

Role of Academia in Urban Resilience

Lauren Sorkin
Acting Executive Director
Global Resilient Cities Network

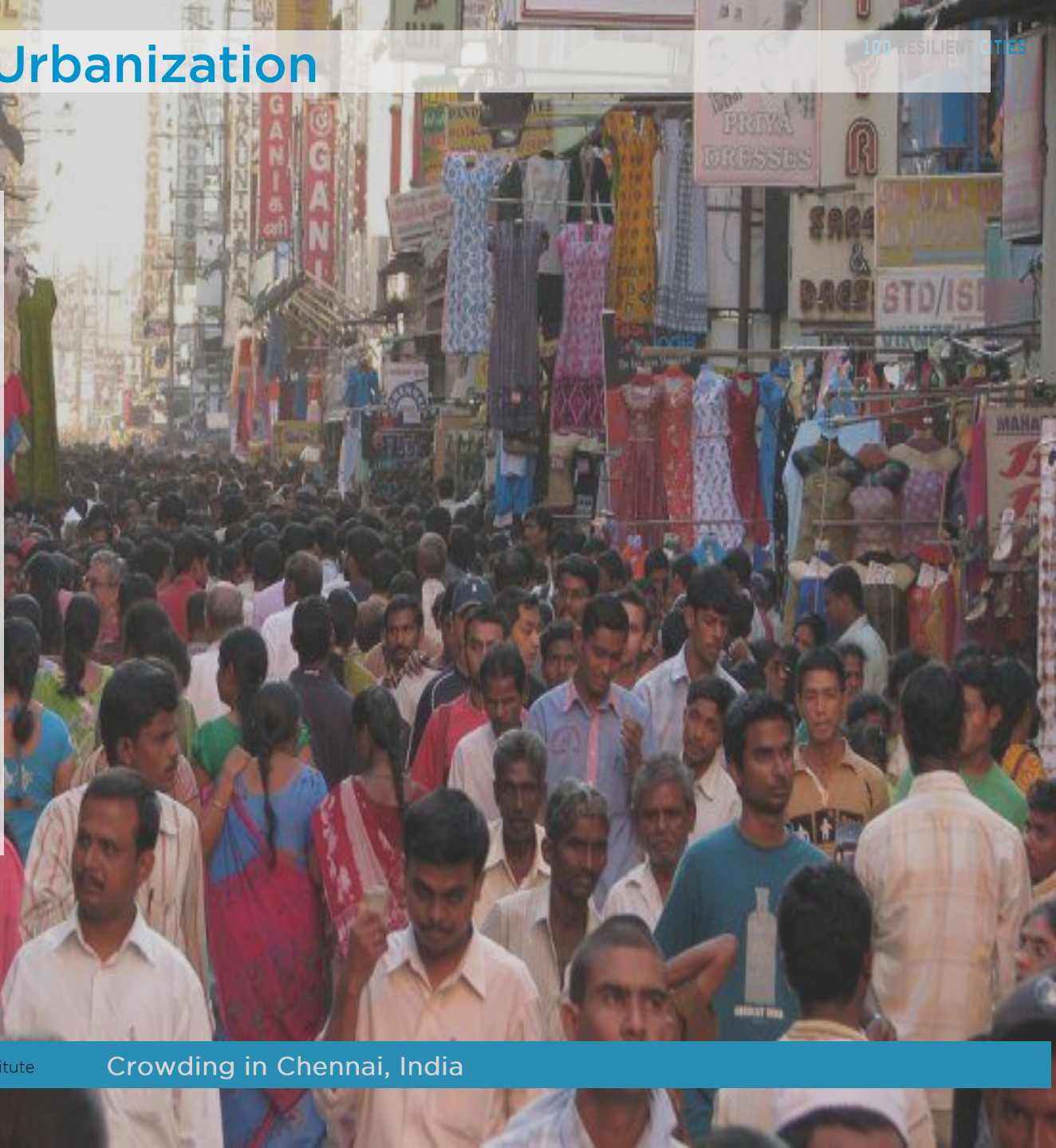


The Urgency

Global Trends – Urbanization

100 RESILIENT CITIES

By 2050,
68% of the
world's
population will
live in cities
and cities will
contribute
approximately
80% of
global GDP.



