BLOXHUB
Summer School on
Urban Resilience

May/June 2020

SDU

Acknowledgements

Organizers:

University of Southern Denmark, Civil and Architectural Engineering, in collaboration with BLOXHUB and Aalborg University, BUILD Department of the Built Environment.

Partner organizations:

The United Nations Human Settlements Programme (UN-Habitat), United Nations Office for Disaster Risk Reduction (UNDRR), ICLEI – Local Governments for Sustainability, World Wildlife Fund (WWF International), RECNET. Recycling the City Network, Delft University of Technology (TuDelft), Nordic Urban Resilience Institute (NURI), Imperial College London (ICL), Asociación Adapt Chile, ARUP, Universitat Politècnica de Catalunya - UNESCO Chair on Sustainability, United National Educational, Scientific and Cultural Organization (UNESCO) - Intergovernmental Hydrological Programme, Climate Service Center Germany (GERICS), International Centre for Climate Change and Development (ICCCAD), Climate Technology Centre and Network (CTC-N), Politecnico di Torino - Responsible Risk Resilience Centre (R3C), IUAV University of Venice, Asian Disaster Preparedness Center (ADPC), The Resilience Shift which we would like to highly acknowledge for all the support of this summer school happening.

Target groups

▸ **Practitioners**
▸ **Policy makers**
▸ **Researchers**

The summer school aims at providing multi-disciplinary knowledge and perspectives on the different global and local challenges for urban resilience in the Global South and North. The training is organized as a series of lectures and work in small groups to respond to a problem-based challenge. The participants will gain necessary competences to develop informed policies, strategies, plans and solutions for urban resilience, at the time of Covid-19.

Fee: 300€

▸ *Available fee waiver for applicants from the Global South*

**NEW DEADLINE FOR APPLICATIONS:
30 April 2020**

https://tinyurl.com/uu7qp7y

BLOXHUB Summer School on Urban Resilience

June 2020

~~Copenhagen DK~~

ONLINE VERSION

Organizers:

SDU
University of
Southern Denmark

BUILD
AALBORG UNIVERSITET

BLOX HUB

Partners:

UN@HABITAT
FOR A BETTER URBAN FUTURE

UNDRR
UN Office for Disaster Risk Reduction

I·C·L·E·I
Local
Governments
for Sustainability

WWF

recnet.

TU Delft
BK Bouwkunde

NORDIC URBAN
RESILIENCE INSTITUTE

Imperial College
London

ARUP

Adapt Chile

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH
UNESCO Chair on Sustainability

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

Intergovernmental
Hydrological
Programme

GERICS
Climate Service Center
Germany

CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

ICCCAD
International Centre for
Climate Change and
Development

POLITECNICO
DI TORINO

R3C
Responsible
Risk
Resilience
Centre

I
U
A
V
Università Iuav
di Venezia

adpc
Asian Disaster
Preparedness Center

THE RESILIENCE SHIFT

Expert's Committee

Alexandros Makarigakis
Programme Specialist and IHP Deputy Secretary
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United Nations Educational, Scientific and
Cultural Organization UNESCO

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World Wide Fund for Nature (WWF)

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PhD candidate
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Munich Re Foundation

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CTCN, Climate Technology Centre and Network

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World Wide Fund for Nature (WWF)

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Sector Project Urbanisation,
GIZ Bonn

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Founding Member of RECNET. Recycling the
City Network
Coordinator at UNESCO Chair on
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Co-Founder
Nordic Urban Resilience Institute (NURI)

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Helmholtz Center Geesthacht

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Ass. Prof. in Regional and Urban Planning, .
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Habitat)

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Climate and Disaster Resilience Lead
ARUP International Development

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Climate Action and Reporting (carbonn Climate
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ICLEI World Secretariat

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Delft University of Technology Tu Delft

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Dept. of Geography, Teaching and Research Unit
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Ludwig-Maximilians-Universität München

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Independent University, Bangladesh (IUB)

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Head of Unit, Professor
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University of Southern Denmark

Sanjaya Bhatia
Head, UNDRR Office for Northeast Asia and
Global Education and Training Institute (GETI)

Sara Candiracci
Dr, Associate Director
Inclusive and resilient cities lead
ARUP International Development

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Associate Academic Officer
United Nations University - Institute for
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and Country Coordinator, ACCCRN Bangladesh
International Centre for Climate Change and
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Bangladesh (IUB)

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Chairman
Munich Re Foundation

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Researcher
Italian National Agency for New Technologies,
Energy and Sustainable Economic Development
(ENEA)

Seth Schultz
Global Executive Director
The Resilience Shift

Silvia Haslinger Olsson
Co-Founder
Nordic Urban Resilience Institute (NURI)

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IURA Coordinator
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Senior Design Strategist
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MIT - Massachusetts Institute of Technology

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Urban planner, landscape architect,
expert in slum upgrading

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Founder Out Of Office
Project lead Designscapes
Service Design Lab (Aalborg University)

Margherita Nardi
Msc student
Politecnico di Torino

Eleonora Orsetti
Msc student
Aalborg University

https://www.pinterest

Foreword

BLOXHUB Summer School on Urban Resilience 2020 was a second edition and was organized responding to the Cities-IPCC call for fostering dialogue between practitioners, policy makers and researchers; to develop and promote peer-to-peer learning across regions, sectors and disciplines to support climate actions.

Following the challenge imposed by the COVID-19 pandemic and relative constraints in our personal and professional lives, it was not be possible to realize the BLOXHUB Summer School on-site as originally planned. At the same time, the relevance and the importance of this training course, as an opportunity to exchange experiences, discussing challenges and solutions among participants was indeed timely, relevant and needed; as COVID-19 exposed the vulnerability of cities and human settlements worldwide. Thereby the training was adapted to the current circumstances to hold it on-line and addressing specifically the urban resilience challenges posed by the pandemic.

The summer School brought 25 policy makers, researchers and practitioners from 18 countries and 4 continents, during on-line learning process spread across 5 weeks from 28 May till 26 of June 2020. The summer school aimed at providing the participants with the latest knowledge on urban resilience research, practice and policies and to co-develop their competencies by working on problem-based challenge, responding to the challenge of analysing and understanding the current pandemic crises. Ultimately, participants identified lessons learned on how to make cities resilient in face of multiple and diverse crisis, including climate change.

I would like to congratulate the alumni of the BLOXHUB Summer School 2020 for an impressive outcome and to complement them on their wholeheartedly effort, collaborative skills, openness throughout the entire process, during the on-line time spend together. I would like to thank sincerely our partner organizations, the members of Expert's Committee and the organizing committee for their dedication, support and work that made possible the organization of the summer school in challenging times. I look forward to continued collaboration towards 2020 and onwards!

Nicola Tollin

Contents

1. Rationale –Urban Resilience

Today over 50% of world population lives in urban areas, and cities account for 60-80% of global energy consumption and the same level of greenhouse gases missions, producing 50% of global waste, consuming 75% of natural resources and producing 80% of global GDP. Cities and their populations are vulnerable and increasingly exposed to rapid and slow on-setting climate and environmental disasters, which frequency and intensity is growing exponentially. Cities are also major centers of economic activity, social life and culture, innovation and knowledge-creation.

The scientific research on urban resilience has been exponentially growing in the last decade, parallelly a growing number of cities worldwide started developing resilience related plans and actions, following the recommendations and prescriptions national and international policies international policies, as: Sustainable Development Goals, Paris Agreement, New Urban Agenda and Sendai Framework for Disaster Risk Reduction.

The key challenge for urban resilience is to co-develop and harmonize scientific and practice led knowledge to support informed and science-based decision and policy making, to enable our cities to evolve and innovate.

Urban resilience aims at increasing the ability of urban systems, to respond systemically and dynamically to present and future shock and stresses related to major global challenges as: unsustainable development patterns, rapid and unplanned urbanization, climate change mitigation and adaptation.

Urban resilience is instrumental to address both causes and effects of these mayor global challenges, re-thinking the way in which cities are designed, planned and managed, at the same time fostering innovation.
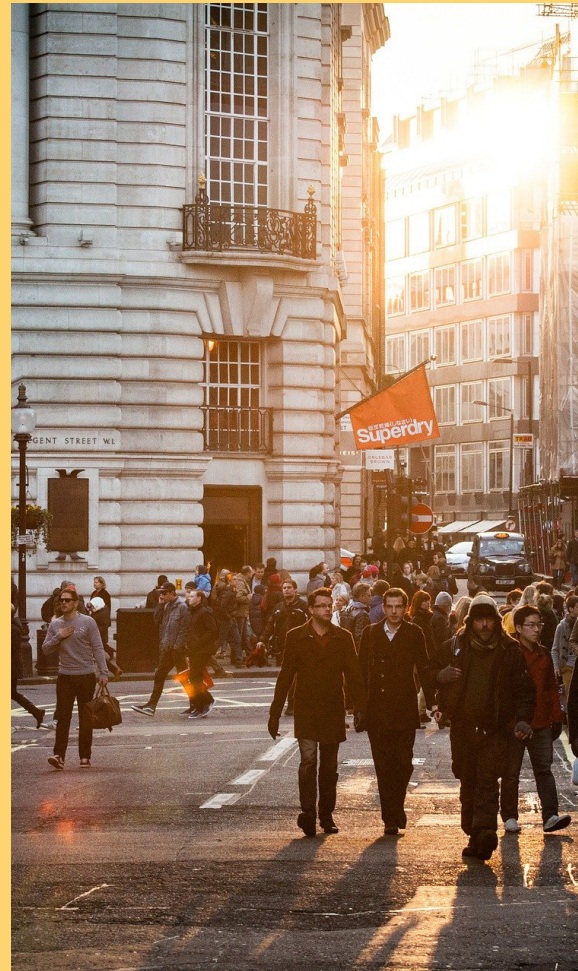
2. Summer school's goal

The BLOXHUB Summer School on Urban Resilience 2020 brought together researchers, practitioners and policymakers from 28st May to 26th June 2020. The summer school provided the participants with the latest knowledge on urban resilience research, practice and policies through lectures of lead experts; and aimed to co-develop their skills and knowledge by working in small groups for responding to the challenge of analysing and understanding the current pandemic crises and to define lessons learn and recommendations that can make cities more resilient in face of multiple and diverse crises, including climate change.

The summer school goal was to bring together multi-disciplinary knowledge and perspectives, from science and practice, on the different global and local challenges faced by cities, and to provide a process design methodology and the necessary skills to developed informed policies, strategies, plans and solutions for urban resilience, that can be later used in the specific context of work of the participants.

The work in groups was organized through a process design methodology guiding the participants in addressing the challenge.

The lectures provided an overview on major international policies in relation to urban resilience (Sustainable Development Goals, Paris Agreement, New Urban Agenda and Sendai Framework for Disaster Risk Reduction), key practices worldwide including those developed in the frame of major international organizations and lead private sector organizations (e.g. UNDRR, UNESCO, UN-Habitat, Arup, ICLEI, WWF, et al.), and the latest developments and perspectives for research.

The lectures also addressed key cross-sectorial and thematic issues, for example, including multi-level governance, finance, generation of co-benefits, nature-based solutions, appropriate technology, participatory processes and stakeholder's involvement, planning and design.

3. Learning objectives

KNOWLEDGE

The basis of urban resilience science, and the development of resilience research in different disciplinary contexts;

International policies (Sustainable Development Goals, Paris Agreement, New Urban Agenda and Sendai Framework for Disaster Risk Reduction);

National policies regarding climate adaptation and mitigation, including urban content of Nationally Determined Contributions and urban aspects of National Adaptations Plan and Policies;

Urban resilience practices with specific case studies from cities worldwide, including strategic plans, action plans, and technological solutions

COMPETENCIES

Process design methodology for urban resilience;

System thinking for the analysis of urban shock and stresses;

Different future scenarios methods: forecasting, visioning and backcasting

CROSS-SECTORIAL & THEMATIC ISSUES

Multilevel governance, Finance, Generation of co-benefits, Appropriate technology, Participatory processes and stakeholder involvements, Planning and design

4. Webinars

Webinar series: Urban Resilience

Starting 28 May 2020

https://tinyurl.com/yb3dqffd

Facing global crisis at the time of pandemic.

This webinar series is intended as a space for an emergent dialog between policy makers, researchers, and practitioners debating how urban resilience can increase the ability of urban systems to respond to major global challenges.

The webinar series debates on ways to design future urban systems, with adequate levels of preparedness and response to crises in the short and long term.

SDU University of Southern Denmark

Webinar series: Urban Resilience. Facing global crisis at the time of pandemic.

