successfully implemented financing of three subway projects for the Istanbul Municipality, wastewater concession project in Brazil, Lekela equity platform for developing wind and solar projects in Sub-Saharan Africa, four 50MW solar PV projects under the Egypt Feed-in-Tariff renewable energy initiative and Masdar's recent 200MW solar PV investment in Jordan. Some of these projects were recognized by international organizations leading to IFC being awarded with Project Finance International (PFI), Global Deal of the Year 2017; Infrastructure Journal (IJ) Global, MENA DFI of the Year 2018 and Multilateral Institution of the Year in 2017 by both PFI and IJ Global.

Ms. Cakir holds a double major BA in Economics and Business Administration from Koc University, Istanbul and MBA degree from Harvard Business School.



DR. JOSEF LEITMANN

Lead Disaster Risk
Management Specialist,
Global Facility
for Disaster Reduction
and Recovery (GFDRR),
World Bank Group

Dr. Josef Leitmann is Lead Disaster Risk Management Specialist at the World Bank Group, heading teams on Resilient Recovery and Urban Resilience at the Global Facility for Disaster Reduction and Recovery (GFDRR).

He is also GFDRR's focal point for humanitarian and fragility/conflict issues. Previously, Dr. Leitmann spent four years managing the \$400 million Haiti Reconstruction Fund which supports post-earthquake recovery in partnership with the Government and the international community.

At the same time, he supported the creation of crisis response and development funds in a number of fragile and conflict-affected states (Somalia, South Sudan, Sudan). He also developed and managed the \$650 million Multi Donor Fund to help rebuild after the tsunami in Indonesia. Dr. Leitmann has over 30 years of development experience with the World Bank in disaster risk management, climate change, natural resource management, urban development, forestry, and clean energy.

Dr. Leitmann holds a Ph.D. in city and regional planning from the University of California, Berkeley, and a master's from the Harvard Kennedy School.



MR. SUJIT KUMAR MOHANTY

Chief of the Arab States Regional Office, United Nations Office for Disaster Risk Reduction (UNISDR)

Sujit Kumar Mohanty works in the UNISDR Regional Office for Arab States as the Chief of Regional Office.

Before coming to Egypt, Mr. Mohanty worked as the Head and Regional Platform Coordinator for the UNISDR Asia Pacific office in Bangkok, Thailand (2011-2017). Sujit has over 18 years of experience in the field of disaster risk management; humanitarian coordination; development; climate change and worked with UN organizations such as UN Office for Humanitarian Coordination (UNOCHA), United Nations Development Programme (UNDP) and UNISDR.

Mr. Mohanty led the Asia Ministerial Conferences and regional coordination for implementation of Sendai Framework in the Asian region. He worked in UNISDR headquarters in Geneva (2006-2011) and led the design and implementation of the 'Hyogo Framework for Action (HFA) Monitor', a global DRR/HFA progress monitoring and evaluation framework; the PreventionWeb; and co-authored publications such as the Global Assessment Report (2011) and Asia Pacific Disaster Report (2012).

Prior to UNISDR, he worked with UNOCHA in Sri Lanka as a Chief Technical Adviser for Risk Information Systems in 2005 and as a Manager, Disaster Information Systems in UNDP, India (2000-2005).

Mr. Mohanty is an Indian national, holding dual master's degrees in business administration and in Computer Science.



MS. HART FORD

Director, ACTED Lebanon

Building on a background of socio-anthropology and economic development, Ms. Hart Ford has been working across various aspects of humanitarian and development programming over the last 10 years in Haiti, Senegal, South Sudan, Jordan and Lebanon.

Her work has focused on linking humanitarian programming in urban emergencies to resilience and good governance efforts, notably through applying camp management principles to expand the impact of crisis response in these constrained environments, while integrating structural solutions.

Furthermore, Ms. Hart has been a partner on two recent studies led by the Institute of Development Studies and Impact Initiatives entitled "Wellbeing of Urban Refugees: Syrians and Hosts in Jordan and Lebanon" and "Public Authority and Legitimacy Making (PALM) – host-refugee relations in urban Jordan and Lebanon." Hart is currently the Country Director for ACTED Lebanon based in.



DR. SUFYAN AL-ISSA

Regional Head of
Operations, International
Finance Cooperation
MENA, World Bank Group

Dr. Sufyan Al-Issa is the Regional Head of Operations for the Middle East and North Africa (MENA) at the International Finance Corporation (IFC), World Bank Group. Prior to this position he was a Principal Investment Officer and Regional Program Leader at IFC, covering both investment and advisory services, especially skills, education, and entrepreneurship in MENA.