Global Trends – Economic

“While global growth is steady, it has peaked; debt risks are rising; and climate change continues apace. These **global challenges put our aspirations at risk and raise the urgency of action.**”

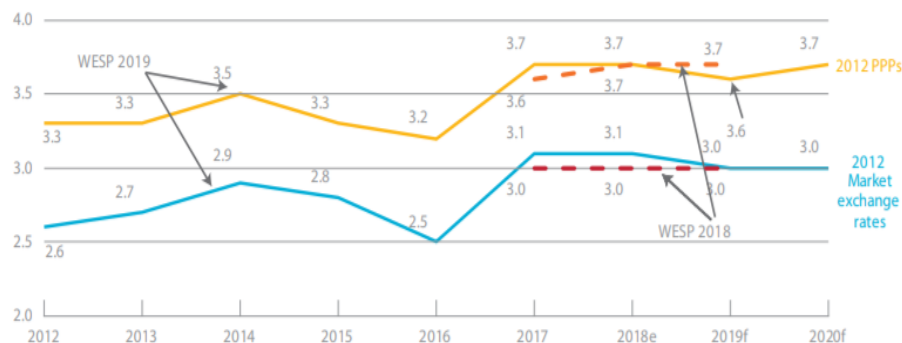
Liu Zhenmin

Under-Secretary-General for Economic and Social Affairs
UN Chair of the Inter-agency Task Force

Global real wage growth grew by only 1.8% (2017) the lowest since 2008 and far below growth rates seen prior to the 2008 global financial crisis. This will have a **negative impact on disposable income of individuals and families.**

UN Financing for Sustainable Development Report 2019

Growth of world gross product
(Percentage)



Source: UN/DESA.
Note: e=estimate, f=forecast.

Labour income share, 1990-2017
(Percentage of GDP)



Source: UNCTAD Trade and Development Report 2018.
Note: based on statistics of distribution of value added from the UN Statistical Division, complemented with International Labour Organization ILOstat, European Commission's AMECO and OECD statistics. When available, social accounting matrices produced by national statistical offices are used to adjust wage shares. Missing data are interpolated.

Global Trends - Climate Change

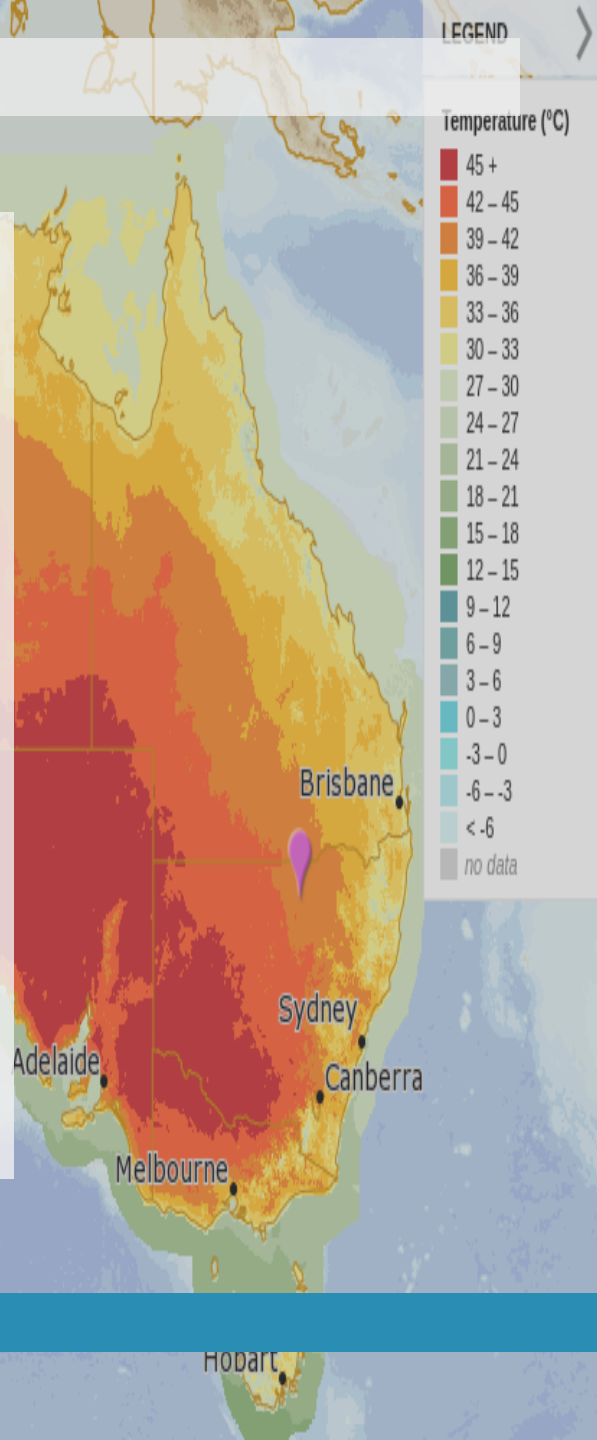
Poverty & Climate Change vulnerabilities are concentrated in

South Asia
Sub-Saharan Africa
South East Asia
Latin America
Middle East

70% of the major climate change concerns are related to

Droughts
Water shortages
Severe weather
Floods

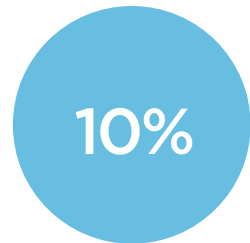
By 2050, an estimated **800 million people** will live in more than **570 coastal cities** vulnerable to a sea-level rise of 0.5 meters.