Starting 28 May 2020

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This webinar series is intended as a space for an emergent dialog between policy makers, researchers, and practitioners debating how urban resilience can increase the ability of urban systems to respond to major global challenges.

The webinar series will debate on ways to design future urban systems, with adequate levels of preparedness and response to crises in the short and long term.

Organizers:

SDU University of Southern Denmark — BUILD AALBORG UNIVERSITET

Partners:

UN@HABITAT FOR A BETTER URBAN FUTURE — UNDRR UN Office for Disaster Risk Reduction — ICLEI Local Governments for Sustainability — WWF — recnet. — TUDelft BK Bouwkunde — NORDIC URBAN RESILIENCE INSTITUTE — Imperial College London — Adapt Chile — ARUP

BLOX HUB — UNESCO Chair on Sustainability UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH — United Nations Educational, Scientific and Cultural Organization Intergovernmental Hydrological Programme — GERICS Climate Service Center Germany — CTCN CLIMATE TECHNOLOGY CENTRE & NETWORK — ICCCAD International Centre for Climate Change and Development — POLITECNICO DI TORINO — R3C — IUAV Università Iuav di Venezia — adpc Asian Disaster Preparedness Center — THE RESILIENCE SHIFT

Summary of the Webinar series

#1 WEBINAR

Facing global crisis at time of pandemic: research, practice and policy perspectives

WEBINAR #2

Learning from crisis: resilient leadership and positive transformation

#3 WEBINAR

Incremental and radical solutions for critical infrastructures

WEBINAR #4

Just transition facing global crises: social (in)justice and (in)formalities

#5 WEBINAR

Tools and methods for making cities sustainable and resilient

WEBINAR #6

Harmonizing multi-level governance: vertical and horizontal integratio

#7 WEBINAR

Tools and methods for climate action plans and transformative participation

WEBINAR #8

Learning from crisis: resilient leadership and positive transformation

#9 WEBINAR

Finance and jobs for just transition

WEBINAR #10

Envisioning the future and enabling paradigm shift

#1 WEBINAR
Facing global crisis at time of pandemic: research, practice and policy perspectives

28 May 2020, 09:30 – 11:30 CET

This first webinar set the scene for the webinar series URBAN RESILIENCE: facing global crisis at the time of pandemic, with a lively discussion intended to provide a broad overview on urban resilience, and the capacity of cities to address causes and effects of mayor global challenges, specifically learning from the current global pandemic crises. The panellists discussed different perspectives and experiences from the point of view of practice, policymaking and research.

The discussion illustrated a reality snapshot at the ground level, efforts, gaps, and opportunities to increase the ability of urban systems, to respond systemically and dynamically to present and future shock and stresses related to the major global challenges.

Citing directly one of our panellists: 'building resilient cities [must happen] not tomorrow, but now. It's not easy. Globally, humanity is enduring one of the most difficult moments in decades. The experience is particularly bewildering for younger generations, who have never encountered challenge of this magnitude before' (Esteban Leon, UN Habitat, Urban resilience Hub).

Alexandros Makarigakis
Programme Specialist and IHP Deputy Secretary
Intergovernmental Hydrological Progamme,
United Nations Educational, Scientific and
Cultural Organization UNESCO

Esteban Leon
Head of the City Resilience Global Programme
United Nations Human Settlements Program
UN-Habitat

Nicola Tollin
Professor wsr in Urban Resilience
IURA Coordinator
SDU Civil and Architectural Engineering
University of Southern Denmark

Corina Angheloiu
PhD candidate , Imperial College London
Senior Design Strategist, Forum for the Future
Moderator

vimeo.com/423674802

WEBINAR #2
Learning from crisis:
resilient leadership and positive transformation

1st June 2020, 16:30-18:30 CET

Dr Sara Candiracci
Associate Director
Inclusive and resilient cities lead - International
Development
ARUP

Seth Schultz
Global Executive Director
The Resilience Shift

Monica Pandele
MBA, MPA
Sustainability consultant
Presidio Graduate School
Moderator

The 2nd webinar of the series was a collaborative initiative between The Resilience Shift and ARUP, and it tackled various aspects of the Covid-19 crisis, and its implications for cities and private sector organisations, including the role of leadership in grasping the opportunity that the crisis presents, to emerge positively, and transform our urban systems from infrastructure to urban spaces. Decisions that are made now will have long term implications for resilience.

Seth Schultz, Executive Director, the Resilient Shift, who brings a vast experience in urban sustainability, a catalyst for resilient urban systems, shared details of an ongoing study of resilient leadership, decision-making in times of crisis, and the lessons that are emerging.

Sara Candiracci, Associate Director, Arup, where she leads the Inclusive and Resilient Cities portfolio of Arup International Development, discussed opportunities for transformation of urban centres, through the unique perspective of children and what this means for the broader society.

#3 WEBINAR
Incremental and radical solutions for critical infrastructures

4 June, 9:30-11:30 CET

Delivering adequate infrastructure solutions implies an understanding of urban needs today and predicting what might be needed, and what we might be challenged with in the future. Defining 'adequate' should rely on a clear appreciation of the extent of future disturbances we account for, the level of standards we build to, and the environmental, social and economic factors we include.

In this webinar, we discussed the benefits of resilient infrastructure standards, the opportunities offered by radical infrastructure alternatives such as nature based solutions (NBS), and the need to reassess the role of critical infrastructure and interdependence between infrastructure sectors, in order to prepare and respond fast in moments of crises.

Simone Sandholz
Associate Academic Officer, United Nations University – Institute for Environment and Human Security (UNU-EHS)

Jordi Morato
Founding Member of RECNET. Recycling the City Network; Coordinator at UNESCO Chair on Sustainability at UPC

Louis Downing
CEO, Global Infrastructure Basel (GIB) Foundation

Monica Pandele
MBA, MPA
Sustainability consultant
Presidio Graduate School
Moderator

vimeo.com/426240859

WEBINAR #4
Just transition facing global crises: social (in)justice and (in)formalities

David Jácome-Polit
Metropolitan Director of Resilience, Municipality of Quito. Chief Resilience Officer, Global Resilient Cities Network

Marcus Mayr
Urban Climate Change Specialist United Nations Human Settlements Programme (UN-Habitat)

Roberto Rocco
Associate Professor of Spatial Planning and Strategy. Faculty of Architecture and the Built Environment,
Delft University of Technology Tu Delft

Ombretta Caldarice
Ass. Prof. in Regional and Urban Planning, .
Interuniversity Department of Regional and Urban Studies and Planning, Politecnico di Torino, R3C.
Moderator

The 4th webinar: Just transition facing global crises: social (in)justice and (in)formalities, tackled the fundamental issue of just transition, and the importance of considering social aspects, as well as to remember the funding principles of sustainability and development, when facing urban crises. The discussion reflected on how the most vulnerable parts of the urban population, particularly in informal settlements, were affected and responded to the pandemic. The session aimed to understand how to strength social justice in facing major global challenges and crises. The panelists brought together different perspective and exchange experiences from practice, policy and research.

#5 WEBINAR
Tools and methods for making cities sustainable and resilient

11 June, 09:00 – 11:00 CET

The 5th webinar "Tools and methods for making cities sustainable and resilient " presented two tools for urban resilience developed by UNDRR an UN-Habitat respectively.

The UNDRR's Disaster Resilience Scorecards for Cities developed for supporting the reporting and implementation of the Sendai Framework for Disaster Risk Reduction: 2015-2030, and including an addendum on public health.

The Un-Habitat's City Resilience Profiling Tool providing cities the necessary framework to evaluate urban resilience and to guide the development of tailored action plans.

Amaya Celaya Alvarez
Urban Resilient Senior expert (United Nations / European Commission – H2020 + CORDIS + Urban Innovative Actions Programmes – International Standards Organization)

Sanjaya Bhatia
Head, UNDRR Office for Northeast Asia and Global Education and Training Institute (GETI)

Mrudhula Koshy
PHD Research Fellow at Norwegian University of Science and Technology (NTNU)
Moderator

Felix Döhler GIZ
Policy Advisor on Cities and Climate Change,
Sector Project Urbanisation, GIZ Bonn

Jennifer Lenhart WWF
Global Lead, WWF Cities
World Wide Fund for Nature (WWF)

Maryke van Staden
Manager of the Low Emissions Development
Program, Director of Bonn Center for Local
Climate Action and Reporting (carbonn Climate
Center), Director of Business Development
ICLEI World Secretariat

Jenna Dutton
Research Coordinator, Urban Policy Platform,
School of Public Policy, University of Calgary
Moderator

The 6th webinar "Harmonizing multi-level governance: vertical and horizontal integration" aimed at discussing barriers and opportunities for multi-level governance, strengthening the collaboration between: international, national and sub-national levels; mainstream urban resilience across departments within the same administration; favor the collaboration with stakeholders. Ultimately the webinar discussed the importance of multi-level governance for empowering action for urban resilience.

#7 WEBINAR
Tools and methods for climate action plans and transformative participation

The 7th webinar "Tools and methods for climate action plans and transformative participation" aimed at presenting and discussing three different tools/approaches to enhance urban resilience at local level through capacity building and action plans. Climate Technology Centre and Network / Anthesis Lavola focused on conducting diagnosis of vulnerability to climate change and developing energy and climate action plans; Adapt-Chile addressed the value of ludic approaches for enhancing participation, specifically in groups where hierarchies may limit interaction; UN-Habitat presented the CityRAP tool for training city managers and municipal technicians to understand and plan actions aimed at reducing risk and building resilience through the elaboration of a City Resilience Action Plan.

Fruzsina Straus
Human Settlements Officer
UN-Habitat Regional Office for Africa,
Nairobi, Kenya

Selene Angelone
Urban Resilience Programme Specialist
UN-Habitat Regional Office for Africa,
Nairobi, Kenya

Nadège Trocellier
Head of Climate Change
Anthesis Group

Ash Carl
Director, Department of Urban Resilience
Asian Disaster Preparedness Centre (ADPC)
Moderator

Cristóbal Reveco Umaña
Founder and International director (non-executive)
Asociación Adapt-Chile
PhD candidate,
Climate Service Centre Germany (GERICS)

vimeo.com/430654616

WEBINAR #8
Learning from crisis:
resilient leadership and positive transformation

22 June, 16:30 – 18:30 CET

Lykke Leonardsen
Head of program for Resilient and Sustainable City Solutions
City of Copenhagen

Piero Pelizzaro
Chief Resilience Officer
Comune di Milano

Rojina Manandhar
Programme Officer, Adaptation Programme
United Nations Climate Change Secretariat

Magnus Qvant
Co-Founder, Nordic Urban Resilience Institute (NURI)
Moderator

The 8th webinar "Knowledge brokerage through partnerships and networks" discussed how networks and partnerships can strength urban resilience transition through exchange of knowledge.

The panellist shared their direct experience from a practice and policy-making perspective, including on: establishing bilateral city-to-city partnerships, participation in multi-city networks and global initiatives as the Nairobi work programme on impacts, vulnerability, and adaptation to climate change, the UNFCCC knowledge-to-action hub for climate resilience and adaptation.

#9 WEBINAR
Finance and jobs for just transition

25 June, 09:00 – 11:00 CET

The 9th webinar "Finance and jobs for just transition" tackled key aspects related to finance, insurance and jobs in the frame of just resilient transition, more specifically how urban climate investment can support a green and just transition; the relation between built environment, urban livelihoods and labour; financial risk transfer mechanisms, social bonds and climate risk insurance.

Thomas Loster
Chairman
Munich Re Foundation

Dražen Kučan
Sector Lead,
Senior Urban and Energy Efficiency Specialist
Green Climate Fund

Edmundo de Werna Magalhães
Head of Unit, Team Leader,
Chief Technical Advisor and Senior Specialist
ILO-UN
(International Labour Office, United Nations)

María Mánez Costa
Scientist
Climate Service Center Germany (GERICS),
Helmholtz Center Geesthacht
Moderator

vimeo.com/432832773

WEBINAR #10
Envisioning the future and enabling paradigm shift

26 June, 10:30 – 11:30 CET

Martin Frick
Deputy to the UN Secretary General's Special Envoy for the Food System Summit 2021
United Nations

Nicola Tollin
Professor wsr in Urban Resilience
IURA Coordinator
SDU Civil and Architectural Engineering
University of Southern Denmark
Moderator

The 10th webinar "Envisioning the future and enabling paradigm shift" discussed how major global challenges, including: urbanization, sustainability, pandemics, development and climate change, are going to affect our future. The lessons learned from the current pandemic crises can help us to define how to enable a paradigm shift leading to a radical transformation of the way in which we image, plan, manage and live or cities.