Dr. Al-Issa has more than 15 years of international experience in financial and private sector, economic policies and issues, connecting finance with investment opportunities and fund mobilization. Prior to joining IFC, he was a Senior Advisor to the Dean of the Board and Executive Director for Middle East at the World Bank Group.

Dr. Al-Issa is a Certified Public Accountant and holds a Ph.D. in Economics from University of London.



MS. DANA OMRAN

Managing Director
for Africa,
100 Resilient Cities

Ms. Dana Omran joined 100 Resilient Cities after spending over 9 years with the World Bank and International Finance Corporation in various capacities.

Ms. Omran worked for one of the World Bank Group's flagship publications, the Doing Business report, in Washington DC, where she led the global research team responsible for bench-marking construction and urban planning regulations in 183 countries. She then joined the International Finance Corporation's Investment Climate Advisory Services, where she advised national and city governments across Africa and the Middle East on how to design and implement innovative policy and technology solutions to improve the reach of public service delivery, increase government transparency, and support small and medium sized business growth.

In addition to her international development experience, Ms. Omran has worked in a variety of strategy and policy roles and has advised start-ups, government entities and political campaigns in Latin America and the Middle East.

Ms. Omran holds a Master of Arts in International Security Studies from Georgetown University. She received her Bachelor of Science in Science and Technology in International Affairs and a certificate in Contemporary Arab Studies from the Walsh School of Foreign Service at Georgetown University, where she was a Phi Beta Kappa member and a John Carroll Scholar.



**MS. ISABEL
MARGARITA
CANTADA**

**City Scans,
The World Bank Group**

Ms. Isabel Margarita Cantada is an Urban Specialist and consultant for the World Bank's Social, Urban, Rural and Resilience Global Practice focusing on cities in Sub-Saharan Africa and has previously worked in East and South Asia.

She is currently supporting the City Resilience Program where she contributes her project experience in city management, municipal finance, local governance and decentralization, spatial and land use planning, and municipal infrastructure and service delivery.

Ms. Cantada holds a master's in urban planning from the Graduate School of Design at Harvard University and a B.A. in Economics from Ateneo de Manila University in the Philippines.



**DR. ALI
M. AL-HEMOUD**

**Research Scientist,
Kuwait Institute for
Scientific Research,
Kuwait**

Dr. Ali M. Al-Hemoud is a research scientist at the Kuwait Institute for Scientific Research in the Environment and Life Sciences Research Center.

He is a Certified Industrial Hygienist, a Certified Safety Professional, and a Chartered Member of the Institution of Occupational Safety and Health (IOSH). He earned his degrees from the University of Cincinnati (PhD), Cleveland State University (MS), and University of Pittsburgh (BS), all in industrial engineering.

His research interest is in the field of risk assessment, environmental and occupational health, safety, natural hazards, and resilience, as well reviewing international health, safety and environment (HSE) standards and guidelines, and developing new HSE standards for Kuwait.



MR. TONY SFEIR

Chief Resilience Officer,
Byblos, Lebanon

Mr. Tony Sfeir has been appointed as the Chief Resilience Officer (CRO) for the City of Byblos in 2014. Mr. Sfeir brings a wealth of experience and local expertise to the position.

He has been an elected member of the municipality corps from 2010- till 2016. There, he joined the Committee of Tourism and Culture, as well as the Committee of Environment. He was also appointed as the coordinator between the city and the United Nations International Strategy for Disaster Reduction-Disaster Risk Recovery (UNISDR-DRR) program. Mr. Sfeir represented the Municipality of Byblos till 2016, in the "Crisis Committee," which has recently performed successful response exercises for tsunami and earthquake simulations.

Mr. Sfeir was a longtime member of Byblos Ecologia, an environmental NGO that successfully fought to preserve Byblos' heritage. After a long political struggle, a small group of persons including Tony was able to mobilize the citizens of Byblos to lobby against a decree that would have replaced the city's historic last sandy beach with a marina. Their efforts protected this important heritage site.

Since his appointment Mr. Sfeir and his team worked for 18 months on meetings and consultations with the different city stakeholders, academic bodies, government and private sector representatives, to come up with the Byblos resilient strategy that was launched in April 2016.