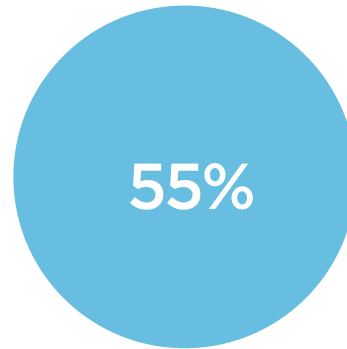
Flooding in Jakarta, Indonesia

Cities concentrate risks

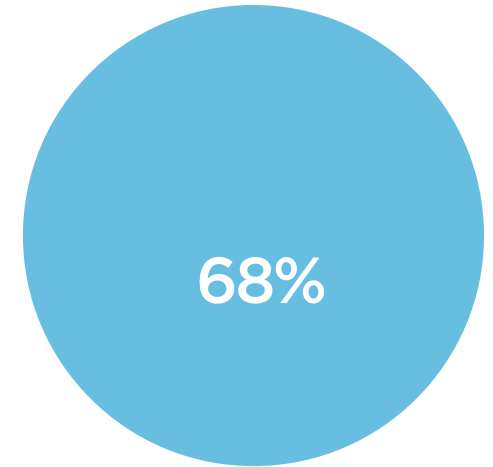
Population



1800

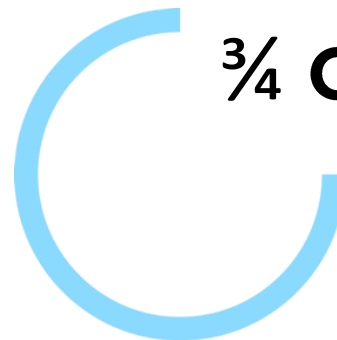


2018



2050

Economy



$\frac{3}{4}$ of global GDP



Who are we?



3 interrelated trends

Globalization

Cities are more interconnected than ever before, and a system failure in one city can cause problems across the globe.

Urbanization

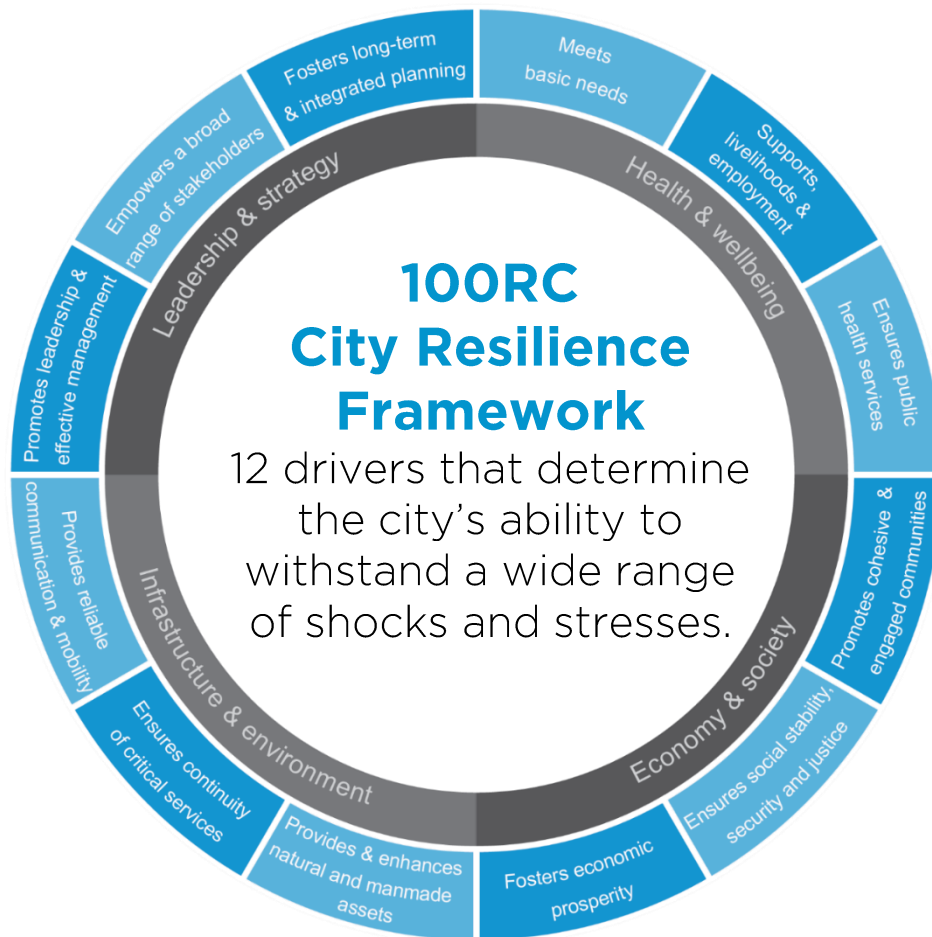
Urban populations are growing rapidly: of an estimated global population of 9 billion by mid-century, 70% will live in cities. Many are in fragile ecosystems, and the number of people at risk is unprecedented.