Alumni sessions
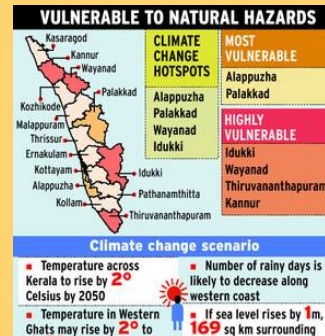
'LEARNING IN CRISIS' DURING THE COVID-19, A 'GLOBAL SOUTH' CASE STUDY, KERALA, INDIA

Mrudhula Koshy
PHD Research Fellow
Norwegian University of Science and Technology (NTNU)

Urban resilience

SOCIAL
• Livelihood
• Sociocultural values

ECONOMIC
• Informal economy
• Income disparity

PHYSICAL
• Access to basic services
• Spatial segregation
• Density

ENVIRONMENTAL
• Lack of green spaces
• Pollution
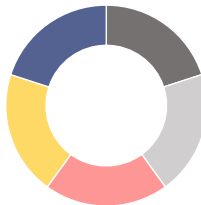
INSTITUTIONAL
• Political instability
• Lack of planning

CASE STUDY: SÃO PAULO, BRAZIL

Danilo Cançado
Junior Program Officer Green Infrastructure
Global Center on Adaptation
The Netherlands

| Overview of Lagos City |
| COVID-19 and First Appearance in Lagos and Actions |
| Roles, Challenges and Opportunities in Managing the Pandemic |
| Progression of Spread |
| Lessons from Lagos |
| Pictures Gallery of Private Sector Involvement |

COVID-19 RESPONSE MECHANISMS IN THE CITY OF LAGOS, NIGERIA
www.arcticil.org

Lookman Oshodi
Commonwealth professional fellow
Project Director, Arctic Infrastructure
Team lead, Abeokuta Urban Intervention,
FCN/UK Global Prosperity Fund

COVID-19 IN CALGARY, CANADA

Jenna Dutton
Research Coordinator, Urban Policy Platform,
School of Public Policy, University of Calgary

Local

- #SupportLocalYYC
- Freshroutes/ Leftovers YYC- 27,000 lbs of food redistributed
- Breweries - making hand sanitizer
- "Porchraits" – by donation, expanded across country
- Local scavenger hunts – window art and painted rocks

ALL OVER THE WORLD, PEOPLE ARE LIVING THEIR OWN VERSION OF THIS STORY

Image: Sam Hester

Image via Annex Ales Instagram
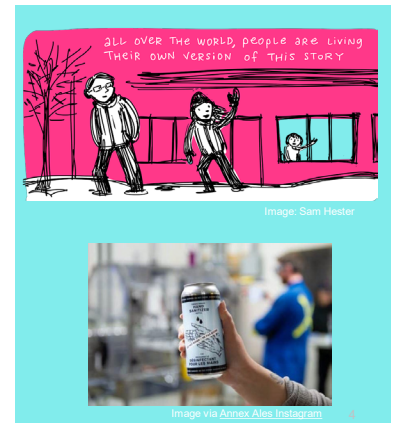
Peer to peer learning sessions

CLIMATE CHANGE, VULNERABILITY AND RISK UN-HABITAT

Begoña Peiro Salvador
Urban Resilience Advisor, Ministry of Housing and Community Development (Fiji), in partnership with UN-Habitat

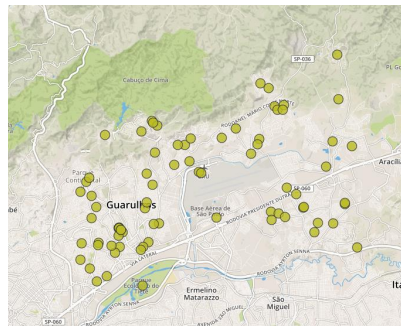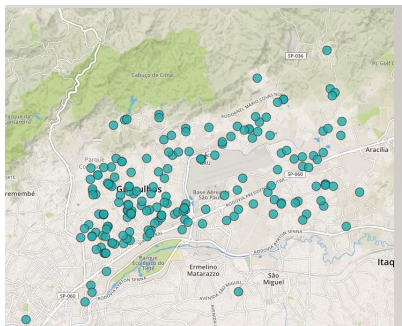| Challenges	Mitigation
Inconsistent data quality- not easily verifiable	- Data collection process documented and field/partners are consistently trained - Use of Data Quality Assurance guideline Proper use of IPTTs/ the same format (programme and MEL) - Use of data collection through technology (Total reach; activity indicators)
Analysis is shallow and sectors would like more depth	- Each sector to identify key areas of analysis (information that they CANNOT live without) - Programmes to provide technical interpretation in initial reports e.g. Baseline, analysis documentation
Because you aren't getting what you think you need from MEL some sectors would like to have their own sector specific MEL staff	- Before we can make this kind of decision we need to understand what type of information you need which you aren't getting. Can the MEL team's priorities be reorganised to meet your needs.
Communications between MEL and programmes is challenging	Programmes and MEL to agree effective communication methods and when to collaborate
MEL team involved too late in the design and planning of projects thus are unable to be proactive in providing support- key activities are ad hoc when they could be planned in advance	A MEL activity calendar will be updated regularly and TAs should check this during project design. MEL should be involved before logframe design to explore opportunities for integrated MEL activities and capitalise on learning from previous projects.
MIS is a useful tool however, certain functionalities are not user friendly and therefore limits programme use	- Teams to propose improvements to the system to encourage use - Information to be shared summarising the key findings every month

MONITORING EVALUATION & LEARNING (MEL) PRACTICES

Nir Prasad Dahal
Monitoring Evaluation and Learning (MEL) Delegate
American Red Cross, Philippines

New proposals for fresh food markets and urban gardens to fight food insecurity

PARTICIPATORY GEOGRAPHIC INFORMATION SYSTEMS (PGIS) FOR WATER-ENERGY-FOOD (WEF) NEXUS TOWARDS A SUSTAINABLE URBAN PLANNING

Carolina Carvalho
Researcher
Institute of energy and environment,
São Paulo University

5. Target groups

The summer school welcomed applicants with different disciplinary backgrounds and professions:

- **Scientist and researchers**: including PhD candidates, post-docs, research fellows and lecturers from universities and research organizations.
- **Practitioners**: including policymakers, from national and subnational governments and public organizations, officers from international and intergovernmental organizations, staff from private profit and non-profit organizations.
- **Participants with different disciplinary background** are welcome: including engineering, architecture, planning, environmental, economic and social sciences.

Gender
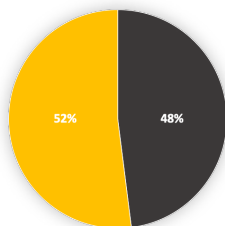
52% Female
48% Male

- Male ■ Female

Continent

28%
8%
12%
52%
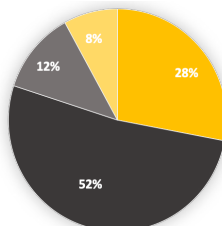
- Europe - 7
- Asia & Pacific - 13
- Africa - 3
- Americas - 2

Position

36%
20%
44%
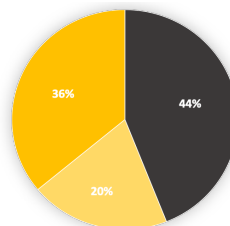
- Practitioner - 11
- Researcher - 5
- Policy maker - 9

Years of experience

23%
23%
54%
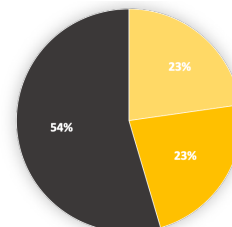
- 1 - 5 years (5)
- 5 - 10 years (5)
- 10 + years (12)

Country of origin
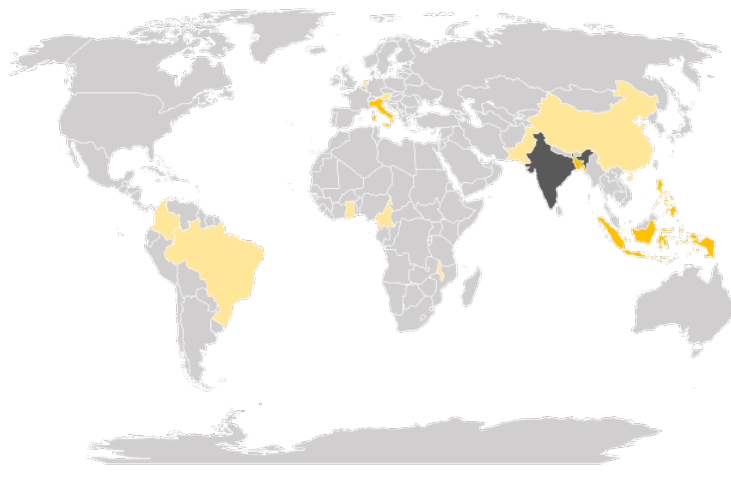
N° participants per country-origin

Country of work
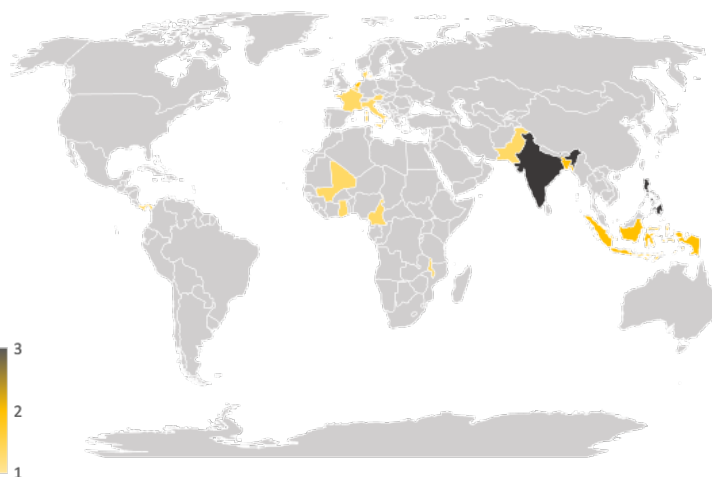
N° participants per country-work

3
2
1

43

5.1 Composition of groups

GROUP #1

Researcher | Cameroon

Herve Alain Wouapi
Lecturer and researcher,
University of Dschang,
Cameroon
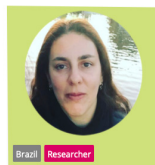
Brazil | Researcher

Carolina Monteiro de Carvalho
DSc in Environmental
Planning, Researcher at
the Institute of Energy
and Environment, São
Paulo University, Brazil

Colombia
Policy maker | Panama
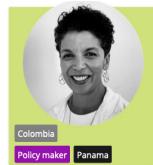
Johanna Zisky Granados Alcala
Urban Resilience Advisor,
United Nations Office for
Disaster Risk Reduction,
Regional Office for
the Americas and the
Caribbean

Netherlands | Practitioner | Mali
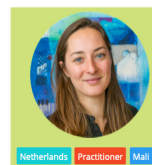
Eleanor Treadwell
Project officer, World
Waternet,
Netherlands / Mali

Thomas Dettoh
Municipal physical
planning officer,
GA South Municipal
Assembly
Ghana

GROUP #2

Practitioner | India
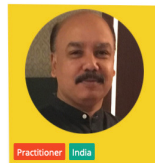
Avinash Kumar Singh
Head – Programme
Management (Urban),
Save the Children,
India
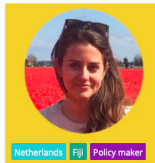
Netherlands | Fiji | Policy maker

Begoña Peiro Salvador
Urban Resilience
Advisor, Ministry of
Housing and Community
Development (Fiji) in
partnership with
UN-Habitat

Practitioner | Italy
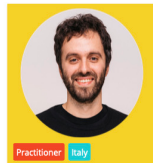
Filippo Bazzoni
Transport Planner
Systematica,
Italy

Policy maker | France | Russia

Irina Pavlova
Associate Programme
Specialist UNESCO,
France

Germany
Practitioner | Belgium
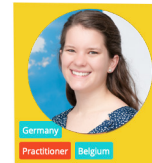
Lea Kleinenkuhnen
Project manager,
Climate Alliance of
European cities with
indigenous rainforest
Peoples, Belgium

GROUP #3

Policy maker
Practitioner | **India**

Indu Valiaveetil
Architect, Kerala State
Disaster Management
Authority,
India

Netherlands | **Policy maker**

**Henricus Joseph
Norbertus Heinen**
Policy advisor Water
Municipality of
Dordrecht,
The Netherlands

Practitioner | **Malawi**
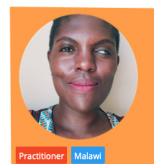
Maggie Ngwira
Programme Coordinator,
Trócaire,
Malawi

