Making Cities Disaster Resilient

WHERE IS AT RISK? WHO IS AT RISK? WHERE ARE THE ACTIONS? WHERE ARE THE SOLUTIONS?

Top 20 cities ranked in terms of 'population' exposed to coastal flooding in the 2070s

| Rank	Country	Urban Agglomeration	Exposed Population Current	Exposed Population Future
1	INDIA	Kolkata (Calcutta)	1,929,000	14,014,000
2	INDIA	Mumbai (Bombay)	2,787,000	11,418,000
3	BANGLADESH	Dhaka	844,000	11,135,000
4	CHINA	Guangzhou	2,718,000	10,333,000
5	VIETNAM	Ho Chi Minh City	1,931,000	9,216,000
6	CHINA	Shanghai	2,353,000	5,451,000
7	THAILAND	Bangkok	907,000	5,138,000
8	MYANMAR	Rangoon	510,000	4,965,000
9	USA	Miami	2,003,000	4,795,000
10	VIETNAM	Hai Phòng	794,000	4,711,000
11	EGYPT	Alexandria	1,330,000	4,375,000
12	CHINA	Tianjin	956,000	3,790,000
13	BANGLADESH	Khulna	441,000	3,641,000
14	CHINA	Ningbo	299,000	3,305,000
15	NIGERIA	Lagos	357,000	3,229,000
16	CÔTE D'IVOIRE	Abidjan	519,000	3,110,000
17	USA	New York-Newark	1,540,000	2,931,000
18	BANGLADESH	Chittagong	255,000	2,866,000
19	JAPAN	Tokyo	1,110,000	2,521,000
20	INDONESIA	Jakarta	513,000	2,248,000

Top 20 cities ranked in terms of 'assets' exposed to coastal flooding in the 2070s

Rank	Country	Urban Agglomeration	Exposed Assets Current ($Billion)	Exposed Assets Future ($Billion)
1	USA	Miami	416.29	3,513.04
2	CHINA	Guangzhou	84.17	3,357.72
3	USA	New York-Newark	320.20	2,147.35
4	INDIA	Kolkata (Calcutta)	31.99	1,961.44
5	CHINA	Shanghai	72.86	1,771.17
6	INDIA	Mumbai	46.20	1,598.05
7	CHINA	Tianjin	29.62	1,231.48
8	JAPAN	Tokyo	174.29	1,207.07
9	CHINA,	Hong Kong	35.94	1,163.89
10	THAILAND	Bangkok	38.72	1,117.54
11	CHINA	Ningbo	9.26	1,073.93
12	USA	New Orleans	233.69	1,013.45
13	JAPAN	Osaka-Kobe	215.62	968.96
14	NETHERLANDS	Amsterdam	128.33	843.70
15	NETHERLANDS	Rotterdam	114.89	825.68
16	VIETNAM	Ho Chi Minh City	26.86	652.82
17	JAPAN	Nagoya	109.22	623.42
18	CHINA	Qingdao	2.72	601.59
19	USA	Virginia Beach	84.64	581.69
20	EGYPT	Alexandria	28.46	563.28

Top ten city rankings by analysis for all aggregated hazards

Metro area	Ranking: people potentially affected (aggregate for all 5 perils)	Metro area	Ranking: value of working days lost (global index, aggregated for all 5 perils)	Metro area	Ranking: value of working days lost relative to national economy (global index, aggregated for all 5 perils)
Tokyo-Yokohama (JPN)	57.1 mn	Tokyo-Yokohama (JPN)	4.50	Manila (PHL)	1.95
Manila (PHL)	34.6 mn	Osaka-Kobe (JPN)	2.71	Amsterdam-Rotterdam (NLD)	1.31
Pearl River Delta (CHN)	34.5 mn	Nagoya (JPN)	2.69	Tokyo-Yokohama (JPN)	1.29
Osaka-Kobe (JPN)	32.1 mn	Pearl River Delta (CHN)	1.78	San Jose (CRI)	1.26
Jakarta (IND)	27.7 mn	Amsterdam-Rotterdam (NLD)	0.96	Guayaquil (ECU)	1.20
Nagoya (JPN)	22.9 mn	Los Angeles (USA)	0.93	Taipei (TWN)	1.02
Kolkata (IND)	17.9 mn	New York-Newark (USA)	0.62	Ndjamena (TCL)	1.00
Shanghai (CHN)	16.7 mn	San Francisco (USA)	0.47	Nagoya (JPN)	0.97
Los Angeles (USA)	16.4 mn	Paris (FRA)	0.46	Tainan-Kaohsiung (TWN)	0.90
Tehran (IRN)	15.6 mn	Taipei (TWN)	0.39	Lima (PER)	0.90

