

BACKGROUND PAPER

Prepared for the 2015 Global Assessment Report on Disaster Risk
Reduction

FORM DISASTER RISK REDUCTION TO RESILIENCE: A NEW URBAN AGENDA FOR THE 21ST CENTURY

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Background

UN-Habitat's Role and Mandate in Disaster Risk and Resilience

The United Nations Human Settlements Programme (UN-Habitat) is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-Habitat's mandate is derived from the Habitat Agenda to assist Member States with disaster prevention, mitigation and preparedness, and post-disaster rehabilitation capabilities in human settlements.¹ The main documents outlining the mandate of the organization also include the Vancouver Declaration on Human Settlements, Istanbul Declaration on Human Settlements, the Declaration on Cities and Other Human Settlements in the New Millennium, and Resolution 56/206.

The UN mandate is derived from Member State commitments to the Hyogo Framework for Action 2005-2015 (HFA), endorsed by the UN General Assembly in Resolution A/RES/60/195 following the 2005 World Disaster Reduction Conference. The Governing Council of UN-Habitat mandates the Agency to increase the resilience of cities to the impacts of natural and human-made crises and undertake post-disaster and post conflict recovery and rehabilitation of settlements and shelters in ways that advance sustainable urban development. The Governing Council encourages governments and Habitat Agenda partners to consider seriously increasing urban density through intensification of land use, as part of improved urban planning, so as to promote development patterns that allow housing for all, increased job opportunities and reduced urban sprawl, to reduce infrastructure investment costs, the ecological footprint of urban centres and demand for transport and energy use, and to overcome a growing social divide, spatial fragmentation and resulting land use patterns (UN-Habitat Governing Council, Resolution 23/17).

In all crisis situations where housing and urban planning interventions play a significant role, UN-Habitat has advocated an approach where the affected people are placed at the centre of their development and recovery processes. This "People's Process" approach is an important link between communities, cities, and national governments in promoting the aim of the Hyogo Framework for Action 2005-2015 (HFA) to "build the resilience of nations and communities to disasters". Moreover, UN-Habitat emphasizes the need to institutionalize disaster risk reduction to settlement planning through housing policies, national building code development and enforcement, and city planning acts, laws and frameworks. UN-Habitat has also committed to implementing the UN Plan of Action on Disaster Risk Reduction for Resilience on an operational level through its Strategic Policy on Human Settlements in Crisis and Sustainable Relief and Reconstruction

¹ In addition to: i) Resolution HSP/GC/19/9 of 9 May 2003: declares that one of the special themes of the twentieth session of the Governing Council shall be "Post-conflict, natural and human-made disasters assessment and reconstruction". (A/58/8 Report of the Governing Council of the UNHSP, p. 44) ; ii) Resolution HSP/GC/19/7 of the same date recommending UN-HABITAT to devote specific attention to human settlements needs in the reconstruction of countries and territories affected by armed conflicts or by other human-made or natural disasters. (A/58/8 Report of the Governing Council of the UNHSP, p. 42, paragraph 6) ; iii) GA Resolution 59/239 of 22 December 2004 on the implementation of the outcome of the United Nations Conference on Human Settlements (Habitat II) and the strengthening of UN-HABITAT further requested that UN-HABITAT continue to support the efforts of countries affected by natural disasters and complex emergencies, to develop prevention, rehabilitation and reconstruction programmes, and to ensure a more effective transition from relief to development. (A/59/239, paragraph. 18) ; iv) GA Resolution 60/203 of 22 December 2005 urging the Inter-Agency Standing Committee to include UN-HABITAT in its membership. (A/60/203, paragraphs 15, 16) ; v) Resolution HSP/GC/20/17 on 'Post-conflict, natural and human-made disaster assessment and reconstruction' taking note of the UN-HABITAT's guiding principles for sustainable relief and reconstruction, and requesting that the Executive Director mainstream prospects for risk and vulnerability reduction and limiting the after-effects of disasters, elaborate on the guiding principles, and develop a strategic policy for the role of UN-HABITAT. (A/60/8 Report of the Governing Council of the UNHSP, p. 43)

Framework, and on an institutional level by creating a new Branch, dedicated to disaster risk reduction and resilience, and a global work programme mainstreaming outputs on disaster risk reduction and resilience.