Researcher | **Italy** | **Denmark**
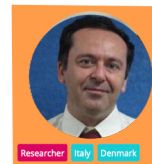
Umberto Alibrandi
Associate Professor,
Aarhus University,
Denmark

Austria
Practitioner | **Policy maker**

Lisa Plattner
Climate and Energy
Expert, WWF,
Austria

GROUP #4

Practitioner | **Nepal**

Nir Prasad Dahal
Monitoring Evaluation
and Learning (MEL)
Delegate,
American Red Cross,
Philippines

Practitioner | **Indonesia**
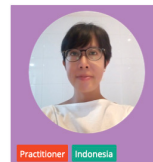
Ardiani Chandra Dewi
Consultant, Yayasan
Plan International,
Indonesia

Practitioner | **Bangladesh**
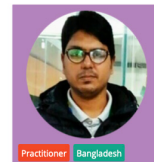
Simon Rahman
Manager - Urban
Resilience, Save the
Children,
Bangladesh

Researcher | **Bangladesh**
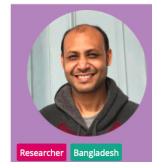
Tasfin Aziz
Lecturer, Department
of Architecture, Brac
University,
Bangladesh

Practitioner | **Hong Kong** | **China**
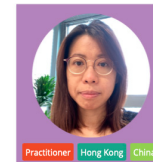
Eva Yeung
Deputy Head of
International & Relief
Service (Acting), Hong
Kong Red Cross (Branch
of the Red Cross Society
of China)

GROUP #5

Policy maker | Philippines

Ermin V. Lucino
City Planning
and Development
Coordinator, City
Government of Santa
Rosa, Philippines

Practitioner | Philippines
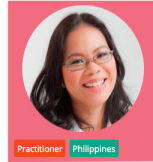
Hannah Gonzalez
Urban Planning/
Urban Development
Consultant
(Independent)
Philippines

Practitioner | Pakistan
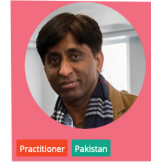
Javed Hussain
Executive Director, Sindh
Community Foundation,
Pakistan

Researcher
Indonesia | Policy maker
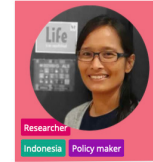
Gusti Ayu Ketut Surtiari
Researcher
Indonesian Government

India | Researcher

Shailendra K. Mandal
Early career researcher
and faculty,
National Institute of
Technology Patna,
India

The key challenge for urban resilience is to co-develop and harmonize scientific and practice led knowledge to support informed and science-based decision and policy making, to enable our cities to evolve and innovate.

The global pandemic of COVI-19 exposed the vulnerability of cities and human settlements worldwide, facing and responding to the pandemic. The whole urban system has been affected, including:

Urbs

The physical structures and infrastructures;

Polis

The policy and the decision making processes

Civitas

The social fabric and the human relations

Oikos

The ecological fabric, the environment and the natural resources

The economy, as the good management of resources and the economic activities
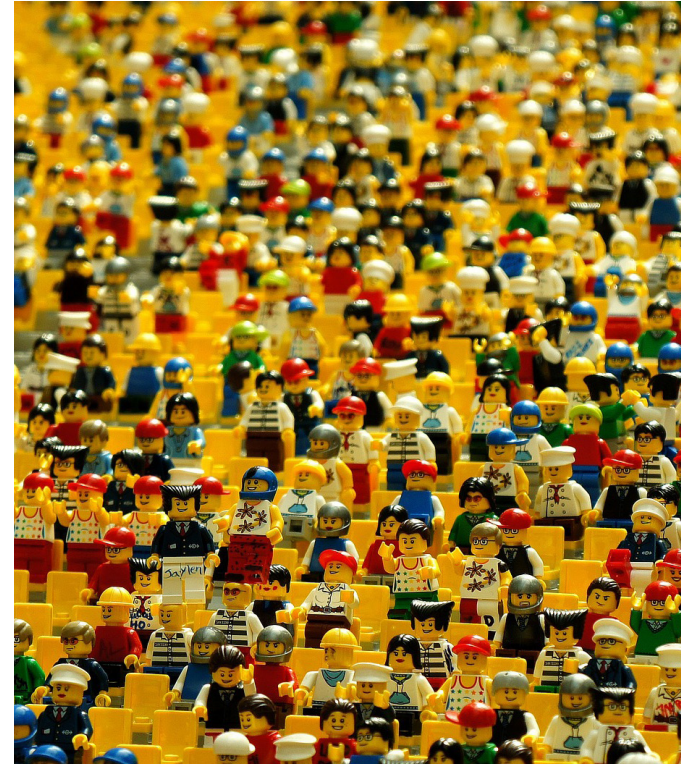
6. Challenge

The systemic understanding of how the pandemic affected these dimensions and their interrelations is still to be understood, this including both negative (stop of the economic activities) and positive feedback loops (reduction of pollution and GHG emissions).

The challenge is to:

- Analyse and understand how the pandemic affected our cities
- Analyse understand strength and weakness of the cities in facing the pandemic
- Foresee future challenges for the cities, both slow and rapid on-setting
- Foresee how the cities can dynamically adapt to future multiple crises
- Transfer lessons learned from the pandemic to increase urban resilience in relation to other global crisis
- Make recommendations to increase urban resilience, through strategies and action, considering knowledge gaps in policy, practice and research.

The purpose is to better understand how the pandemic crises affected the cities and how resilient were the cities in responding in the short and long term to this crises, as well as to understand in a future looking perspective how to enhance the resilience of cities facing diverse and multiple crises, especially climate change, based on the experience of this first global urban crisis.

Analyse vulnerabilities and impact of COVID-19 on cities, and how this affected urban resilience.

Understand how resilient cities are in the short and long terms response, including positive and negative aspects.

Envision medium- and long-term scenarios, about urban resilience of cities facing single and multiple crises.

Identify lessons learned from the pandemic that can be of use for addressing other crises, specifically climate change

Provide recommendations how to enhance urban resilience and how to facilitate urban resilience transition.

7. Process design

Three main steps: Diagnose; Envision; Intervene.

Diverge

Converge

Diverge

Converge

Multiple Cause Diagrams
Stakeholders mapping
Trend Wheels

Systemic leverage

Futures Cone
Four Futures/Scenario Archetypes

Theory of change
Backcasting
Roadmapping

M&E
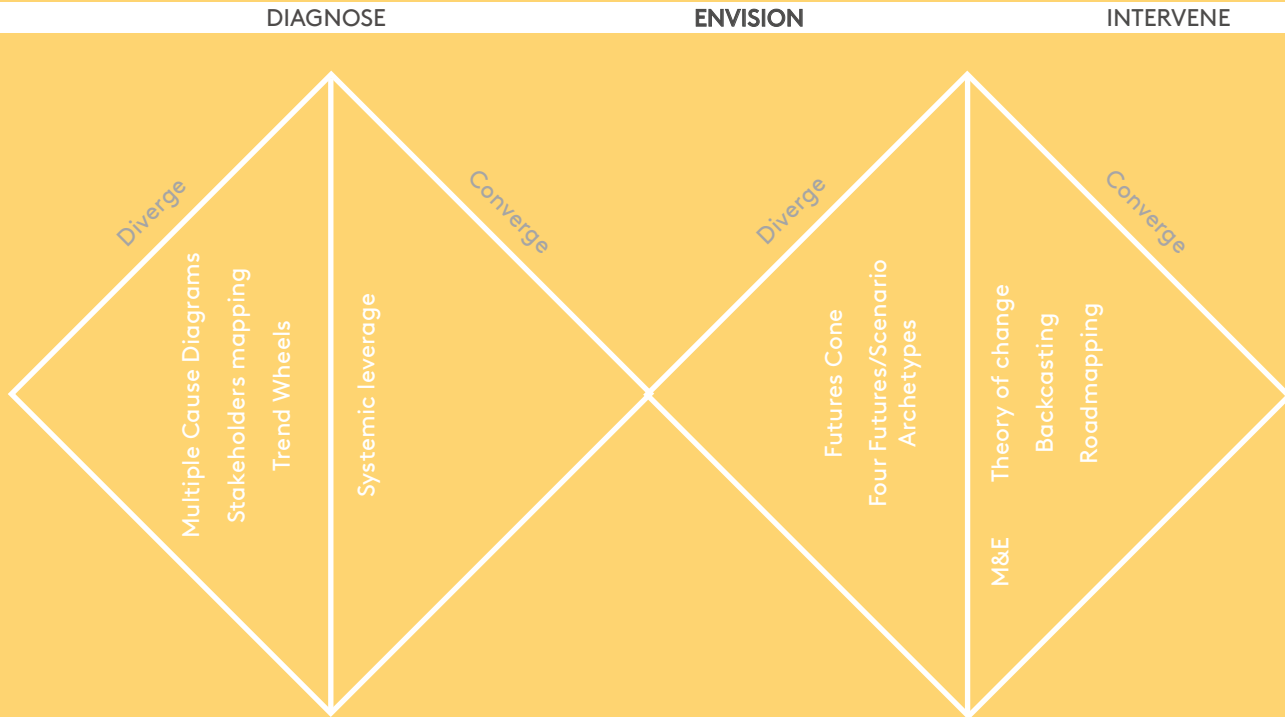
Diagnose
System Mapping

STEP 1. Analysis of topic/factor, symptoms and cause.
STEP 2. Answer to basic 5 whys, to move from problem to the root cause.
STEP 3. Identify and map stakeholders.
STEP 4. Problem/challenge statement (diving and restraining forces)

Non-inclusive public spaces

Social exclusion

Green gentrification

Lack of education/expertise of current pratictioners or decision makers

Unequal distribution of public spaces across the city

Lack of adequate connectivity to public realm

Poor planning

Land value/pricing

car and parking space dominance

Overcrowdedness

which is one of the main factors of

Virus can spread more easily

Low public finances

General shortage of public spaces

People forced to stay home

dominance of short-term economic interests over long-term social and environmental benefits

Lack of direct economic revenue from public space

Social isolation

People forced to shopping malls during their free time

Mental and physical health problems

Envision Forecasting/ Visioning

STEP 5
Identifydrivers, trends and signals of change related to the exploring
system, starting from the once identified by WBCSD for this decade.
(from GROUP 3)

Population growth in Asia and Africa

- Pressure on social infrastructure & services (education, health etc.)
  - Decreasing public spaces
  - Tertiary consequence for your system
- Increased preasure on resources (water, foood, etc.)
  - Environmental degredation
- Pressure on physical & technological infrastructure
  - Tertiary consequence for your system
- Growth of informal housing / settlements / slums
- Migration to urban centres increases
  - Tertiary consequence for your system
  - increase inequalities
- Biodiversitylos s
  - Tertiary consequence for your system
  - Tertiary consequence for your system
  - Tertiary consequence for your system
- more diverse cities
  - disillusion of culture fabric
  - more diverse city
- increased human capital
  - Tertiary consequence for your system
  - Tertiary consequence for your system
- Secondary consequence for your system
  - Tertiary consequence for your system

Envision

Collaboration with ARUP and The Resilience Shift

Digital mapping of complex urban systems and their interdependencies

Pasquale Capizzi
Climate and Disaster Resilience Lead at Arup International Development

Sachin Bhoite
Urbanist, Designer, Resilience Specialist, Senior Consultant at Arup International Development

Oliver Pritchard
Senior Consultant, Infrastructure Advisory at Arup

Áine Ní Bhreasail
Senior Engineer, Infrastructure Asset Advisor at Arup

Framework to guide resilience in an integrated way

STEP 1
System mapping

- Resilience of what
- Resilience to what
- Resilience trought what

STEP 2
Interdependency analysis

- Positive interdependencies
- Cascading failure
- Failure mechanism

STEP 3
Critical Systems Prioritization

- Most influential elements
- Elements most important to human vulnerability
- Entry points

STEP 4
Design integrated programme

- Organisation
- Coverage
- Targeting
- Clusters
- Activities

Rainfall in catchment
Landslides
Flooding
Droughts
Surface drainage
Dam
Agriculture
Water table
Waterlogging
Telecoms
Vector bourne diseases
Buildings
Heat stress
Habitat
Open spaces
Contamination
Water/drainage
Unhygenic conditions
Waste management
Migration
Livelihoods
Weather systems
Storms/cyclones
Coastal flooding
Saline intrusion

Intervene

What's the context, key dynamics and root causes?