Fire events decreasing but spreading to more areas
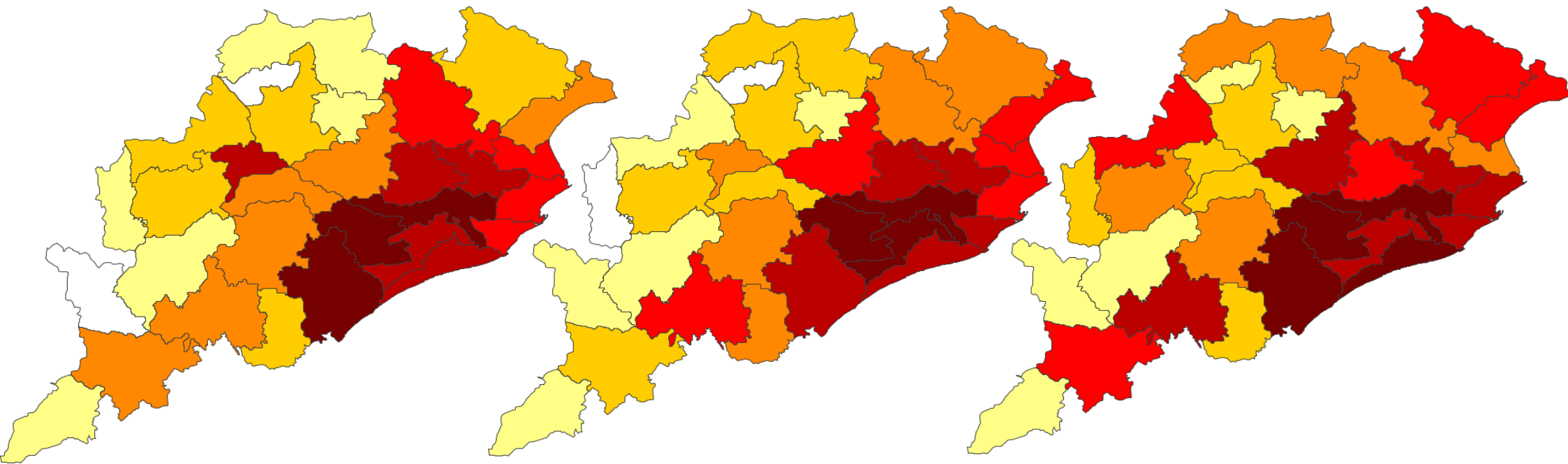
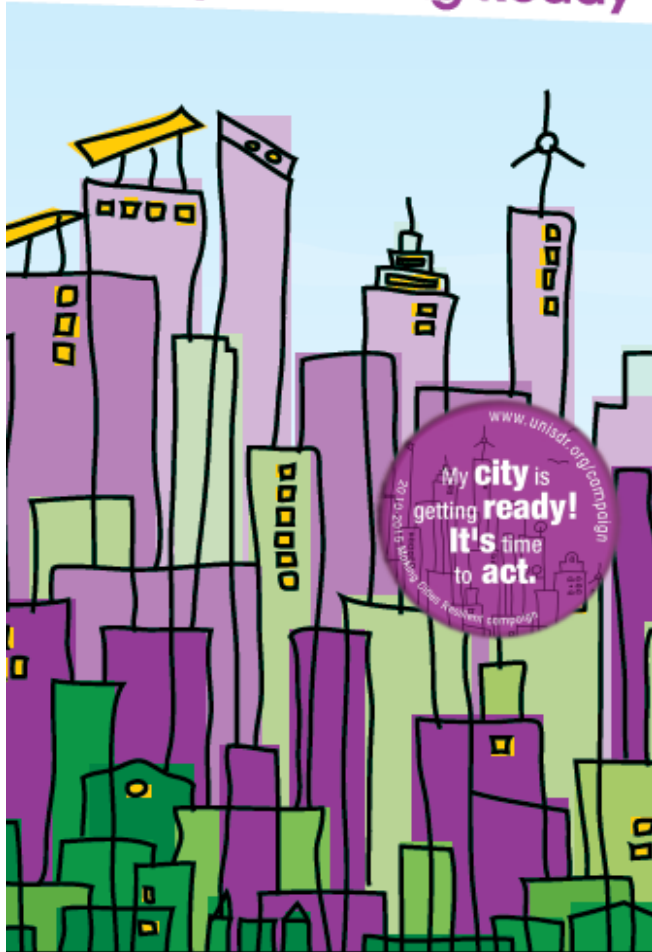