Introduction

The primary purpose of this paper is to demonstrate how strategic human settlements planning development and management can contribute to disaster risk reduction and resilience building. Particular attention is given to how the post-2015 disaster risk reduction framework can address the new challenges brought by a rapidly urbanizing world against a rise in the incidence and complexity of extreme events and crises affecting human settlements around the world.

This paper is structured across three key areas:

Firstly, it reviews the progress of the HFA to date with an emphasis on Priority for Action 4, which calls for a reduction in the underlying risk factors related to changing social, economic, environmental conditions and land use, and the impact of multiple hazards. Numerous assessments of the HFA over the past 10 years have concluded that Priority for Action 4 has achieved the least progress and will thus require the most attention and focus in the post-2015 framework.

Secondly, this paper makes recommendations for how the post-2015 disaster risk reduction framework can address the gaps in the current HFA by outlining the various dimensions, or ingredients, needed to achieve a resilient urban system (e.g. urban planning and management, building codes and regulation enforcement, etc.). These recommendations draw on the outcomes and lessons learned from the High Level Committee on Programmes Senior Management Group for Disaster Risk Reduction and Resilience, as well as the many urban resilience initiatives now underway by multiple UN and non-UN organizations, institutions and cities.

Finally, this paper will emphasize the linkages between resilience building and sustainable urban development, with the aim of promoting greater alignment between the goals of the post-2015 disaster risk reduction and sustainable development frameworks, and the New Urban Agenda, to be discussed at the Habitat III United Nations Conference on Housing and Sustainable Urban Development in 2016.² A recent review of UN Agencies' role in DRR highlighted the successful impact of UN-Habitat's normative and operational work in supporting the Five Priorities of the HFA and the achievements since the previous review period (2009-2011)³. Drawing from that experience, this paper will offer new insights into the role of urbanization as a transformative force for positive change in the 21st century.

Retrospective Review on Progress (2005-2015)

Resilience and Urban Planning in the HFA

The HFA was adopted at a time when the global population living in urban areas had recently surpassed 50 per cent, making urban centres the dominant habitat of humankind. With this historic milestone came a renewed excitement for the role of

² In resolution 66/207 and in line with the bi-decennial cycle (1976, 1996 and 2016), the United Nations General Assembly decided to convene, the Habitat III Conference to reinvigorate the global commitment to sustainable urbanization, to focus on the implementation of a "New Urban Agenda", building on the Habitat Agenda of Istanbul in 1996.

³ Roles, mandates and results of key UN entities, UNISDR 2013

cities as engines of economic growth that provide critical services for urban and rural populations, drive down poverty levels, and foster innovative, low-carbon development.

However, the growing concentration of people and assets in cities means disasters are affecting more urban dwellers with increasingly harmful consequences for employment, housing and critical infrastructure, such as roads, power and water supplies. This is especially the case in fast-urbanizing developing nations, where poorly planned and managed cities create new risks and threaten to erode previous development gains.

Rapid urbanization in hazard prone areas demands immediate attention. A recent risk analysis⁴ of 616 major metropolitan areas, comprising 1.7 billion people, or nearly 25 per cent of the world's total population, and approximately half of global GDP, found that flood risk threatens more people than any other natural hazard. River flooding poses a threat to over 379 million urban residents, with earthquake and strong winds potentially affecting 283 million and 157 million, respectively. The number of poor exposed to natural disasters will reach 325 million by 2030. With many urban populations facing multiple hazards, the need to strengthen and build resilient cities is fundamental to the global economy and to reduce mortality rates.⁵

Left unchanged, current development patterns and behaviour could contribute to social, environmental, and economic degradation and injustice, rather than to delivering the 'urban advantage' many had envisaged at the start of this century.

A multi-stakeholder review of the HFA's progress prepared for the United Nations General Assembly in May 2014⁶ observed that the main achievements since the adoption of the HFA in 2005 has been qualitative - grounded in policies, legislation and planning that lays the foundation for more quantitatively measurable achievements in the future. Since the HFA's adoption, 121 countries have enacted legislation to establish policy and legal frameworks for disaster risk reduction. After three successive reporting cycles (2007-08, 2010-11 and 2013-14), the 'HFA Monitor' reporting platform has had gradual success in country-level reporting on disasters, with just less than 40 per cent reporting comprehensive or substantial achievement, albeit with recognized limitations in capacities and resources. A significant gap remains in disaggregating data on disasters at local level.