Articulating your theory of change and monitoring & evaluation approach

What are your assumptions about each of these levels?

informal settlement

pandemic restricts people's mobility

less economic activities caused close down of business

Loss of income and looking for livelihoods

poverty level increases resulted in higher criminal rate

loss of income resulted in poorer hygiene and health condition

less family income resulted increase drop out of school, increase drop out rate of girls

Less education level and higher criminal rate creates stigmatization

Skills transfer on multi livelihoods

Sphere of concern/interest

market system with wider range of livelihood acitivies

attitude to learn new skills and technology

Sphere of direct influence
Immediate changes for stakeholders

linking up of private sector and NGOs in creating vocational training

individuals are mobilized to participate

community leaders to promote the awareness and livelihood activities

Hygiene promotion and behavior change communication

Sphere of control
Your interventions

financial support from government/ private sector

promotional of gender, protection and inclusion

social welfare support

improved environmental hygiene

Intervention outputs

diversified livelihood training and opportunities

mobilisation of volunteers from community and coordinate with associated resources

Use of outputs by stakeholders in your power analysis

Wider changes in attitudes, behaviour, practices, policies you are seeking to influence

equal opportunities for male and female to access to education and work

participation of community and as volunteers

availability of expertise locally

Access to technology for home-based work

People are willing to adapt with the changes

secured safety net or social welfare from the government

no major occurrence of disasters

community unit or cooperatives are et up

Worksheet based on Hivos International - Visualisation of a Theory of Change

7. Group work

#1 Group
Water, the third thing

The cultural value of water as a driver for increasing urban resilience in informal settlements in Brazil

Group: Carolina Carvalho | Johanna Granados A. | Herve Alain Napi Wouapi | Eleanor Treadwell

In 2020, the Covid-19 virus global pandemic poses great challenges for the future(s) we dreamt of. As numbers rise and information is shared widely, the main recommendation issued by governments and organizations is to promote hygiene measures and maintain physical distance to avoid contagion. However, hygiene is not always possible when water is not available, and physical distance also poses a challenge when there is not enough room for a family living in a reduced space. This project aims to understand the possibilities to leverage a systemic change through increasing the cultural value of water, engaging local communities, and promoting a long term development vision.
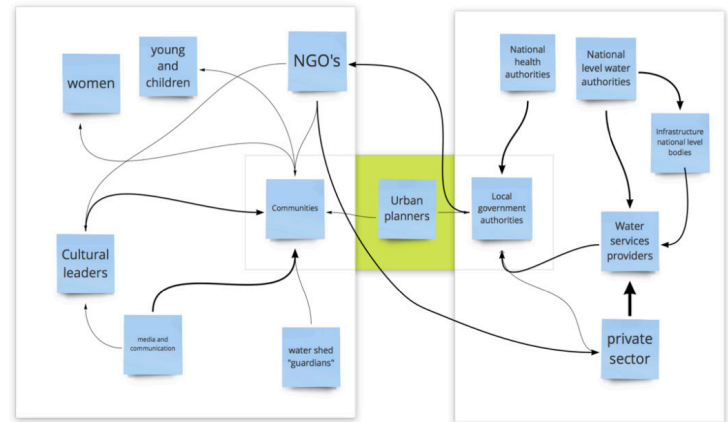
What needs to be achieved...　　　　**By means of...(how)**　　　　**In order to...(purpose)**

equitable access to water

raise awareness of water as cultural asset

communication

sustainably manage water resources

increase water availability with good quality

integrating cultural values into management

coordinated decision making process

participatory water governance system

new policies formulation

increase infrastructure investment in water and sanitation

social justice

promote social inclusion

disease prevention through water access and sanitation

allow women and girls to easily access sanitation facilities

improve health conditions

improve conditions for hygiene

DIAGNOSE
Brainstorm: sentence and connection. Which system it will be?

ASSUMPTION	WHAT	IMPACT
Perception of value	**Short term revaluation of increasing rainwater value through harvesting,**	**Reduced purchase of water could hinder the perception of water as a finite resource.**
Willingness of stakeholders	**The positioning of an integrated NGO has the ability to build trust with the local community and local government**	**Limitations to local participation and engagement, consider alternative entry points**
Rainfall regime	**Rainfall is expected to increase in Brazil, supply of rainwater is not foreseen as a limiting factor**	**There is high confidence that changes in weather will have a negative impact on human health, consider storage NbS**
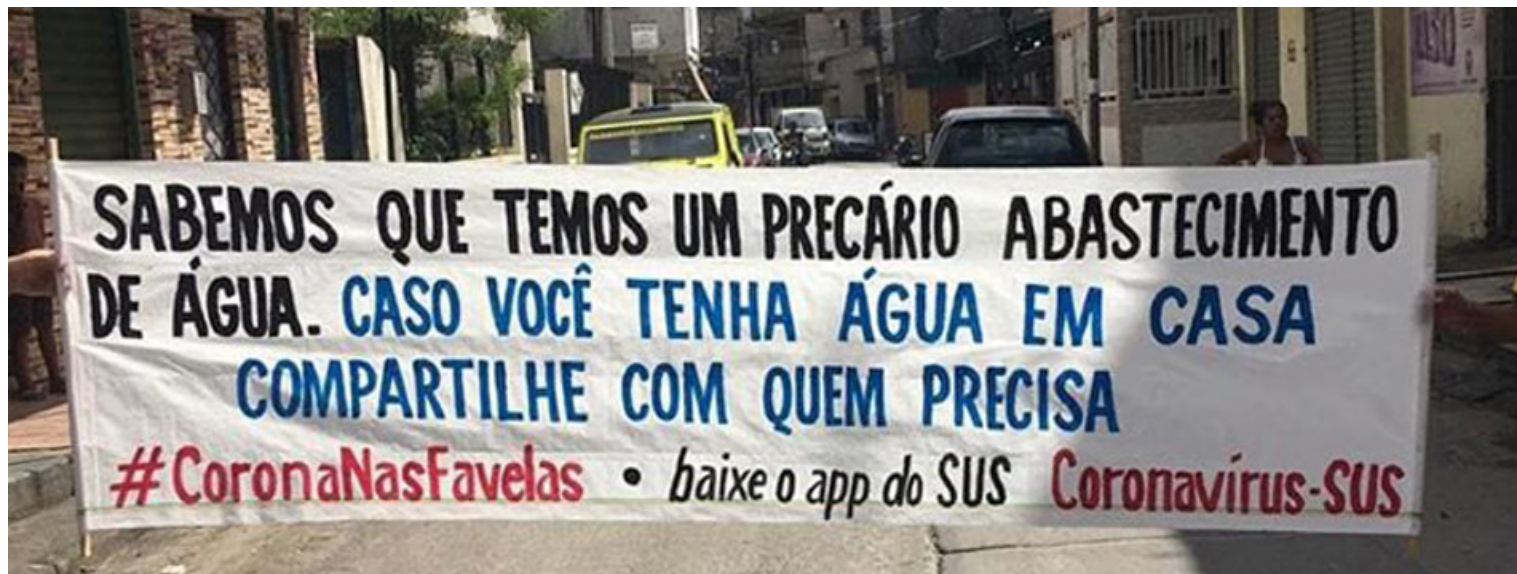
"We know that you have precarious water access at your home. If you have water please share it with those who don't". #CoronaNasfavelas.

INTERVENE
The Proposal

"The virus doesn't act alone, the virus exploits weak control,"
warned Ryan. "The virus exploits weak health systems. The virus
exploits bad governance. The virus exploits lack of education, lack
of empowerment of communities," he said. "That's the reality of the
pandemic..."

#2 Group
Playful cities

Group: Filippo Bazzoni | Lea Kleinenkuhnen | Begoña Peiro | Irina Pavlova | Avinash Singh

Public spaces and multiple crisis. Parks, streets, squares, all our public spaces have been dramatically affected by the Covid-19 pandemic. These places were not considered safe enough and most of the countries worldwide implemented measures that restrict of forbid their usage. As a result, many of us ended up locked down in our homes in isolation or overcrowding, in situations that are very uncomfortable and unhealthy from many points of view.

This has given rise to innovative interventions from the city government level but also individual citizens and community groups, in a move to make more public spaces available while allowing for social distancing. Opening up lanes or whole streets, previously used by cars, to pedestrians and cyclists has suddenly become possible in a short period, parking spaces have been transformed into pop-up gardens or café terraces, and people have transformed their street into a picnic space.

Our group decided to build on these developments and to look at the system of public space, in order to explore how they can make cities more resilient, especially in times of pandemic.

We wanted our system to focus on COVID-19 and multi-hazard responsive public spaces, through a number of policies and interventions, in order to achieve socially inclusive, better integrated, better connected, environmentally sustainable and safe public spaces.

Public spaces are all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive. Each public space has its own spatial, historic, environmental, social and economic features. (UN Habitat)
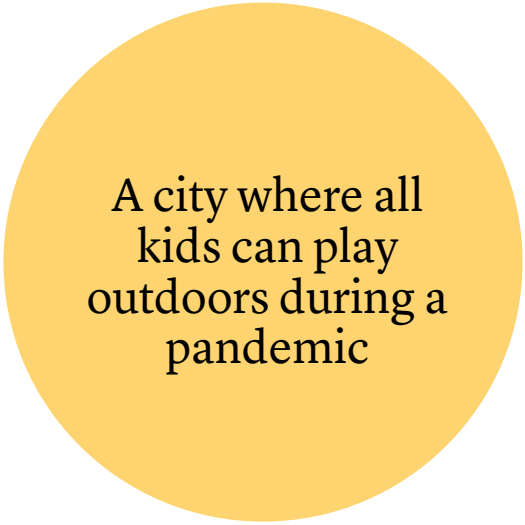
DIAGNOSE
Impacts of Covid-19

Social activity in public spaces has been
discouraged or forbidden.

Many people ended up in isolation or in
crowded situations.

Signals of change: street closure in Madrid
Informal appropriation of space in Milan
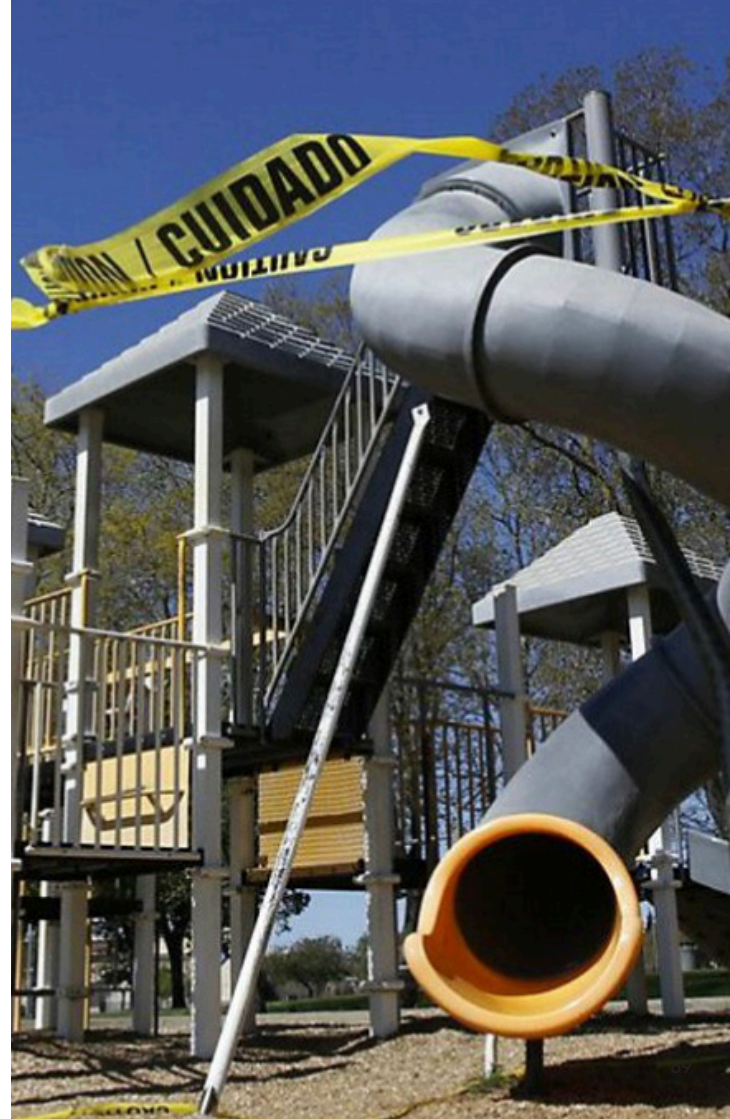
A city where all
kids can play
outdoors during a
pandemic

GOAL

This will ensure increased availability of space open to everyone; designed for the many; in proximity and well connected to homes. IIt will also allow fast and flexible interventions in case needed.