MR. SALIM ROUHANA

Senior Urban
Development Specialist,
World Bank Group

Mr. Salim Rouhana is a Senior Urban Development and Resilience Specialist and Task Team Leader at the World Bank, where he has worked on the Middle East and North Africa, and East Asia regions. Based in Tunis, Tunisia, Mr. Rouhana has most recently focused primarily on areas related to urban governance, public finance, low-income housing, and urban resilience.

Prior to joining the World Bank, Mr. Rouhana worked in private and public institutions in Paris, Doha, and Beirut in architecture, urban planning and design, mobility planning, and urban community engagement.

Mr. Rouhana holds a Bachelor and master's degree in architecture from the Lebanese University in Beirut, a Dual master's degree in political science from La Sagesse University in Beirut and Paris 11 University, a master's degree in urban planning and Management from the Ecole Nationale des Ponts et Chaussées in Paris, and an Executive MBA from the Instituto de Empresa in Madrid, Spain.



MR. ANTON SALMAN

Mayor of Bethlehem,
Palestine

Mr. Anton Salman was elected Mayor of the City of Bethlehem in May 2017.

In addition to this position, Mr. Salman is a lawyer since 1989 and was a lecturer in civil law at Bethlehem University and member of the City Council at Bethlehem Municipality.

Secretary general and chairman of the committee of international relations of the Association of the Palestinian Local Authorities, in addition to numerous other Palestinian committees, Mr. Salman has received many awards, including a honorary citizenship from the Municipality of Ruviano, Italy, in 2017.

Mr. Salman holds a bachelor's in law from Beirut Arab University.



MS. ANA ARDELEAN

Chief Resilience Officer,
Tbilisi, Georgia

In 2016, Tbilisi joined the 100RC network and in 2017, Ms. Ardelean was appointed as first Chief Resilience Officer. Since then, with a team of experts from 100 Resilient Cities and BuroHappold Engineering, she has been working on Tbilisi Resilience Strategy that will be released in 2019.

Ms. Ana Ardelean worked in the private sector for 10 years. In 2014, she moved to work to the local government. She held a variety of senior positions in the Mayor's Office including the Head of Vice-Mayor's office and the Head of International Relations Department.

In 2015, Tbilisi was struck by the deadly flood known as June 13th Flood. This tragedy deeply affected every person living in Tbilisi. From City Hall Ms. Ardelean worked with donor organizations and different parties to help the City get back on track. That is when she decided to reach out to 100 Resilient Cities and realized that Tbilisi had an opportunity to become the part of the network.

Ms. Ana Ardelean holds a bachelor's degree in Economics from Ivane Javakishvili Tbilisi State University and a master's degree from DePaul University of Chicago, USA.



MR. ERIC WILSON

Deputy Director,
Land Use and Buildings,
New York City, USA

Mr. Eric Wilson is a Deputy Director with the Mayor's Office of Resiliency (MOR), where he manages climate adaptation programs in land use and buildings.

He oversees a team of architects, urban planners and policy experts working to identify fiscally responsible and socially equitable approaches to the climate challenges facing New York City's building stock and neighborhoods. Mr. Wilson and his team coordinate with individuals, households, communities and local, state, and federal agencies to get ready for New York City's climate vulnerabilities, including sea level rise, extreme heat, and powerful storms.



DR. NABIL S. ITANI

Project Manager,
Cultural Heritage and
Urban Development
(CHUD) Project, Council
for Development and
Reconstruction, Lebanon

Dr. Nabil S. Itani is a Conservation Architect and Heritage Management Specialist.

He received his Architecture Degree from the Lebanese University (1986) and a master's degree and PhD in Conservation of Historic Towns and Buildings from the Katholieke Universiteit Leuven, Belgium (2001), where he also practiced architecture and restoration.

Upon returning to Lebanon, Dr. Itani joined the Ministry of Culture (2001-2003), where he was in charge of the setting of the official sites of the Arab and Francophone Summits held in Beirut. He also lectured on the Theory and History of Conservation, Urban Design, and Cultural Heritage Management, and participated in research projects at various universities, including the Lebanese University and the American University of Beirut.



MR. STEVEN RUBINYI

Disaster Risk
Management (DRM)
Specialist,
World Bank Group

Mr. Steven Rubinyi is a Disaster Risk Management Specialist at the World Bank where he leads the World Bank's City Creditworthiness Initiative and co-leads the World Bank's City Resilience Program.

Mr. Rubinyi has worked at the World Bank for six years, including in the South Asia Region where he assisted on urban and coastal resilience projects in Bangladesh and the Government of Nepal's housing reconstruction program following the 2015 earthquake.