1980-1990
1433 events

1990-2000
1364 events

2000-2010
980 events

Making Cities Resilient

My City is Getting Ready

My **city** is getting **ready**! **It's** time to **act.**

www.unisdr.org/campaign

Resilient Cities Campaign
unisdr.org/campaign/resilientcities

Launched in 2010 by UN SG

Objective

Achieve resilient, sustainable urban communities through actions taken by local governments to reduce disaster risk.

Expected Results

- *Increased awareness and actions* mobilized by local governments to reduce risk and build resilience;

- *Stronger recognition and actions* at local level for of DRR as integral to planning on climate risk management and sustainable development;

- More *integrated approach* towards local resilience compared to sectoral programming;

- *Critical assets and infrastructures* in cities are identified and action taken.

Largest global movement of cities

CITIES PARTICIPATING "PER REGION"

420

294

510

467

69

EUROPE

ARAB STATES

ASIA

AFRICA

LATIN AMERICA & THE CARIBBEAN

The "Ten Essentials"
Critical and interdependent

ESSENTIAL 1
ORGANISATION AND COORDINATION

ESSENTIAL 2
ASSIGN A BUDGET

ESSENTIAL 3
MULTI-HAZARD RISK ASSESSMENT -
KNOW YOUR RISK

ESSENTIAL 4
INFRASTRUCTURE PROTECTION THAT