INTERVENTIONS

Promoting appropriation of spaces for children to play during a pandemic by combining financing options, identifying locations strategically, making it part of the design process and stimulating community ownership through place-making.

Increase **budget** for creating/maintaining public places

1 Identification of areas where to intervene

2 Design

3 Empower communities to activate

4 Monitor and ensure sustainability
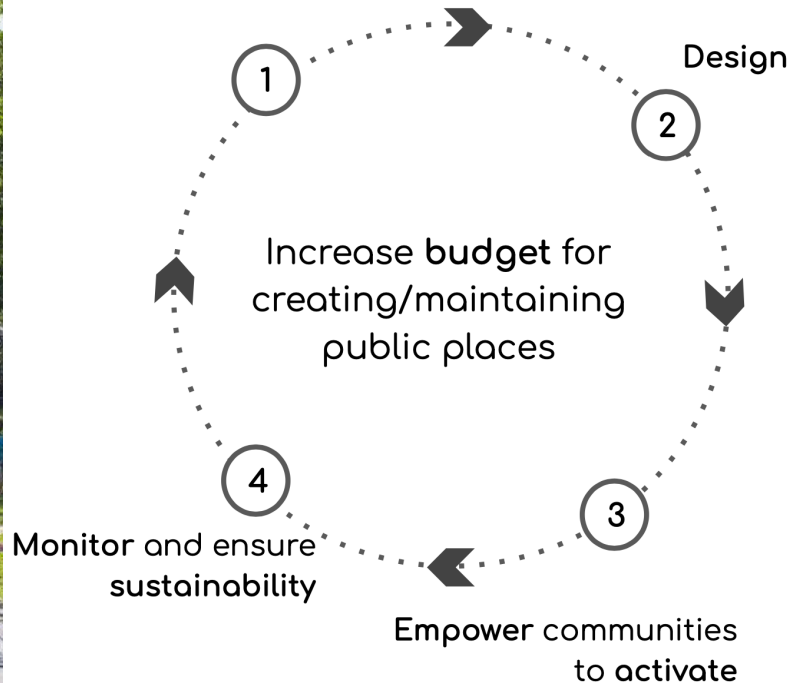
Short-term - Technical urbanism   **Long-term - Strategic actions**

This is a world in which...
- people want to gather in public spaces but centrally-planned solutions don't cater to all communities and areas
In this world we value...
- quick and large-scale solutions
The key trends/drivers are...
- quick (and cheap?) solutions, possibly copied from other places

This is a world in which...
- a sufficient number of good quality public spaces exist where people from all backgrounds can interact
In this world we value...
- involvement of all groups in the design and upgrading of public spaces that are safe, socially inclusive and sustainable
The key trends/drivers are...
- high demand for public spaces

Desire of socialization

centrally planned

participatory planning

This is a world in which...
- solutions are thought for people to stay physically distanced, also with the help of technologies, private mobility is the norm
In this world we value...
- physical distancing
The key trends/drivers are...
-

This is a world in which...
- solutions are sought for people from all communities to access and use public spaces while keeping physical distances from others- e.g. dividers
In this world we value...
-public spaces planned by and for everyone and physical distancing
The key trends/drivers are...
- fear of pandemic

People scared of masses

ENVISIONING
Exploring key uncertainties:
scenario development

What is the key question you want to explore in relation to your system?

How to ensure equal access to good quality public spaces for all?

towards who we'll address our actions/proposals

in which way we include private property in our work?

During pandemic we all understood about the quality of public space how to take this opportunity of great awareness to trigger some long term changes?

How to enable a participatory process in a pandemic?

How to make them versatile enough to contribute to the city's resilience in the long run?

Monica' suggestion: access in order to achieve a greater good?

which lessons are we taking away from Covid-19? How can this contribute to reduce Climate Change in the future?

How to create more and better quality public spaces in a relatively short time?

What is outside the system as you have defined it?

transition areas

What is inside the system as you have defined it?

Definition:
- Places publicly owned or of public use
- Accessible and enjoyable by all for free and without a profit motive.

Functions: Increases property values
Multiplies retail activity
Enhance safety
Fosters social cohesion and equality
Improves health and well-being
Improves the environment
Makes the city more attractive
Promotes more effective and efficient transportation and mobility

- streets & sidewalks
- squares
- parks
- water spots (lakes, beach, river banks)
- unused / postindustrial spaces

What is working well in your system? Why?

by definition, open 24/7 and potentially accessible by everyone

free

potentially easy to retrofit change quite quickly

installing fitness equipment in public spaces (park) accessible for everyone free

flexible during the day

A system is defined by the function or purpose it fulfils. What is the purpose/function of your system?

enable interaction, social life and social cohesion

What is not working well in your system? Why?

unequal distribution of public spaces across the city

cannot be used by everyone in an optimal way- e.g. elderly and disabled people

safe access for women & children

complex system (a lot of stakeholders involved at regional / municipality levels)

not a revenue generator; often perceived as a burden to deliver and mantain

can lead to gentrification and thus increase inequalities in access and availability

What new ideas/models/innovations are emerging? Who is driving these?

(by Municipalities) Open Streets programs: pop-up bike lanes, temporary street closure to traffic, sidewalk widening, etc

(by Municipalities / retailers) use of public realm in front of restaurants/bars to put tables/chairs, expanding retail area

conversion of unused or abandoned places into open public space (park) by state government

#3 Group
Women in the informal sector of urban global south

Group Lost & Found: Umberto Alibrandi | Rik Heinen | Maggie Ngwira | Lisa plattner | Indu valiaveetil

While the Novel Coronavirus SARS-CoV-2 seems to have brought the mightiest to their knees, it has also held up- for those who are willing to see- a mirror against the gaping rift between the haves and have-nots. Whole nations have been under lock down and with the global economy capsizing, it felt as if the world was almost coming to a stand-still. This "slow-down", a welcome pause for some, was nothing short of a terrifying calm for many.

As bleak headlines populated the media and the obituary column ran into tens of pages, it was evident that it wasn't just the virus that took lives, but hunger, abuse, stress, ignorance, all fuelled by crony capitalism and the sheer apathy of authorities. The cry for "inclusiveness" once again resurfaced, as always, after much of the harm was done.

It is in this context that we started off our exercise with a discussion on vulnerable communities and why leaving no one behind is inevitable for a truly resilient urban society.

INTERVENE & LEARN
Timeline of stakeholder involvment with skill learning centres.

Source: Francis Mascarenhas/Reuters

Minority groups

Women in the informal sector

NGO

micro financing banks

community based organisation

Funding
UN Agencies (linking to SDGs) / Corporate sector (CSR)

Men in the family

Organisation of skill learning centers

realization of centers

self sustaining hubs to facilitate green transition

assessing needs and aspirations

expanding (sustainable) skill learning program

Local Government

Media (Visual, Print, Social)

National government

Men in the informal sector

acadamic institutes

local green heroes /activitist

Group focus: Empathy and social inclusion as the central starting point

"How to harness the informal economy to support resilience building for women in the informal sector of the urban global south?"

with the vision of facilitating a

"Women-friendly, resilient informal economy through self- sustaining, green and, above all, just transition."

in order to overcome the shocks and stresses induced by

"the COVID-19 pandemic in specific and climate change in general."

System diagnosis question

DIAGNOSE

Panel A. Including agriculture[9]

Legend:
- Less than 20%
- 20% - 49%
- 50% - 74%
- 75% - 89%
- 90% and over

Source: Women and men in the informal economy: A statistical picture- International Labour Office

INTERVENE & LEARN
Key performance questions.

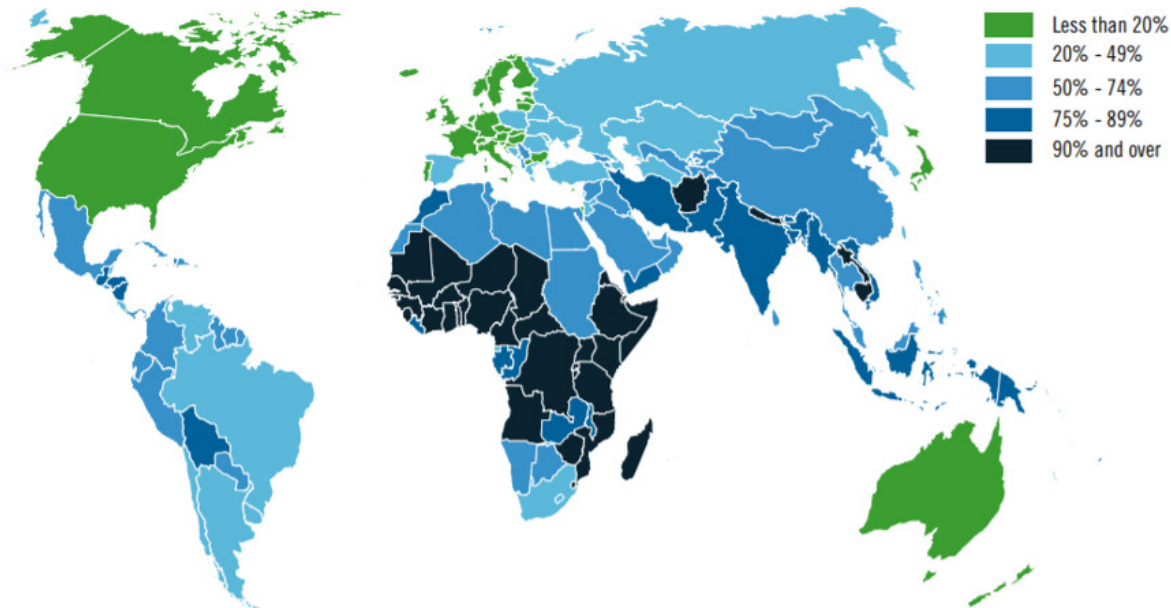|	If - Then Hypothesis	Because:	Key Questions	Key Assessment Methods and Indicators
first step: asking what their needs and aspirations are? based on that a skill learning program can be developed.	*Our current thinking on how our programmatic actions in one leverage area in the system will affect adjacent areas of the system, how that will affect key dynamics, and how that, in turn, may have the potential to contribute to positive higher-level systemic change.*	*the reasons, assumptions, beliefs for how our "IF" statement will lead to our "THEN" statement*	*key questions that will help us test our assumptions, assess the impact of our work, the degree to which our actions are producing intended results and why/why not*	*Assessment methods and indicators – Key early evidence of progress (qualitative or quantitative) and how we might gather it*
Activity	If we train women skills based on their current work (for example: small business, construction, tailor, finance). Train men on social awareness and family roles, child caring.	create more opportunity within their own livelihoods, to create the opportunity upward mobility.	does it fit with their needs and aspirations?	Participation in skill learning program.
Outcome	upward social mobility and decreased exploitation of women	there is a larger financial independancy and higher skilled work.	resisting forces: are their new roles accepted in the family and within the informal market.	learned skills are put to use in their informal market. How many people actually use the new skills after year 1, year 3 and year 5?
Key dynamic	If we have these outcomes, then we expect to see these impacts on one or more dynamics: skill training program itself, and the surrounding community.	To have a sustainable learning within a community, that is maintained by the community.	Does the community take ownership of the program.	Skill training center is self sustaining
Ripple effects	If we have these outcomes and dynamic impacts, then we expect to see: acceptance for a change in traditional roles	The community will notice the positive change the approach and improvement of livelihoods	How is the community dealing with the outcomes and results?	Interviews and community buildingsessions
Systemic change	If we have these dynamic impacts and ripple effects, then we expect to see: improved livelyhoods due to economic stability	Because the productivity is better off than before and the resilience is giving by robustness of the system	Are the key indicators meeting the targets?	evaluating and monitoring the systems

#4 Group
Building community resilience through livelihood diversification in Karail, Bangladesh

Group: Nir Prasad Dahal | Ardiani Chandra Dewi | Simon Rahman | Tasfin Aziz | Eva Yeung

Our case study represents Virtual Urbanist, an NGO, working for improving the lives of the vulnerable population in the informal settlement in Bangladesh. Karail, an informal settlement in Dhaka, is a representative case for assessing livelihood parameters in terms of access to basic urban services, land tenure, infrastructure and housing, access to economic opportunity, safety and security concerns, and integration with city in the context of COVID 19. It is the largest informal settlement in Dhaka and home to 286,000 people and more than 60,000 households, occupying an area of 90 acres. Like all other informal settlements, community from karail is started experiencing acute shocks of the pandemic. Many have lost their jobs, informal businesses are impacted, access to basic urban services are now limited etc. Most importantly, mobility restriction imposed by the government and stay home order made all possible streams of livelihood vulnerable.