In addition to his ongoing work program, Mr. Rubinyi is pursuing a PhD in spatial economics from the University of Oxford.

Mr. Wilson joins the Mayor's Office of Resiliency from 100 Resilient Cities, a program of the Rockefeller Foundation, where he managed relationships with 11 cities and staffed special initiatives such as the ReImagine Puerto Rico Commission following Hurricane MaSeria. His over 15-year career spans several New York City agencies, including the Department of Housing Preservation & Development, the Economic Development Corporation, and the Department of City Planning.

Mr. Wilson holds a Master of City and Regional Planning from Cornell University and Bachelor of Arts degrees in Environmental Conservation and Plant Biology from the University of Colorado at Boulder.



MS. NISREEN AL-ARAJ

Chief Resilience Officer,
Greater Amman, Jordan

Ms. Nisreen Al-Araj has a working experience of around 24 years mainly in the sustainable development and urban planning.

She has various and extensive experience in different fields related to development especially in local governments, Project financing, public policy and strategy formulation, Climate Change and resiliency, Sustainable development goals monitoring and tracking in the city level. Has been working for the last ten years in Greater Amman Municipality managing projects and overseeing programs, especially which international agencies or donor finances and funding agencies.

Currently, she is the Chief Resilience officer for Amman responsible for the implementation of the resiliency strategy in addition to being the Mayor's advisor for Projects and International Cooperation.

Ms. Al-Araj holds a degree in Engineering from the Jordan University of Science and Technology.



MR. ABDULLAHI ALI WATIIN

Mayor of Baidoa, Somalia

Mr. Abdullahi Ali Watiin is the Mayor of Baidoa City, South West State of Somalia. In his capacity as a mayor, he has led comprehensive reforms in Baidoa local government. He has successfully worked with the United nations, World Bank and donors by elevating the profile of local governments in South Central Somalia.

Mr. Watiin has 12 years of experience in leadership positions focused on development planning, local government planning, peacebuilding and conflict resolution.

As a mayor, he has supervised MIDNIMO project, which is intended to enhance local leadership capacities to facilitate the sustainable return, recovery, social integration and peaceful co-existence of displacement affected, returnee, other migrant groups and host communities in Baidoa South West State of Somalia.

Previously, he has worked with the Somalia ministry of Finance and United Nation Mine Action Services (UNMAS).



MR. SAED ZAWAHRAH

Zarqa City
Youth Council, Jordan

Mr. Saed Zawahrah is a founding member of the Zarqa City Youth Council which contains 60 members of the youth from the city in addition to 15 members from the Syrian refugees who were living in Zarqa. The Zarqa City Youth council functions as a shadow council for the municipality in order to ensure that municipal services are functioning and fulfilling the quickly rising demand after the waves of Syrian refugees into the city.

Mr. Zawahrah is also a member of the Local Community Prevention Network that aims at protecting the community, and young people in particular, from being targeted by extremist groups

Currently, I am a researcher and analyst intern at NAMA Strategic Intelligence Solutions. A technology driven firm that conducts studies and research in various topics related to the region. We are currently working on some projects related to the Syrian refugees and the Decentralization Law.



MS. CYNTHIA BAKKALIAN

World Bank Youth
Advisory Group, Lebanon

Ms. Cynthia Bakkalian currently works as a Monitoring, Evaluation, Learning and Development Officer within the Disaster Risk Reduction (DRR) Unit of the Lebanese Red Cross. As a DRR unit, their goal is to achieve safe, resilient and self-reliant communities for responding to natural and man-made hazards.

Prior to joining the Lebanese Red Cross, Ms. Bakkalian worked as a Data Manager with Fondation Mérieux, a French family foundation, which aims at combating infectious diseases in developing countries among vulnerable populations by building local capacities.

Furthermore, she is an active member in the Sin El Fil Youth Committee, a youth committee that advocates for children and youth rights to enable them as active decision and change makers within their own local contexts.

Ms. Bakkalian has also been accepted to join the Youth Advisory Group (YAG) of the World Bank Group. The YAG is a voluntary group composed on 27 young men and women from diverse backgrounds and areas within Lebanon. The objective of the group is to provide a pathway for youth to participate in and engage in policy discussions and to communicate their concerns. The group will contribute to World Bank projects in addition to planning for new and innovative initiatives.

She is from Beirut, Lebanon, and holds a bachelor's degree of Sciences in Public Health and Development Sciences from the University of Balamand.