Climate Change

Climate change places new social, fiscal and political pressures on urban systems.



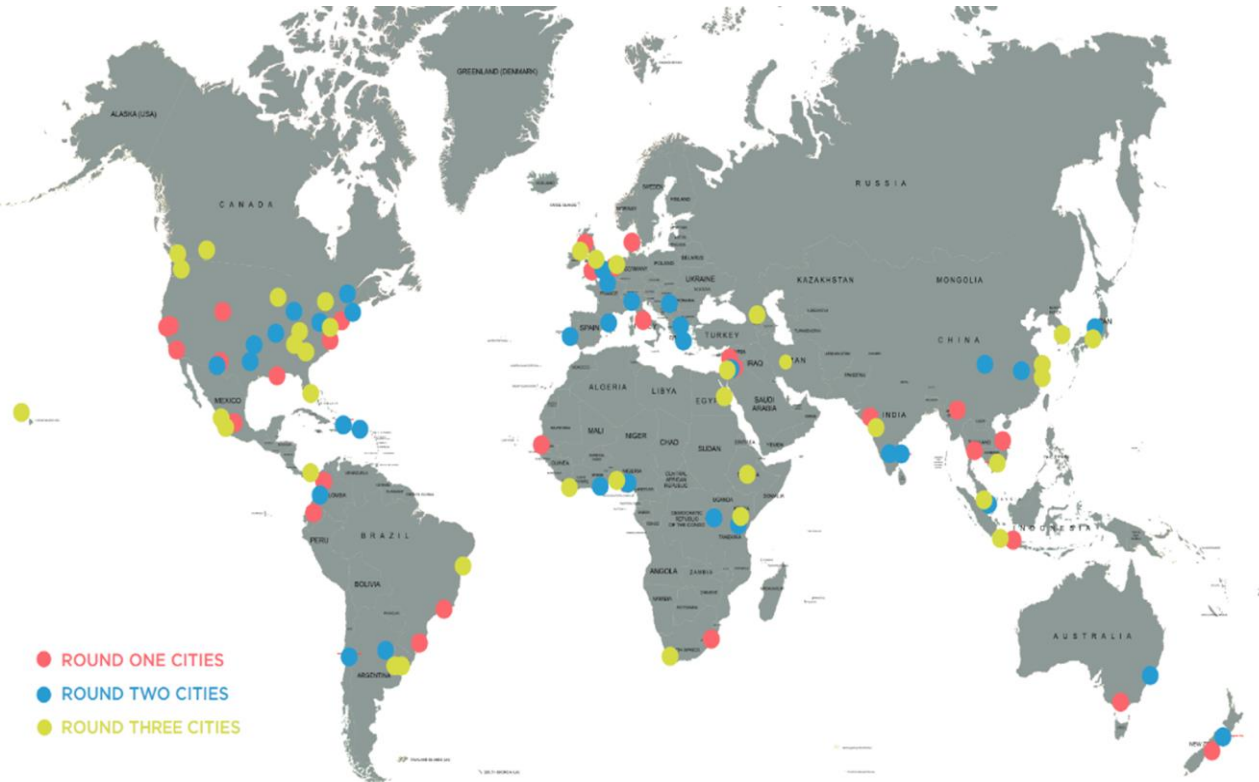
How we define urban resilience



Urban resilience as... *“the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.”*



Our Global Network



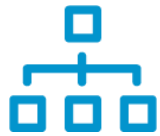
We operate in
6 continents
47 countries
21 languages

In cities with
populations
ranging from
40 thousand
to **21 million**



Global Engagements

83 Chief Resilience Officers (CROs), often holding senior leadership positions in their cities, and their staff are trained in Urban Resilience and the tools to achieve success in their city.



Cities are changing how they govern, institutionalizing resilience offices and creating more integrated, inclusive, risk aware and forward looking policies



78% of cities have embedded resilience principles into city plans, policies, and practices, such as a resilience lens on how they allocate budget or design for the future.