REDUCES RISK

ESSENTIAL 5
PROTECT VITAL FACILITIES:
EDUCATION AND HEALTH

ESSENTIAL 6
RISK COMPLIANT BUILDING
REGULATIONS AND LAND USE
PLANNING

ESSENTIAL 7
TRAINING, EDUCATION AND PUBLIC
AWARENESS

ESSENTIAL 8
ENVIRONMENTAL PROTECTION AND
STRENGTHENING OF ECOSYSTEMS

ESSENTIAL 9
EFFECTIVE PREPAREDNESS,
EARLY WARNING AND EMERGENCY
MANAGEMENT CAPACITIES

ESSENTIAL 10
RECOVERY AND REBUILDING
COMMUNITIES
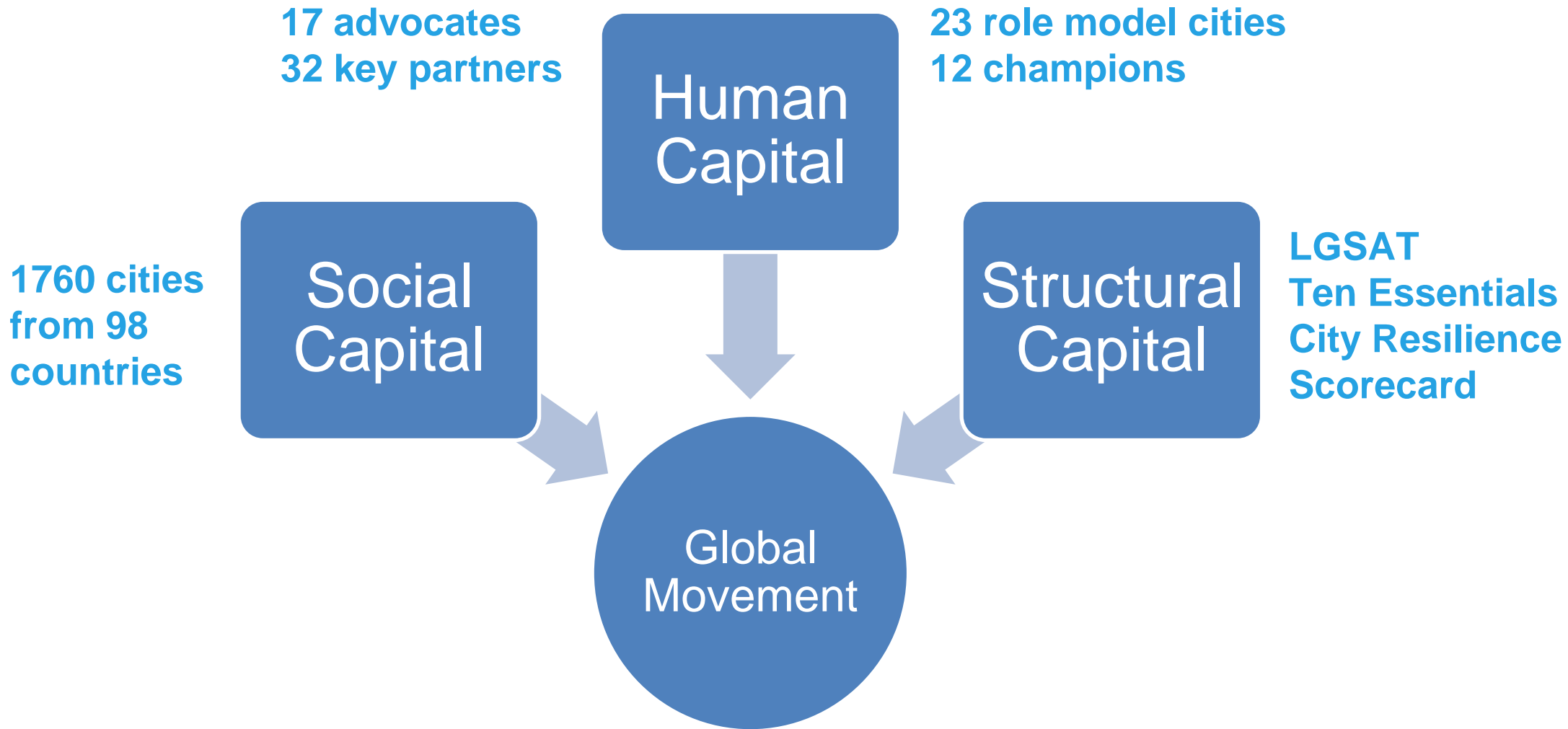
Achievements so far..

- **850 municipalities in 62 countries** have dedicated responsibility for disaster risk reduction, backed with budget allocations.

- **2/3rd cities** have incorporated disaster risk analysis in local development planning.

- **Cities from 24 countries** addressing safety of their schools and hospitals

- ***45 city-to-city learning*** *events facilitated through the Campaign*

**744** CITY LOSS DATABASES

500 CITY REPORTS

Local Government Self Assessment Tool 500 City Assessment Reports

> *Only globally available tool to help local governments assess their DRR plans and activities*

> *41 questions based on the Five Priorities of the Hyogo Framework for Action and the corresponding local-level Ten Essentials for Making Cities Resilient;*