MR. BEHZAD ADAM

Deputy Governor of
Dohuk, Iraq/Kurdistan
Regional Government

Mr. Behzad Adam was appointed Deputy Governor of Dohuk in 1992.

He holds a bachelor's degree in law from the University of Baghdad in 1978. He joined the bar association in the same year and practiced law for the 14 following years until 1992. Mr. Adam is a former member of the Bar Associations in Iraq and Kurdistan.

Furthermore, he is a human rights activist and was member of the General Secretariat of the Organization for the Defense of Human Rights in the Arab States / Germany OMRAS until 2005. He was also Chairman of the Organization for the Defense of Human Rights in Iraq / Germany OMRİK.

Mr. Behzad has published a number of articles on human rights



MS. KHADIJE NASSER

Senior Regional Project
Manager, Strong Cities
Network

As a Senior Regional Project Manager based in Beirut, Ms. Khadije Nasser leads the implementation of a Strong Cities Network Project with Lebanese and Jordanian municipalities promoting the role of sub-national actors in PVE.

Prior to joining the Strong Cities Network, Ms. Nasser worked as Projects Manager and Cultural Advisor to the Danish Embassy in Beirut responsible for managing its projects and NGO relations. Earlier on, she worked for national and international NGOs in the region managing prevention, development and humanitarian aid projects.

In Denmark, Ms. Nasser has managed crime prevention initiatives targeting marginalized youth in Copenhagen and integration of former prisoners. As a former Capacity Building Trainer and Dialogue Ambassador for the Danish Ministry of Refugees, Immigrants and Integration she has extensive experiences in working with direct interventions with youth at risk.

She holds a M.A. degree in Anthropology from the University of Copenhagen.



MS. NAILA AHMED

Senior Social
Development Specialist,
World Bank Group

Ms. Naila Ahmed is a Senior Social Development Specialist at the World Bank.

She is currently based in the Beirut Country Office where her main areas of focus are on displacement in the region, post-conflict reconstruction, and social inclusion.

Ms. Ahmed has over fifteen years of experience preparing and leading World Bank operations and analytical work that aims to improve economic opportunities in rural and urban areas, strengthen social cohesion, service delivery and post disaster reconstruction through community driven development programs. During this time, she has worked closely with governments, UN agencies, civil society and across sectors. Prior to joining the Beirut office, she led the development response to internal and regional displacement in Afghanistan.

Before joining the World Bank, she worked in the private sector in Singapore and Hong Kong.

Ms. Ahmed holds a master's degree and an advanced certificate in post conflict and peace building studies from Syracuse University.



MS. FATMA AGLAN

Agricultural Specialist,
World Bank Group

Ms. Fatma El Zahraa Aglan joined the World Bank in 2013, and the Agriculture and Food Global Practice in MENA/ECA in 2018.

In addition to focusing on value chain financing and digital agriculture, she is the Egypt Country Office's MENA Youth Focal point, actively mainstreaming youth inclusion in their World Bank Portfolio. Prior to joining the World Bank, she worked in commodity trade and real estate investment management, whilst founding the Al Yassin Charity Foundation which caters to the underserved, by providing them with direct cash transfers and subsidized medical care.

Ms. Aglan holds an MSc in Shipping, Trade and Finance from Cass Business School in London, UK.



PROF. EZIO TODINI

Consultant,
World Bank Group

Prof. Ezio Todini is a Consultant with the World Bank Group.

After graduating as Doctor in Hydraulic Engineering at the University of Pisa in 1969, Mr. Todini joined the IBM Pisa Scientific Centre in 1970. He combined his role as a Research Scientist at the IBM Pisa Scientific Centre (1970-79) with that of Professor of Applied Hydromechanics at the University of Pisa (1973-80) and of Water Resources Planning at the University of Florence (1979-81).

Since 1980, he has held the chair of Hydrology at the University of Bologna. For a number of years, he also served as President of the Management Board of ProGeA (Protezione e Gestione Ambientale), a spin-off company of the same University.

Prof. Todini has been very active in operational real time flood forecasting. He has developed more than 15 operational real-time flood forecasting systems in Italy, Spain, Germany and China, where he acted as the EU Coordinator for an almost 2 million Ecu project for the development of a real time flood forecasting system on the Fuchun river. He also participated to project EFFS for the development of a European Flood Forecasting System and has been the Co-ordinator of the EU funded project MUSIC dealing with the Bayesian combination of rain-gauges, radar and satellite areal rainfall estimates and the assessment and communication of uncertainty to End-Users. Prof. Todini also participated to project FLOODsite both as a participant and as a member of the Scientific and Technical Advisory Board.