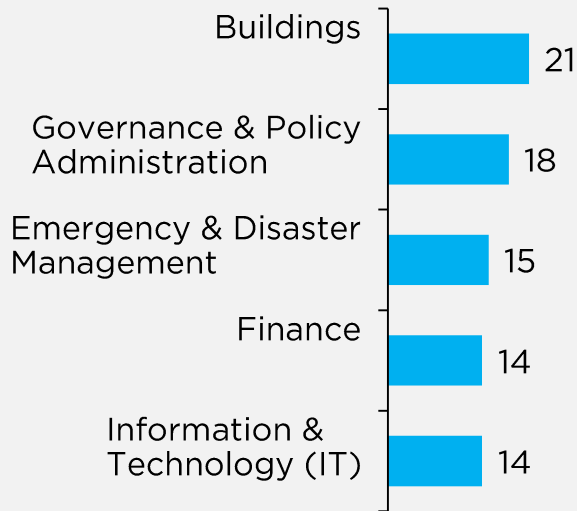


77% of cities are self-funding their CRO positions beyond their initial grant period.



Global Partnerships

A total of **128 Platform Partners** have pledged over **\$217 M** worth of tools and services to network member cities. The most common solutions are designed to support cities with:



Water Management

Transportation

Housing

Climate and Weather Natural

Education/ Skills and Training, Economic Development, Culture Arts

Citizen Engagement, Government & Policy, Social Equity

Information and Technology

Built Environment, Infrastructure



Case Studies

Engagements with Academia



Engagements with Academia



A. Training & Education Engagements

Global Training & Education Engagements

APAC Training & Education Engagements

Global Network for Advanced Management (GNAM)



Collaborative on Urban Resilience and Effectiveness

Global **collaborative** to mobilize talent, knowledge, and experience across disciplines, universities, community organizations, corporates to drive **urban prosperity, innovation** and **development**

City Engagements

India

Achievement

1. Engagement with 15 academic institutions (planning schools)
2. URU Knowledge Network
3. Webinar series 'Building Resilient Cities'

Upcoming

1. Integrating resilience framework in curricula – 3 additional universities (Sept – Dec 2019)
2. URU Knowledge Network – Web platform development to be initiated and a pilot with CITIIS Program under discussion
3. Webinars – 2nd series to be initiated in July, 2019

Singapore (new)

Training of Senior Officials

- Provide training in Urban Resilience and resilience tools to local partners, and often across different departments.

Global Partnerships in Education

Education/ Skills and Training, Economic Development, Culture and Arts



APAC Engagements – India



Dr. Umamaheshwaran Rajasekar is Chair, Urban Resilience at National Institute of Urban Affairs and has over 15 years of experience in developing risk reduction strategies, climate change analysis, hazard modeling, institutional analysis, adaptation & mitigation plans for governments, INGOs, bi-lateral and multi-lateral agencies.



APAC Engagements – India



Network
Platform

The URU-KN is a platform to *generate new ideas, drive innovation, and build collaborations* among institutions, and cooperation among multiple groups and organizations including urban local bodies, to contribute to the *long-term resilience* of landscapes and communities across India.

Objectives of the platform are:

1. To push boundaries in academic research, teaching and learning, by embracing the complexities of the real world
2. To cross disciplinary boundaries through experimentation and innovation
3. To initiate dialogue across institutional, bureaucratic and citizen spaces to understand places and place-making
4. To explore new approaches that embed robust research and innovation into collaborative decision making processes at all levels