> *Scoring on scale of 1-5 (ascending order based on achievements/progress)*

Resilience Progress in Cities
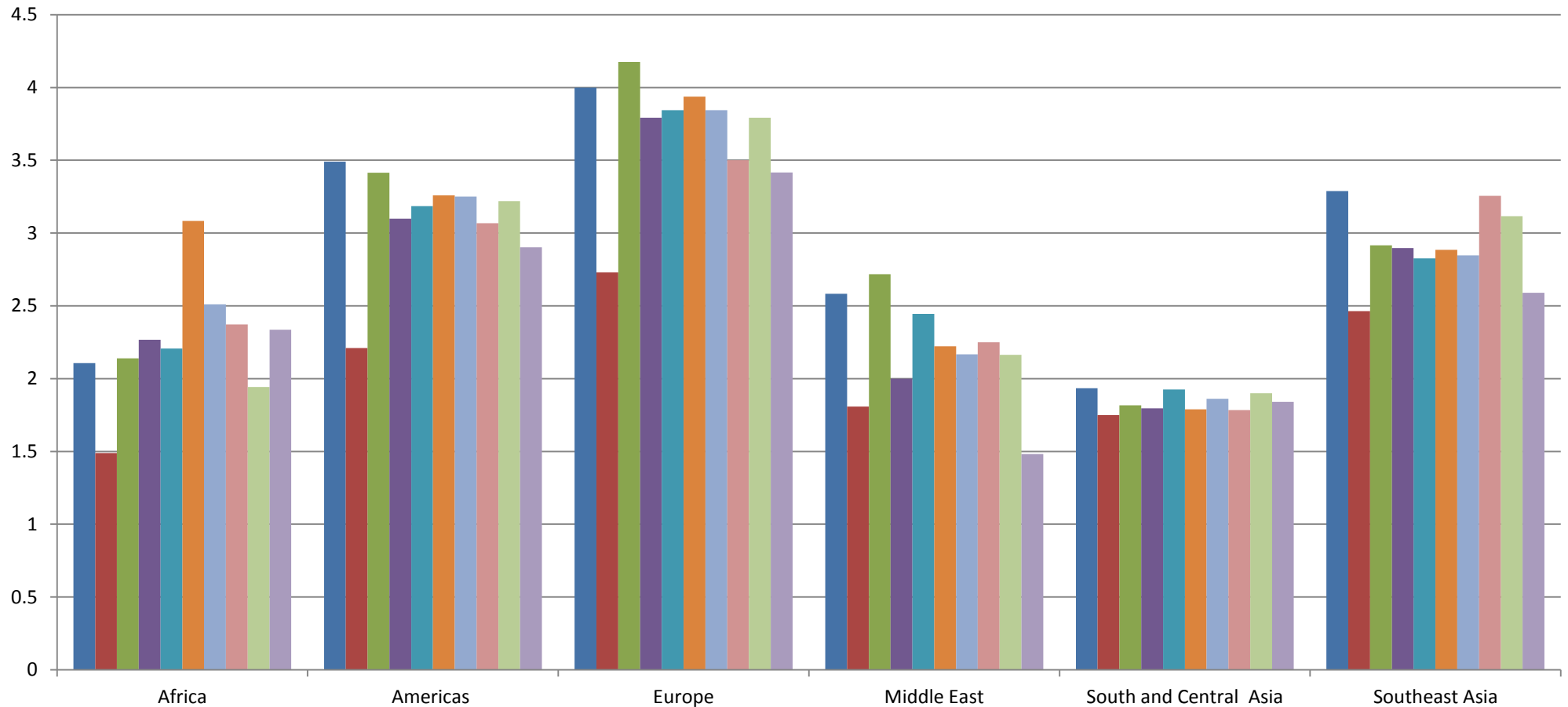
Progress on **governance** is high in Europe and Americas; **Financing** is lagging behind in most regions, but most significantly in relation to progress in other areas in Americas and Europe. Africa scores relatively high on **urban planning** and building compared to its progress in other areas. The absolutely highest score gets **risk assessments** in Europe. The lowest score is for **recovery and rebuilding** in the Middle East.