For his dedication to Hydrology and his achievements, he was then nominated in 2017 Honorary President of the Italian Hydrological Society.



MS. SARAH ANTOS

Data Scientist, Global
Program for Resilient,
World Bank Group

Ms. Sarah Antos is an urban geographer at the World Bank who co-leads the Global Program for Resilient Housing.

This innovative program is aimed at formalizing global development approaches to providing safe, sustainable housing in regions prone to climate stress and natural disasters. In addition to housing, her work as focused on urban planning and leveraging high resolution imagery and machine learning for disaster risk management. Before joining the World Bank, she worked at the World Health Organization and US's Office of Foreign Disaster Assistance, where she used satellite imagery and survey data to improve disaster recovery efforts.

Ms. Antos holds a bachelor's and master's degree in Geography from The George Washington University.



MR. DENIS JORDY

Lead Disaster Risk
Management Specialist,
World Bank Group

Mr. Denis Jordy is Lead Disaster Risk Management Specialist at the World Bank Group, with more than 20 years of experience in environment, agriculture, disaster risk management & climate change adaptation.

He has a multi-region experience in Africa, Asia, Middle East and North Africa, Latin America, France and USA and worked across multiple sectors such as transport, energy, and water. In May 2017, he joined the Global Facility for Disaster Reduction and Recovery (GFDRR) within the World Bank where he leads the Small Islands States Resilience Initiative and the Nature Based Solutions Platform.

Before joining GFDRR, he coordinated the Environment, Disaster Risk Management and Climate Change Adaptation portfolio in the Pacific and Region and Senegal. During his time at the Bank, Mr. Jordy has worked on urban flood risk reduction, coastal zone management, resilient infrastructure, climate resilience, disaster response and reconstruction, and environmental management.

Prior to the Bank, he worked for the French Government on environment, pollution control, agriculture, and rural development programs and policies in France and West Africa.



MR. JADE SALHAB

Senior Private Sector
Development Specialist,
World Bank Group

Mr. Jade Salhab is a senior private sector development specialist at the World Bank; based in Washington D.C.

He has thirteen years of experience promoting innovative public policies at local and national levels, in Europe and the MENA region. In Tunisia, he has been facilitating cluster specific public private dialogues in a wide range of sectors such as pharmaceuticals, electronics, and agribusiness, promoting a bottom-up approach to policymaking and development, with a strong focus on integrating SMEs and smallholder farmers in global markets. He also leads multi-sectoral World Bank investment projects and policy initiatives aimed at strengthening competitiveness and trade.

Mr. Salhab holds a master's in public administration from the Harvard Kennedy School, a master's in Urban Environment and Sustainable Development from the Universitat Politècnica de Catalunya, and a bachelor's in architecture from the American University of Beirut.



MS. ZINA BDEIR DAJANI

Founder & CEO, Antwork,
Lebanon

Ms. Zina Dajani brings 18 years of knowledge in structuring, financing and managing services companies, in addition to her experience in design, development and financing of development projects.

In June 2016, Ms. Dajani established Antwork, a technology-enabled coworking platform in Beirut, bridging between real estate and technology. Antwork is disrupting the workplace/the way work is done, by eliminating the need for dedicated physical space, and investment in tools, equipment and proprietary services. Launched in March 2017, the online Antwork community is now 6,000+ member-strong with 500 members making the technology campus their base. Ms. Dajani has geared Antwork towards regional growth through partnerships with space operators and owners as well as real estate developers - Antwork is in the process of rolling out in key markets, starting with a first one in Europe, expected to be launched in Q2 of 2019.

She holds master's degree in Real Estate Development from the Massachusetts Institute of Technology (MIT) and a Bachelor of Architecture from the American University of Beirut (AUB).



MS. AMIRA SOLH

Cultural Heritage
and Urban Planning
Consultant, Lebanon

Ms. Amira Solh is a cultural heritage and urban planner consultant based in Beirut, Lebanon.

She began her career in rural development planning, focusing on natural resource management and poverty alleviation in various Arab countries. She was program assistant at the United Nations Development Program in New York focusing on South-South Cooperation for the World Trade Organization. In 2002, she started working on the urban planning of the Beirut city center at Solidere, the Lebanese company for the Development and Reconstruction of the Beirut Central District. Her work at Solidere ranged from organizing the international urban design competition of Martyrs' Square to setting up the Urban Planning Department for land use planning, public space planning and preserving cultural heritage. She is a founding Board Member of the Arab Center for Architecture in Beirut.