Academics

Students/
Researchers

ULBs



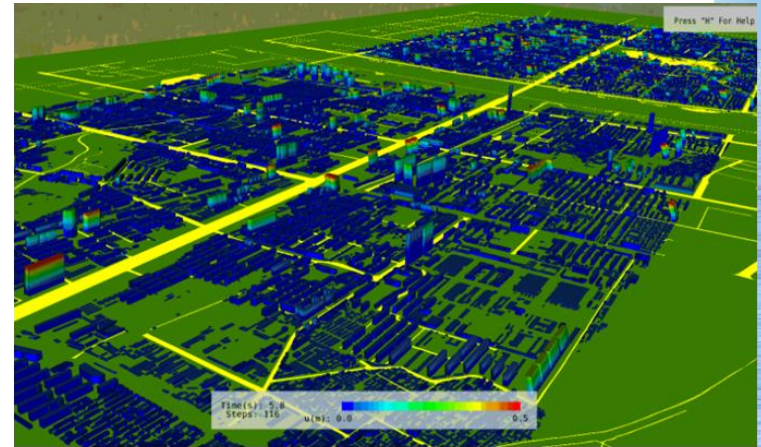
B. Technical Expertise



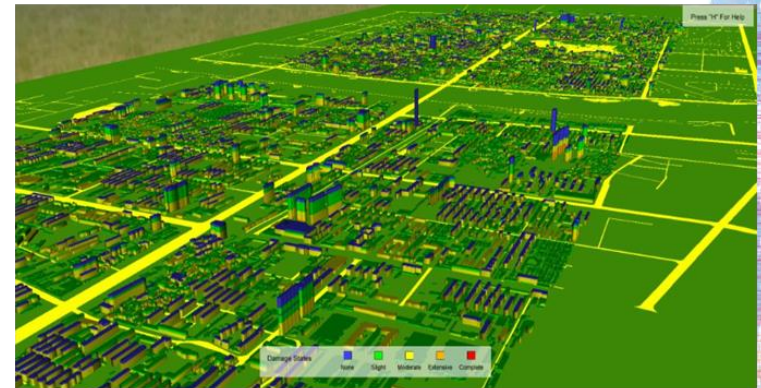
清华大学
Tsinghua University

Computer simulation conducted at the city district level to understand the anticipated damage to the city's buildings from an earthquake event as well as secondary consequences such as fire and cascading impacts on interconnected critical infrastructure.

The results will be summarized in a report which can be used as the basis for prioritizing interventions in the most vulnerable areas, developing earthquake retrofit strategies for buildings, promoting the importance of earthquake risk reduction programs and regulations, and making emergency response preparations such as evacuations, medical and fire response needs, and emergency shelter requirements.



Building seismic response (displacement) t= 5.8 s



Building seismic damage states



APAC Engagements – GNAM

The switch to a “network model” is an institutional innovation in our sector



APAC Engagements – GNAM

Pedagogy... projects for many cities since 2016

SCHOOLS CO-CREATE AND DELIVER



Market-based metrics & strategy



Innovation, technology & entrepreneurship



Private investment & environmental performance



Inclusive business models & social enterprises



Development policy & management



International health & development



Political economy of sustainable development



Social progress index & development

STUDENTS

~350 from 15 GNAM schools
15+ nationalities
18 time zones
Business, Forestry & Environmental studies,
Public health, Journalism, Public Policy,
Architecture, Urban design, Community
planning