Local Empowerment by National Govts
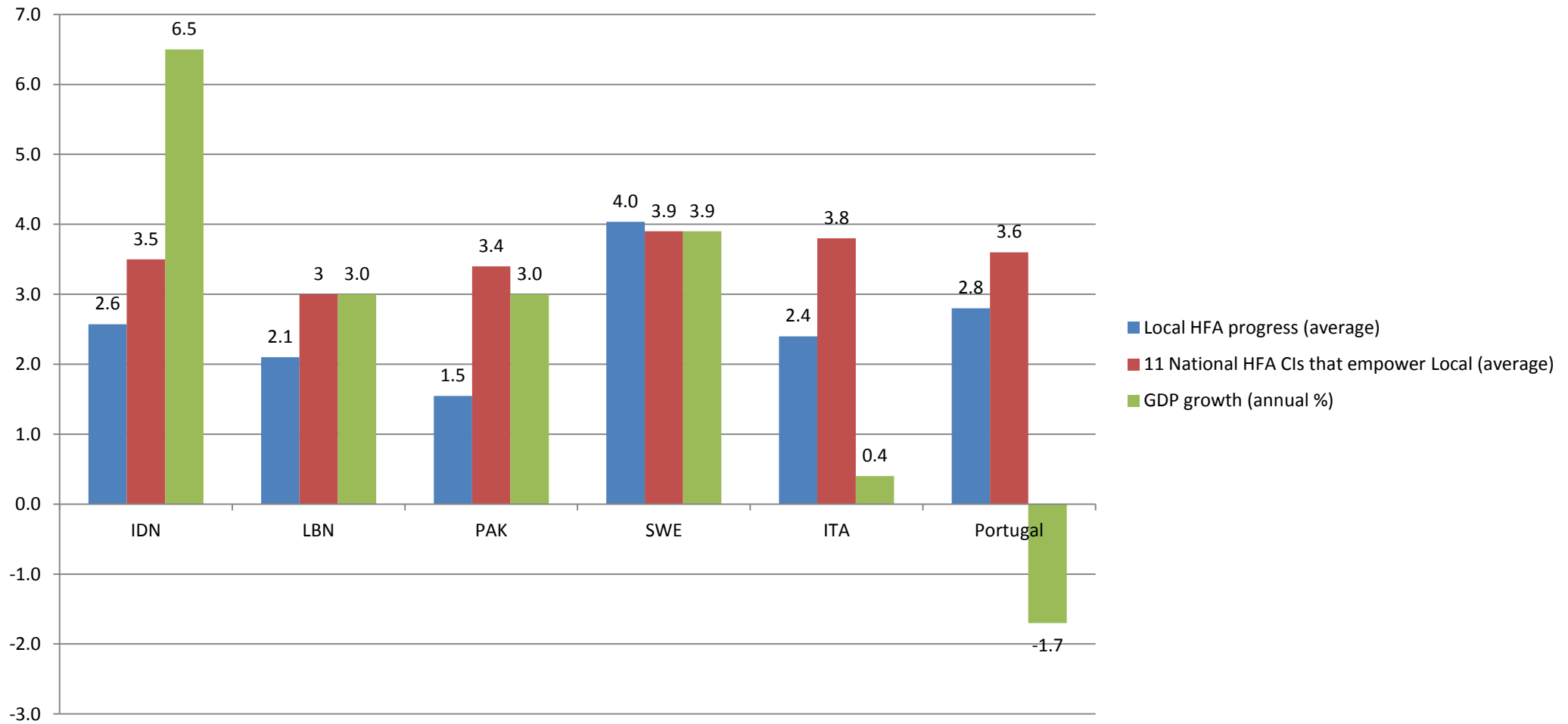
More challenges to come

- Most cities lack both capacity and much of the necessary infrastructure to deal with existing and future risks.

- Exposure of economic assets in cities is expected to increase (GAR 2013)

- A high proportion of the world's population most affected by extreme weather events is concentrated in urban centres (IPCC 2014)

JOIN THE CAMPAIGN
WWW.UNISDR.ORG/CAMPAIGN

UNISDR
The United Nations Office for Disaster Risk Reduction

JULY 2014 - ESRI IN PARTNERSHIP WITH UNISDR WILL LAUNCH AN APP CHALLENGE CENTERED AROUND '10' ESSENTIALS FOR MAKING CITIES RESILIENT

THANK YOU!

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