She studied Sociology at the American University of Beirut and has a master's degree in Regional Planning from Cornell University.



MR. KARIM CHAYA

Managing Partner,
Abillama Chaya
Industrial Design

After graduating in Industrial Design from the Rhode Island School of Design, Beirut born Karim Chaya co-founded Abillama Chaya Industrial Design (ACID) in 1997.

ACID, which specializes in design, manufacturing and installation of exterior and interior architectural detailing, shop fit-outs and furniture, operates out of Beirut, and currently employs 120 craftsmen, architects, and administrators, and handles projects worldwide.

Over the past 21 years, projects have been delivered in cities worldwide from Tokyo to Los Angeles, as well as many other cities in between. Having produced more than 200 boutiques and flagships, ACID has gained the trust of many international brands such as Lanvin, Dior, Alain Ducasse Entreprises, and Rolls Royce. In addition, ACID has now opened a branch in the USA.

In 2001, Chaya started spockdesign, a company devoted to furniture and product design. He also actively contributes to Blatt Chaya, a family owned, traditional, colored cement tile producer that was originally founded in 1881. His work has been published in the local and international press including L'Officiel Design, Monocle, Interior Design, and Interni.



LIST OF PARTICIPANTS

REGIONAL PARTICIPANTS

LEBANON

- H.E. Ms. Raya Haffar El Hassan**, Minister of Interior, Lebanon
- Mr. Jamal Itani**, Mayor of Beirut, Lebanon
- Dr. Nadim Munla**, Adviser to the Prime Minister, Lebanon
- Ms. Matilda Khoury**, Councilor, Municipal Council of Beirut, Lebanon
- Prof. Jamal Saghir**, Professor, McGill University; Affiliated Scholar, IFI, American University of Beirut, Lebanon
- Dr. Nabil S. Itani**, Project Manager, Cultural Heritage and Urban Development (CHUD) Project, CDR
- Ms. Hart Ford**, Director, ACTED Lebanon
- Ms. Cynthia Bakkalian**, World Bank Youth Advisory Group, Lebanon
- Mr. Tony Sfeir**, Chief Resilience Officer, Byblos, Lebanon
- Ms. Zina Bdeir Dajani**, Founder and CEO, Antwork, Lebanon
- Mr. Karim Chaya**, Managing Partner, Abillama Chaya Industrial Design, Lebanon
- Dr. Wafa Charafeddine**, Head of Funding Division, Council for Development and Reconstruction (CDR)
- Mrs. Yusra Sidani**, Councilor, Municipal Council of Beirut

DJIBOUTI

- Ms. Awaleh Osman Fatouma**, Mayor of Djibouti, Djibouti
- Mr. Omar Houssein Omar**, Regional Council of Tadjourah, Djibouti

EGYPT

- Mr. Mohamed Aly Hanafy Elsayed**, Secretary General of Cairo Governorate, Egypt
- Ms. Walaa Gad Elkarim Osman**, Senior Resettlement and Citizen Engagement Specialist, Egypt
- Mr. Hesham Abdelrazek Elhelbawy**, Assistant of Minister of Local Development, Egypt

IRAQ

- Mr. Behgad Ali Adam**, Deputy Governor, Dohuk governorate, Iraq/KRG
- Mr. Mustafa Al-Hiti**, head of Iraq's Reconstruction Fund for Areas Affected by Terrorist Operations, Iraq
- Mr. Omar Dabos**, Director of the Municipality of Ramadi, Iraq
- Mr. Ali Al Mossawi**, Senior Engineering Manager / Basra Municipality Director, Iraq
- Mr. Kareem Al Musawi**, Deputy of Baghdad mayor, Iraq
- Mr. Omr Saheb Akidi**, Senior Statistician, Ministry of Planning, Iraq
- Ms. Ibtissam Jassim Mohammed**, Chief Programmer, Ministry of Planning, Iraq
- Mr. Abdulmajeed Hamid Abdulmajeed**, Senior Engineering Manager / Director of Planning and Studies, Reconstruction Fund, Iraq