Banani

Gulshan 2

BTCL colony

Karail

Gulshan 1

Mohakhali
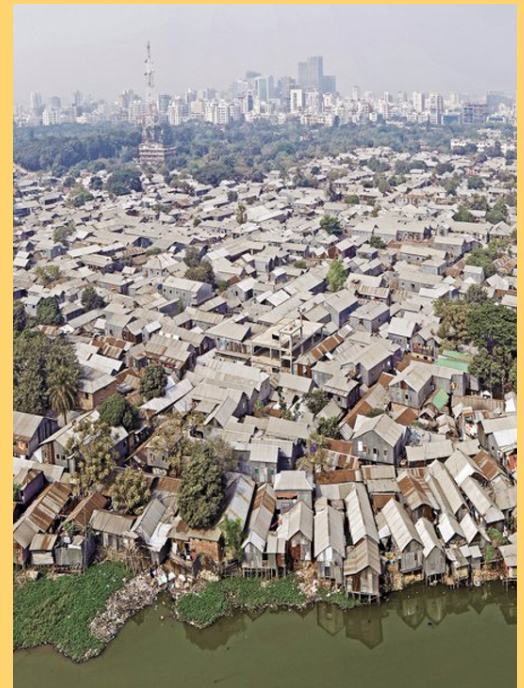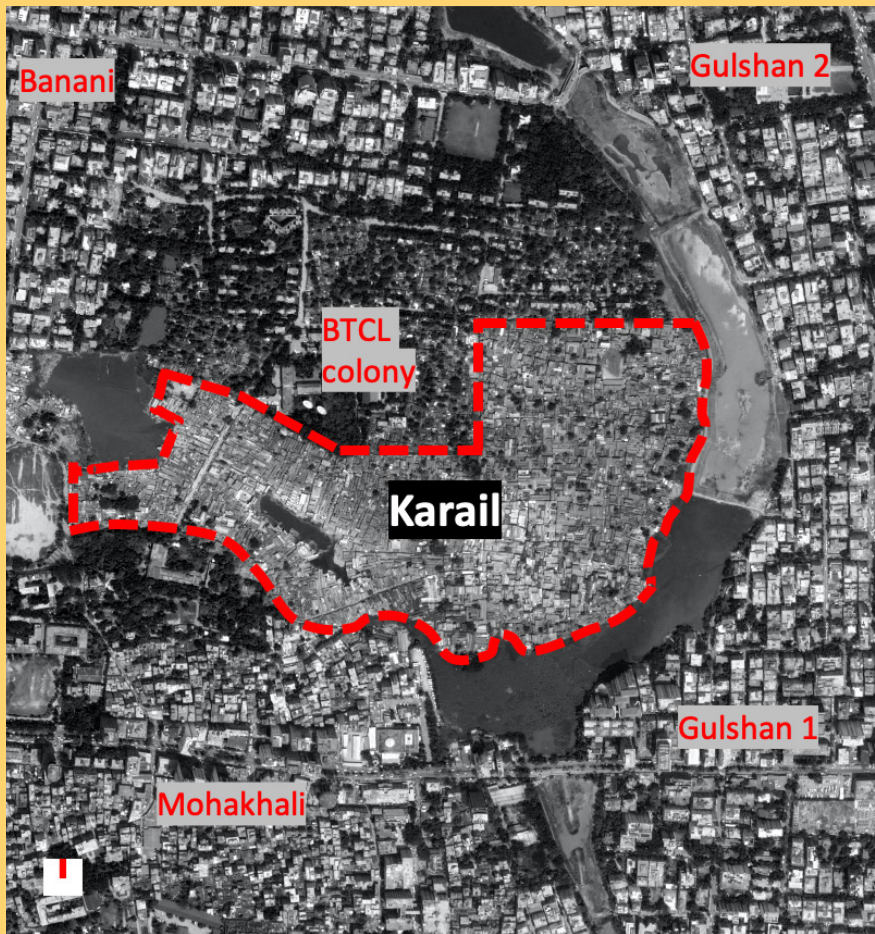
Background

The largest informal settlement in Dhaka city.

Occupying an area of 90 acres.

Home to 286000 people.

To put that into perspective that's 12 sft of living space per person.

DIAGNOSE
Context: Karail, Dhaka, Bangladesh

DIAGNOSE
Problems

Reduced income

Restricted mobility

Disrupted business

Shrinking economic opportunities

Interrupted supply-chain

Limited access to capital

Limited social safety net

Rising unemployment

Reduced Mobility — Restricts → Informal Businesses — Lack - → Income
COVID 19 — Restricts - → Mobility
Informal Businesses — Reduces → COVID 19
COVID 19 — Imapcts - → Informal Businesses
Reduced Mobility — Limits - → Access to Health Services
Reduced Mobility — Limits + → Basic Urban Services
Basic Urban Services → Informal Businesses +
Shrinking Economic Opportunity — Causes → Out-migration
Basic Urban Services — Limits - → (Criminal Activity)
Unemployment — Impact →
Unemployment — Increases →
Access to Public Space — Limits + → Criminal Activity
Gender — Related with → Criminal Activity +
Utility Service Infrastructure — Weak - → Informal Settlement
Social safety-net — Reduces → Informal Settlement
Social safety-net — Improve + → Living Standard
Informal Settlement — Impact → Gender +
Informal Settlement — Influences - → Hygiene
Hygiene → Living Standard +
Unemployment — Leads → Limited Economic Activities
Community — Limited → Access to Financial System
Community — Lacks - → Access to Microcredit
Limited Economic Activities → Access to Microcredit -
Supply Chain — Impacts - → Business
Staying Home — Increases + → Domestic Violence
Criminal Activity — Increases → School Drop-out
School Drop-out — Causes - →
Loss of Income — Increases + → Poverty
Poverty — Doteriotate → Living Standard
Loss of Income — Increases → Loss of Income
Loss of Income — Influences → Stigmatization +
Access to Financial System - → Access to Capital
Access to Capital — Lacks → Business
Loss of Job — Causes + → Starvation
Loss of Income — Impacts - → Food Intake
Loss of Income — Increases → Poverty +

Negative .... Positive ——— Critical Issues ● → ⬤

02
Create Market Linkage

01
Well Connected to Resources

03
Provide Equal Opportunities

SECURING LIVELIHOOD OF KARAIL

04
Enhance Capacity

05
Strengthen Self Sustainability

Exploring trends and drivers:
Trends wheel tool developed by Extrapolation Factory

What macrotrends or key drivers are most relevant for your system?

Economy (less job/ less business) Politics

Urbanisation

Logistics on daily supplies

Environment degradation affect quality of water and air

What trends could impact your system over the next 5-10 years?
- Low income because of loosing jobs and businesses
- Less food consumption as coping strategies which will lead to malnutrition and adverse effect on cognitive development of the younger population

What signals of change can you spot (ie. news headlines)?
-employment rate
-criminal cases report
-health statistics
-mortality rate
-malnutrition rate

Livelihood will be getting worse in the Informal Settlements

People need more credit to survive

Resource constraints will be acute

Transportation system will be expensive to avail

Mobility restrictions will be continued

Many informal settlement people will lose their jobs

Detoriorated Living condition

More young people will rest in Informal settlement

Jobs will be less because of the saturation of the job market

Need for more access to micro credit system to withstand

more philanthropy or grant will be required

Poverty level will be increased

Domestic violence

Children dropping out from schools

Increased criminal tendency

Increased mortality to health hazards

Rise of health risks

Urban to rural migration increased

more burden on social system/ safety net

Household food intake will be impacted

Negative impact on infant and mother health due to limited reproductive

access to urban services will be reduced

Modal choice will be impacted

Travel expense will be even higher

Average salary will be lower

ENVISIONING
Understand how dynamics change over time and explore the
transition pathways to the preferred vision/scenario: Three Horizons

Horizon 1
Present

What are the key trends and drivers?

Stable neighbourhood financial market

secured social protection system

Increased private sector/NGO involvement

Horizon 2
Transition

Horizon 3
Future Vision

H2-Incremental change

H2-Transformative change

Based on your system diagnosis, what is already happening in your system?

- People are looking for alternative livelihood skills and support from NGOs and govt. initiatives.
- Neighborhood financial market is lacking stability with a large human resource sitting home without work.
- People looking to start small entrepreneurship and need social welfare support and micro loan from GO-NGOs.
- Home-based livelihood is becoming a feasible livelihood option.
- Market demand is there but lacking linkage through private sector's involvement.

What are the barriers to change?
- Lack of market demand for home based small enterprises.
- Absence of investment from private sector and support from NGO actors.
- Lack of access to basic needs and utility for local community.
- Lack of mobility and market access for small enterprises.
- Lack of fund to subsidize the community in the long run.

What are the enabling conditions for change to happen?

- Pandemic trend going downwards and people are more willing to move around
- Increased knowledge and protection on health and hygiene
- Functioning of government social protection measures
- Effective collaboration between (I)NGOs for social and livelihood support
- Community engagement and social cohesiveness
- Vocational training opportunities
- Government need to activate gradually economic activities in trading, market, tourism, etc.

Based on your preferred future scenario (step 2), what is the transformative vision for your system?

- People have equal access and well connected to resources and opportunities. Their capacities are enhanced and able to build a self sustained community for themselves. Their skills and knowledge can be learned or transformed from people of other communities.

Based on your system diagnosis, what is not working well? What aspects of your system are declining?
- Rural-urban migration resulting into influx and higher population density.
- Due to increased influx, unemployment is higher and giving rise to criminal tendencies.
- Govt. system is struggling to ensure basic needs and utility support to the increasing population.

What are the beliefs and assumptions that people would need to have to make this future work? What kind of structure would be needed to support it? What flows (resources, skills, materials etc)?

- no major disasters, e.g. floods, pandemic, etc. happened. Hence disaster risk reduction measures and awareness programme are in place.
- sense of gender & inclusion is enhanced. Women are supported to learn new livelihood skills. Promotion on gender balance is needed.
- community unit or cooperatives are set up, to improve cohesiveness and network with external resources including government welfare policies and private sector/ NGO support.

Based on your system diagnosis, what new models/ideas/innovations are emerging? What are the signals of change?
- Due to loss of jobs and daily wage work, home based business models are becoming a feasible alternative in the community.
- Developed skill set and better market linkage is creating small business hub around the informal settlement (handicrafts, mushroom production, tailoring etc.).
Signals of Change:
- More people are coming to the city in search of earning opportunities.
- Unstable livelihood for the local community.
- People are preferring entrepreneurship to part-time or daily-wage based work.
- Increased interest of women in income generating activities.

Who are the key stakeholders required for your preferred system vision to become reality?

- community (including leaders, women, people with disabilities)
- community unit (volunteers)
- local and national government bureaus (including social welfare and civil affairs)
- private sector, social enterprise, international/ local NGOs

Dominance

Time

#5 Group
Wash resiliency of families in Asia's slum areas amidst the pandemic

Group: Ermin Lucino | Shailendra K. Mandal | Javed Hussain | Gusti Ayu Ketut Surtiari

No nation was ready when Covid 19 disrupted the world we know. Rich and poor countries and communities were both affected by the Pandemic. However, the poor were affected the most because of their higher vulnerability and lower capacity to recover from the disaster.

The team analyzed the urban slum system in the global south amidst the pandemic and other disasters. Anchoring their objective with the vision of the New Urban Agenda and SDGs 6 and 11, they focused on slum communities' access to water, sanitation and hygiene (WASH).

Today, by the most conservative estimates, about 900 million people live in slums. But most experts agree that including different types of informal settlements, the number goes up to 1.6 billion – which represents 1/4 of the world's urban population. By 2030, it's estimated that it 1 in 4 people on the planet will live in a slum or other informal settlement.

The team studied one of Asia's largest slums - Dharavi Slum in India. The slum has a population of around 1 million inhabitants occupying an estimated area of only 2.1 square kilometers. Its population density is approximately 277,136 people per square km which is almost 30 times of New York City, one of the most populated cities in the world.

WASH is already a complex and life-threatening issues in Dharavi slum even before the pandemic arrives. Dharavi has severe problems with public health. Water access derives from public standpipes stationed throughout the slum. Additionally, with the limited lavatories they have, they are extremely filthy and broken down to the point of being unsafe. Mahim Creek is a local river that is widely used by local residents for urination and defecation causing the spread of contagious diseases. The open sewers in the city drain to the creek causing a spike in water pollutants, septic conditions and foul odors. Due to the air pollutants, terrible diseases such as lung cancer, tuberculosis, and asthma are common among residents.