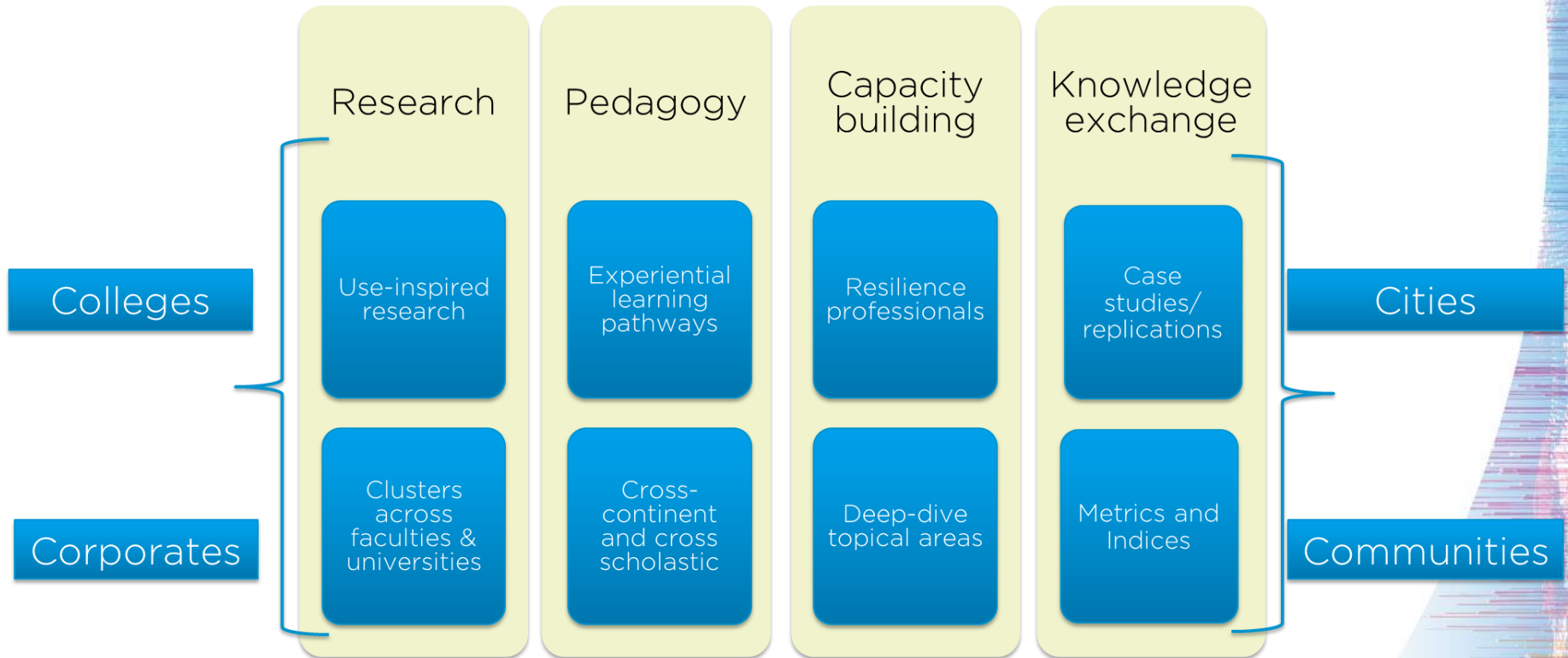
COLLABORATORS

- 20+ project sponsors
- 50+ guests/experts from cities, corporations, community organizations
- 100 Resilient Cities & Rockefeller Foundation

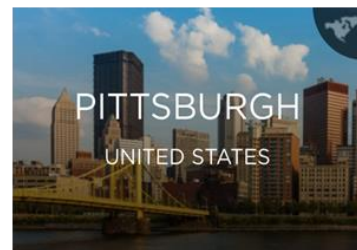
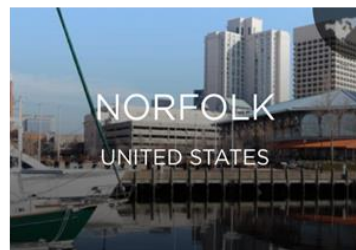
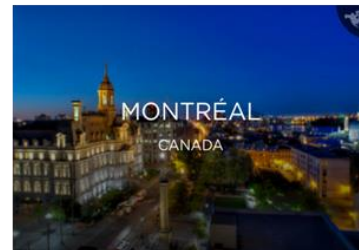


APAC Engagements - GNAM

Value Pillars



APAC Engagements - GNAM



APAC Engagements - GNAM

FALL 2018 PROJECTS



Culture, leisure & economic development



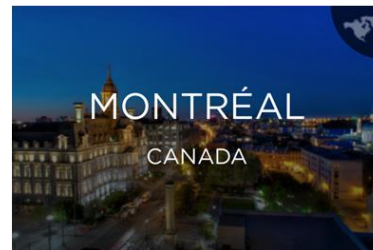
Blue-green infrastructure & climate resilience



Large-scale infrastructure & long-term disruption



Blue-green infrastructure & climate resilience



Commercial arteries and retail resilience



APAC Engagements – GNAM

SUMMER 2019

COLLABORATORS



PIONEERED BY THE
ROCKEFELLER FOUNDATION

100



CITIES

STUDENTS

30 from 4 universities

Cross-disciplinary

Undergrad and graduate students

PhD and Postdoc -- mentors

PROJECTS FOR CITY OF CHENNAI

1. Urban Horticulture
2. Civic engagement
3. Rainwater harvesting
4. Sustainable housing

COURSE FLOW

- May-June: Online delivery and project work
- July: In-residence work in Chennai; workshops with officials from City of Chennai, private sector & community organizations



APAC Engagements – GNAM



[Dr Murali Chandrashekar](#)
Vice Provost, International
University of British Columbia



[Ms Lauren Sorkin](#)
Managing Director
100 Resilient Cities



[Dr Bradford Gentry](#)
Weyerhaeuser Professor
Yale School of Forestry &
Environmental Studies
Yale School of Management