JORDAN

- Dr. Youssef AlShawarbeh**, Mayor of Amman, Jordan
- Ms. Nisreen Alaraj**, Chief Resilience Officer, Greater Amman, Jordan
- Mr. Hussein Faleh Abu Alshieh**, Mayor of Ramtha, Jordan
- Mr. Sa'ed Mahmoud Alzawahreh**, Member of Zarqa City Youth Council, Jordan
- Mr. Huda Hijizai Hijazi**, Director of the Disaster Risk Management Unit, Jordan
- Mr. Mahmoud Mohammed Ababhneh**, Member of the Municipal Council of Irbid, Jordan
- Mr. Ahmar Abdelqahab Al Zoubi**, Official of Foreign Relations and Media of Ramtha Municipality, Jordan

KUWAIT

- Dr. Ali Al-Hemoud**, Research Scientist, Kuwait Institute of Scientific Research
- Mr. Abdillan Alenezi**, Program Manager, Kuwait Institute For Scientific Research, Kuwait

MOROCCO

- Mr. ElMostafa Ablal**, President of Commune of Mohammedia, Morocco
- Mr. Yahya Grari**, Prefecture of Mohammedia, Morocco
- Mr. Mohammed Anass**, Technical Director, Commune of Fez, Morocco
- Ms. Btisam Lakhlifi**, Head of Division of Urban Planning and Environment, Fez, Morocco

OMAN

- Mr. Hilal Ali Al Qamshoey**, Project Director-Oman National, Supreme Council for Planning, Oman

PALESTINE

Mr. Anton Salman, Mayor of Bethlehem, West Bank, Palestine

Mr. Taysir Mahmoud Taha, Mayor of Hebron, West Bank, Palestine

Mr. Mohamed Ahmed Qasrawi, National Disaster Risk Center Coordinator, West Bank, Palestine

Mr. Odai Abdelwahed Hidi, Head of Projects, Municipality of Ramallah, West Bank, Palestine

Mr. Alaa Ragab Shahin, Director of Planning Department, Hebron Municipality, West Bank, Palestine

SAUDI ARABIA

Mr. Nassir Mohammed Aldhafar, General Director of Regional Development and Urban Observatory, Saudi Arabi

Mr. Nassir Faleh Alotaibi, Municipality Riyadh, Saudi Arabia

Mr. Abdulrazak Mohssen Alenazi, Ministry of Municipal and Rural Affairs, Saudi Arabia

SOMALIA

Mr. Abdullahi Ali Watiin, Mayor of Baidoa, Somalia

Mr. Mohammed Ali Taruri, Technical Advisor, Baidoa Municipality, Somalia

STRONG CITIES NETWORK

Ms. Khadije Nasser, Senior Regional Manager, Strong Cities Network

TUNISIA

Ms. Souad Abderrahim, Mayor, Tunis, Tunisia

Mr. Mounir Elloumi, Mayor of Sfax, Tunisia

Mr. Khaled Aouini, Mayor of Djedaida, Tunisia

Mr. Hechmi Bengaji, Mayor of Boussalem, Tunisia

Ms. Henda Belhadjali, Advisor and Chair of an Equality and Gender Committee, Tunisia

Mr. Mahmoud Ddoura, President of the Urban Planning Commission, Tunisia

Ms. Olfa Sakouhi, Technical Officer, Municipality of Boussalem, Tunisia

UNITED ARAB EMIRATES

Mr. Saeed Al-Abbar, Chairman, Green Building Council, United Arab Emirates

UNITED NATIONS

Mr. Sujit Kumar Mohanty, Chief of the Arab States Regional Office, UN Office for Disaster Risk Reduction (UNISDR)

YEMEN

Mr. Hesham Abdulmalek, Assistant Deputy Minister of Planning and International Cooperation, Yemen

Mr. Abdulhakim Al-Shameri, General Director of Public Works and Roads, Yemen

100 RESILIENT CITIES

Ms. Elizabeth Yee, Resilience Finance Vice President, 100 Resilient Cities

Ms. Dana Omran, Managing Director for Africa, 100 Resilient Cities

INTERNATIONAL PARTICIPANTS**FRANCE**

Mr. Sebastien Maire, Chief Resilience Officer, Municipality of Paris

GEORGIA

Ms. Ana Ardelean, Chief Resilience Officer, Municipality of Tbilisi

JAPAN

Ms. Kazuko Ishigaki, Director for Disaster Preparedness, Cabinet Office for Disaster Management

PANAMA

Dr. Arturo Dominici Arosemena, Chief Resilience Officer, Municipality of Panama

UNITED STATES OF AMERICA

Mr. Eric Holbrook Wilson, Deputy Director, Land Use and Buildings, Municipality of New York