Overall, the assessment found that Priority for Action 4 required the most attention, especially taking into account the management of risk and sustainability of development efforts.⁷ Priority for Action 4⁸ makes a direct link between disaster risk reduction and sustainable development by concentrating efforts on reducing the vulnerability of critical economic activities and those populations most at risk to disasters (typically the poorest). It also makes explicit reference to the role of urban planning in reducing the underlying risk factors contributing to disasters, societal inequality, and environmental degradation (see Box 1)⁹. It further emphasizes the integration of DRR elements into environmental-related policies and plans, including climate change adaptation, and the

⁴ Swiss Re Mind the Risk

⁵ Implementation of the International Strategy for Disaster Reduction Report of the Secretary-General, DRAFT, UNISDR, July 2014

⁶ Compilation report on consultations on the post-2015 framework for disaster risk reduction, A/CONF.224/PC(I)/5, 21 May 2014

⁷ Compilation report on consultations on the post-2015 framework for disaster risk reduction, UNISDR, 21 May 2014 (A/CONF.224/PS(I)5)

⁸ Priority area 4: *Reduce risk: Reduce the underlying risk factors through land-use planning, environmental, social and economic measures*

⁹ A Background Paper for the UNISDR Urban Planning Working Group: Guidance for urban planning that enhances resilience, Cassidy Johnson and Donald Brown, Bartlett Development Planning Unit, University College London, February 2014

enforcement of building codes and regulations.

Particularly noted in the progress review of Priority for Action 4 was the accumulation of risk in urban areas and fragile states, characterized by political instability and borne out of social inequality and protracted crises and conflicts. In 2010, 15 per cent of the world population lived in fragile and conflict-affected countries. This same population comprises one-third of people living in extreme poverty.¹⁰ By 2050, it is expected that more than 50 per cent of those living in fragile states will reside in cities. The pace of urban growth in these areas is exacerbating vulnerabilities and bringing more pressure to bear on urban basic services, social cohesion, and the capacity of public institutions to respond to people's needs. The impacts of natural hazards and climate change will likely lead to further displacement and instability in these areas, inhibiting development gains and perpetuating the disaster-response-disaster cycle.

The assessment also emphasized the need to enhance good practices in disaster risk reduction, including standard setting for building codes, land use, and preparedness. The HFA has realized some success in encouraging Member States to adopt legal and regulatory frameworks that incorporate DRR into urban planning and building codes. In the majority of developing countries, however, building codes and regulations have been consistently neglected in urban resilience and disaster risk-mitigation strategies. Likewise, the administration of existing codes is lacking or weak, despite an explicit call for "rigorous enforcement" in the HFA indicators governing building codes and land use-development zoning. Lower middle and low-income nations report the least progress on the HFA's key indicators related to urban planning.¹¹

Governance and system failures to support regulatory functions have further undermined the quality of building controls and created significant vulnerabilities to natural and other hazards. These include the insufficient quality¹² of underlying laws and regulations, ineffective administration, insufficient qualification of local building code officials, local designers and contractors, inadequate focus on risk management, opaque, bureaucratic procedures and corruption.¹³

Corruption, or lack of interest, in building code enforcement can be associated with some of the worst disasters in modern times. Before the 1999 earthquake in Turkey that killed 17,000 people, 65 per cent of apartment blocks in Istanbul and other cities had been built in violation of local housing codes. This failure was first and foremost a collapse of the code implementation system, partly enabled by widespread corruption that incentivized building inspectors to look the other way and let poor building practices develop on the ground.¹⁴ The Rana Plaza collapse in Dhaka, Bangladesh in 2013, which killed over 1,000 garment factory workers, is a more recent example of the tragic consequences of such governance and system failures (*see more on p. 19*). The fact that most casualties are due to earthquake phenomena is a proof that most infrastructures in cities are not built adequately.

Although some bottom-up alternatives to building codes have emerged, they have not always offered scalable and compelling models that can save lives in large and fast-

¹⁰ World Bank inputs to the post-2015 HFA, 2014

¹¹ 2011 UNISDR Global Assessment Report

¹² "Quality" here has at least two broad meanings: i) a legal meaning focused on the functional effectiveness of the law in delivering policy objectives and ii) a technical meaning that considers the relevance of the technical standards established by law.