On April 2020, Covid 19 positive cases rose in the city and the slum became its focal point. The city administration planned an intervention strategy employing community participation and partnership to contain the virus in the Dharavi slum. The community practiced the four T's (Tracing, Tracking, Testing and Treating) in addressing the virus. The positive cases subsequently decreased in the city.

DIAGNOSE
Dharavi is located in the centre of the city,
surrounded by wealthy neighbourhoods.
Source: India Net Zone

WATER

Two-thirds of households in the slum purchase water.

SANITATION &

HYGIENE

About 80% of the residents use community toilets.
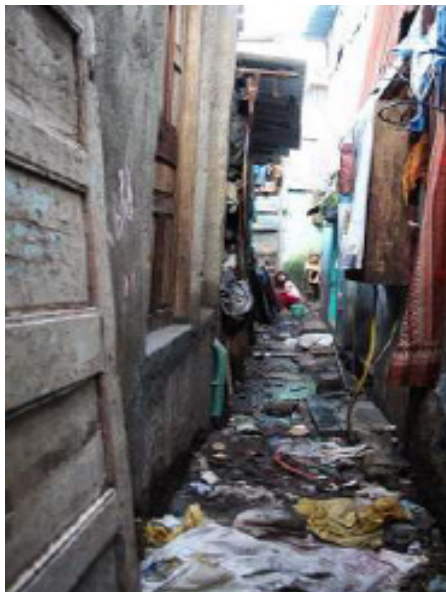
COVID-19

In fight against COVID-19, it grapples with water, sanitation and Hygiene.

POWER

High

Private Companies

Water experts

Climate Scientists

National and Local Government

Public/Private water

Concessionaires

International Donor Agencies (focus improving life in informal settlements in developing countries)

Neighboring local governments

NGOs/Civil society (including ethnic's and religion's group organizations

Slum

Dwellers

Low

Low — INTEREST — High

Driving forces

Restraining forces

Health (Pandemic) is a systemic problem and not limited to a specific socio-economic group

access to water

livelihood

land tenure

Daily low wage income

Families in the Slum have limited access to WASH and thus more prone in getting sick (COVID 19)

Cannot apply power and water connection because of land ownership

Community Feeling

Sanitation & Hygiene

Social protection

Limited Database of Residents

Informal Housing Job

Self-organized

Behaviour

INTERVENE & LEARN
Project Activities for Output Recommendation

Role of the City Planner	Projects / Activities	Outputs

• Promote people participation in development planning	• Organize the Community (if not yet organized)
	• Put all stakeholders on one table
	• Conduct Strategic Planning Workshops with all Major Stakeholders
	• Facilitate MOA Draft Document
		• Approved 1-3 Year Strategic Plan
		  • Conduct of Information Education Campaign on Good Hygiene Practices (Community , school levels)
		  • List of activities, tasking (Government, NGOs, Private Sector, Local Community), key result areas, monitoring
		  • Ownership / Commitment of Stakeholders
		• Signed MOA Among Local Stakeholders

• Provide technical advice to the local council	• Provide a draft document and advice the Mayor and City Council about the need to pass a local law on WASH	• Enacted Resolution Ordinance Declaring Access to Water and Toilet as a Basic Human Right • Enacted Resolution Requesting the Private Water Concessionaire to provide affordable water supply to slum areas

• conduct training programs necessary to evolve plans and programs for implementation	• Coordinate with Stakeholders in providing the following trainings:
	  • Training of youth as peer educator and health educators
	  • Household and neighbor demonstration sessions on Covid-WASH nexus/integration
	  • Community engagement in WASH activities
		• Developed Local WASH Advocates / Champions
		• Developed Local Information Education Campaign (IEC) Materials
		• Empowered Communities

• formulate and recommend fiscal plans and policies
• Monitor and evaluate the implementation of programs, projects, and activities
	• Advise the elected officials to include in the city budget the WASH projects in the Slum Area
	• Monitor the implementation of the project
	• Develop and send proposals to the national government or international agencies if the local budget is not available for the WASH projects
		• Constructed Government funded facility
		  • sanitation resources- hand washing spaces – water storage tank
		  • Community toilets/latrines
		• Distributed safety kit –hygiene kits
		• Construction and repair of water and sanitation facilities in Slum
		• Sent Project Proposals to Funding Agencies

Reflections on COVID 19
How to make cities resilient in face of pandemic and multiple crises

"We need to learn from each other across the globe during times of global crises. Even though local contexts and cultures are different, there is a lot to learn from everyone "
GROUP 2

"The pandemic has also provided an opportunity for the policy makers and key actors to collaborate and respond together, which will strengthen the coordination mechanism for triggering an effective response mechanism in future emergencies"
GROUP 4

"We learned that all of us belongs to one system – world. The world we know is changing. We must cooperate and collaborate with each other to survive and enjoy our existence. We must learn to be resilient as one human race."
GROUP 5

"Once the global crisis of COVID-19 comes to an end, it will leave us to live under 'new normal' circumstances. It might lead us through a paradigm shift as we are getting introduced to new best practices and replicable models across the communities of practice"
GROUP 4

"As the viral poem goes, "We are in the same storm, but not in the same boat". However, more often than not, authorities tend to overlook the most marginalized while coming up with solutions to tackle the urgent issues at hand"
GROUP 3

"We need to prepare even for events we don't (want to) believe possible "
GROUP 2

"COVID does present a new opportunity as every disaster is an opportunity for change. "
GROUP 3

NETWORK

POLICIES

CLIMATE CHANGE

Exit survey

Question	Respondents
Learned more about urban resilience research?	19
Learned from practices worldwide?	20
Learned more about relevant international policies and efforts (SDGs, Paris Agreement, New Urban Agend...	20
Learning outcomes in line with my expectations?	19
Learned more about appropriate technologies?	19
Learned more about process design methodology?	19
Learned from both lecturers and other participants?	19
Provided good opportunities for building community of practice with long-term prospects?	18

Learned more about urban resilience research? — 84 / 11 / 5

Learned from practices worldwide? — 65 / 35

Learned more about relevant international policies and efforts (SDGs, Paris Agreement, New Urban Agend...) — 80 / 20

Learning outcomes in line with my expectations? — 74 / 21 / 5

Learned more about appropriate technologies? — 53 / 37 / 5 / 5

Learned more about process design methodology? — 79 / 21

Learned from both lecturers and other participants? — 95 / 5

Provided good opportunities for building community of practice with long-term prospects? — 94 / 6

Legend: agree ▪ somewhat agree ▪ neutral ▪ somewhat disagree ▪ disagree

Respondents

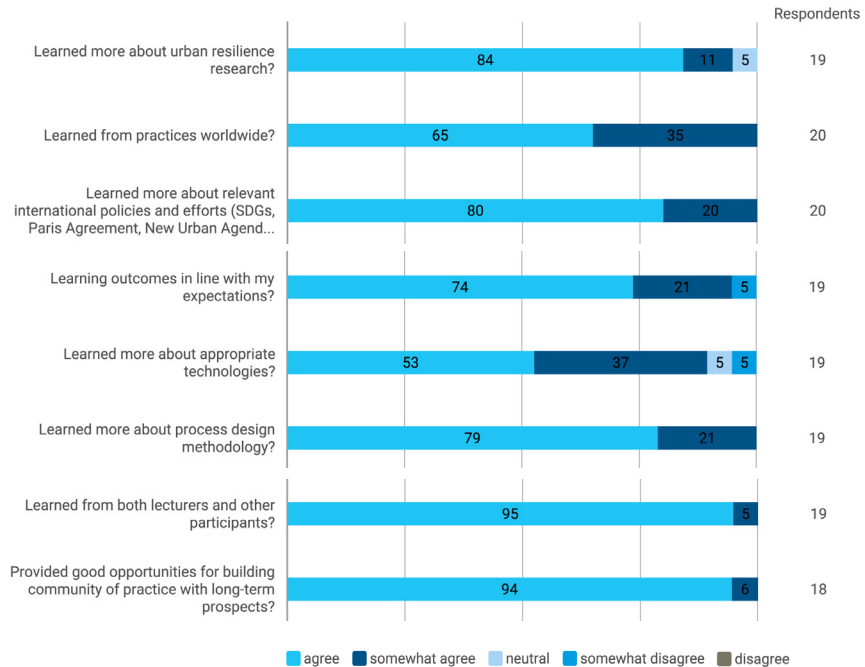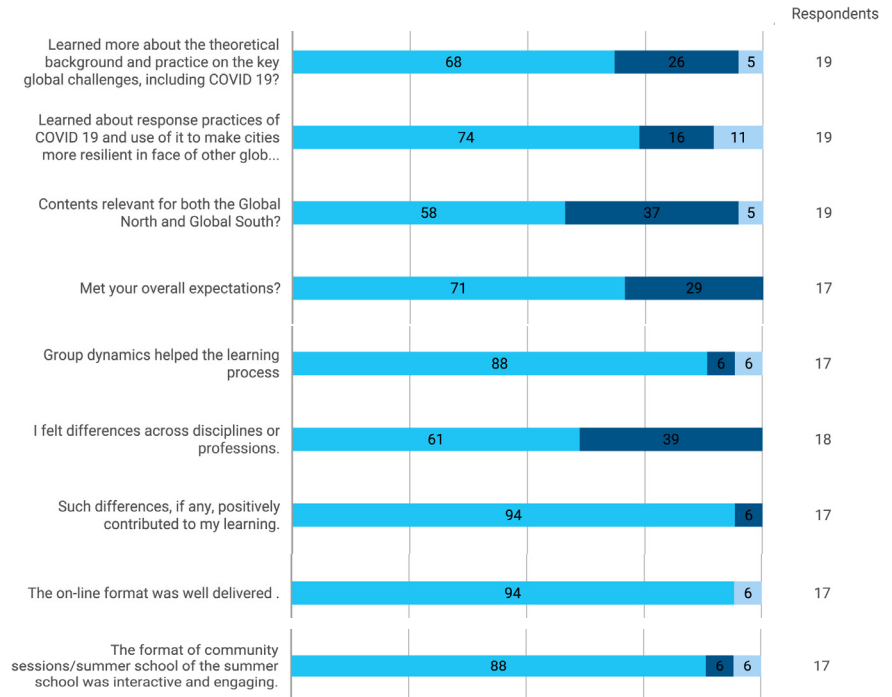|				Respondents
Learned more about the theoretical background and practice on the key global challenges, including COVID 19?	68	26	5	19
Learned about response practices of COVID 19 and use of it to make cities more resilient in face of other glob...	74	16	11	19
Contents relevant for both the Global North and Global South?	58	37	5	19
Met your overall expectations?	71	29		17
Group dynamics helped the learning process	88	6	6	17
I felt differences across disciplines or professions.	61	39		18
Such differences, if any, positively contributed to my learning.	94	6		17
The on-line format was well delivered .	94	6		17
The format of community sessions/summer school of the summer school was interactive and engaging.	88	6	6	17

Exit survey

In what way did the summer school enhance your life-long and interdisciplinary learning experience?

- I was completely new to systems thinking and the summer school has encouraged me to understand the complexities within and outside my subject. It has also helped me connect my discipline to other disciplines and reinforced the need for multisectoral collaborated efforts to achieve resilience. I believe the summer school has also initiated in me an interest to pursue higher education in planning or urbanism.

- My one of the takeaway is "...There is no straightforward black and white in any solutions. It just a different perspective to think off". Taking this into account, I feel miles to go to know a bit better

- I learned new frameworks that I will be able to implement in my work. It was also nice to have the opportunity to focus on topics and take the time brainstorming about them during the different phases, since this is something you sometimes do not havetime for at work. It provided a new perspective.

- The school enhance my life-long and interdisciplinary learning experience in the sense that many of the things that I didn't think were connected before, now I can't see them except as a network; many topics that I've never heard of will probably be the subject of future study or work. In short, as a first deep dive into these topics, the summerschool "simply" diverted my future choices.

If you were to take one thing that you learned during the Summer School and apply it to your practice when you return to your work, what would that be?

- I would try to come up with better, more holistic solutions when I work on disaster resilient construction. I would try to bring in solutions which can have multiple benefits across sectors.

- The systemic approach of urban resilience. The scope of my work needs to be broadened and I will seek to integrate system thinking when approaching the resilience dimension at regional level

What has surprised you the most?

- Simple issues have lot of interconnection

- The similarity of cities in the global south and how they responded and affected by Covid among other disasters

What do you see the potential of the community of practice established during the summer school going forward?

We will need to keep the interest and regular activities to keep the community engaged. I am confident it represents a great opportunity to address urban resilience from the practitioners point of view and to leverage multidimensional engagement.

SDU

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