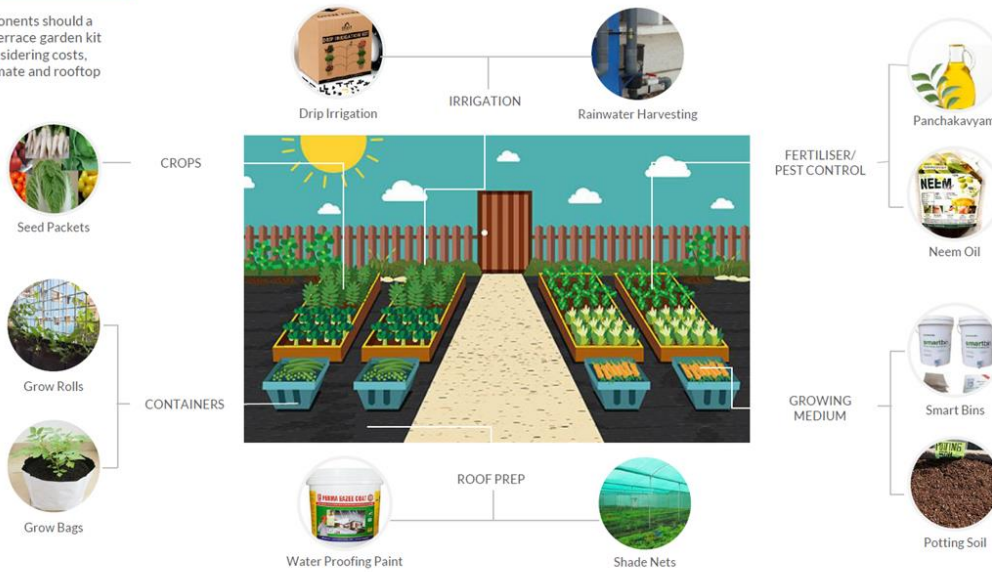
APAC Engagements - GNAM



APAC Engagements - Chennai

ROOFTOP GARDEN KIT

What components should a successful terrace garden kit contain, considering costs, Chennai climate and rooftop conditions?



Printed from
THE TIMES OF INDIA

Chennai: 100 corporation schools to grow vegetables for noon-meal

TNN | Jul 3, 2018, 08:14 AM IST



CHENNAI: Nearly 100 city corporation schools will soon be equipped with gardens that grow vegetables for their mid-day meal scheme.

A self-help group which acquired expertise in terrace gardening under the National Urban Livelihood Mission will train the corporation teachers and students.

"Members of the SHG will train nearly 40 students who are part of eco clubs and the national green corps. These children will be provided with seeds and pots for 25 plants. They will grow the plants either in pots in terraces of the schools or in a small patch of land available inside the school premises," said deputy commissioner, education, Mageswari Ravikumar.



Association of Pacific Rim Universities (APRU)

APRU is a consortium of 50 leading research universities contributing to economic, scientific and cultural advancement in the Pacific Rim:

Asia Pacific

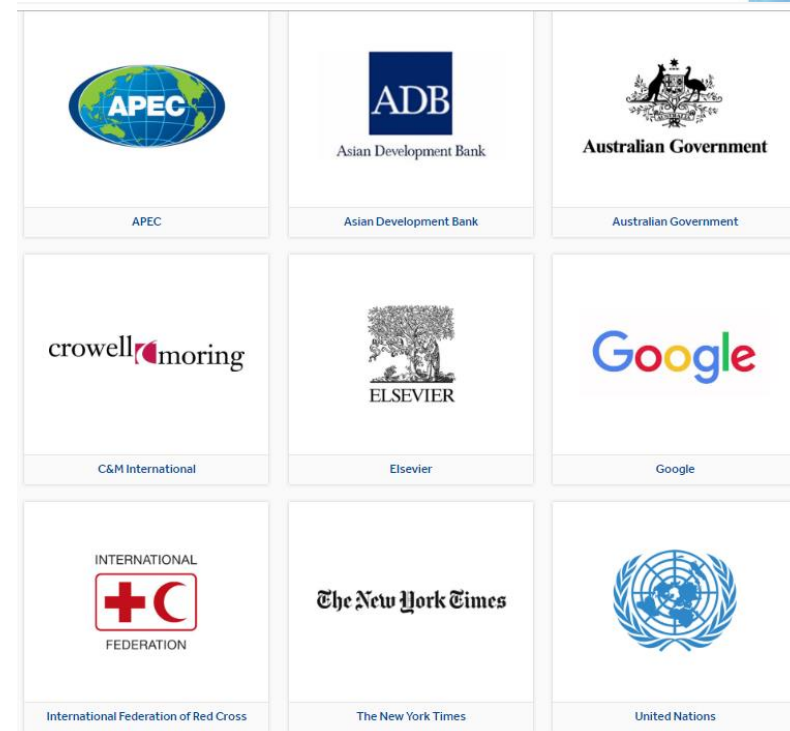
1. Australia
2. China
3. Hong Kong
4. Indonesia
5. Japan
6. Malaysia
7. New Zealand
8. Philippines
9. Singapore
10. S. Korea
11. Taiwan
12. Thailand

Non-Asia Pacific

13. Canada
14. Chile
15. Mexico
16. Russia
17. United States



Knowledge Partners



Potential Areas of Collaboration

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100 RESILIENT CITIES

Holistic Urban Resilience as “the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.”

1. Prepare the next generation of leaders to solve the urgent challenges of climate change, urbanization, and globalization through **leadership programs**
2. Knowledge exchange **to close the academia - policy-maker gap**
3. **Promote investments** into resilience infrastructure
4. **Collaborate on projects** (network & technical expertise)



“...bring together thought leaders, researchers, and policy-makers to exchange ideas and collaborate on effective solutions to the challenges of the 21st century... leverage collective education and research capabilities of our members into the international public policy process”



THANK YOU