¹³ Improving Implementation and Compliance of Land use and Building Regulations, Global Facility for Disaster Reduction and Recovery (GFDRR)/UN-Habitat, 2014

¹⁴ Improving Building Code Implementation and Compliance for more Resilient Buildings in Developing Countries, GFDRR, Thomas Moullier, 2014;

growing cities. For example, in the case of Kenya, the main building code system, that continued the application of top-down colonial standards, paid too little attention to the affordability of the regulatory provisions, until its revision in the mid-1990s. Prior to the enactment of “Code 95,” the cost of conventional building materials was beyond the reach of low-income and vulnerable groups, many of whom did not have access to housing finance and credit. Inadequate settlement planning and management policies associated with the limited use of appropriate materials and technologies resulted in a marked deterioration of the urban environment.¹⁵

Along with the need to develop appropriate technical content of building code provisions, a larger set of functioning administrative and regulatory support functions are critical to achieving disaster risk reduction. In the US, UK, Japan and Australia good regulations, which provide hazard zoning, for example, have been shown to minimize damage and save lives.¹⁶ Likewise, the 8.2-magnitude earthquake off the coast of Chile in April in 2014, and the subsequent aftershocks, highlighted the benefits of investing in preparedness and risk mitigation associated with seismic hazards. The enforcement of strict building codes is credited with the very low numbers of deaths, as buildings and infrastructure held, while the evacuation of over 900,000 people from the coast, following a tsunami warning, illustrate the benefits of investing in public awareness and early warning systems.

Recommendations for a Post-2015 HFA

Addressing the Gaps of Priority for Action 4

To be fit-for-purpose, the post-2015 framework should consider the changing nature of risk, particularly in the face of demographic shifts, urbanization, and the impacts of multiple hazards. Particular attention could be given to limiting risk generation in rapidly urbanizing areas where there is limited institutional capacity to reduce vulnerability and respond to shocks. To address the increasing exposure caused by rapidly growing cities, the aforementioned progress report on the HFA prepared for the United Nations General Assembly in May 2014, observed a need to systematically improve spatial, urban and land-use planning to reduce economic exposure. The assessment further recommended that the goals and supporting indicators of success set out in the post-2015 disaster risk reduction framework should be mutually reinforcing with other relevant post-2015 frameworks and objectives, including the sustainable development goals, climate agreements, and the World Humanitarian Summit.

Other key recommendations for the post-2015 disaster risk reduction framework can be summarized as follows:

- Recognize the role of spatial, urban, and land-use planning and design as an instrument for limiting risk generation and contributing to sustainable, equitable development;
- Encourage inter-disciplinary contributions toward the development of safe and resilient infrastructure, including from experts in international design standards, covering aspects such as flood protection and earthquake resistance;

¹⁵ Double Standards, Single Purpose, ITDG, 2001

¹⁶ Guidance for urban planning that enhances disaster resilience, Cassidy Johnson and Donald Brown, The Bartlett Development Planning Unit, University College London, 2013

- Strengthen urban risk assessments, particularly in relation to the development and enforcement of building codes and regulations;
- Apply a holistic, systems-model approach to disaster risk reduction and reduction of mortality rates;
- Develop financial instruments and mechanisms to ensure that adequate budgets are available to tackle disaster risk, including at local level.

The next framework could go also further than its predecessor in its recognition of local governments' role in limiting the creation of new risk and strengthening communities' economic, social, and environmental resilience. To date, the most successful effort to address the local-level gaps in the HFA is seen in the 10 Essentials of UNISDR's Making Cities Resilient Campaign. In 'localizing' the priorities of the HFA, the 10 Essentials have shone a spotlight on the importance of reflecting cities' needs and challenges in international and national level policies and frameworks, thus helping to pave the way for the set of post-2015 international agreements to call out urban-specific goals.

In 2011, UNISDR launched the Local Government Self-Assessment tool (LGSAT) to complement the national HFA Monitor reporting mechanism. Through the LGSAT, UNISDR's Campaign has documented many city-level actions inspired by the 10 Essentials. In turn, the LGSAT has led to the development of new tools and methodologies that aim to broaden the scope of how resilience is defined, monitored, and measured in order to further reduce uncertainty. The Campaign's goals and principles have also laid the foundation for a cadre of organizations and institutions focused on urban resilience to pursue a common set of goals and framework for achievement, which accounts for multiple shocks and stresses and the complex nature of urban systems.

According to UNISDR, over 500 cities have completed the LGSAT as of October 2014. A coalition of local governments, many of which are members of the Making Cities Resilient Campaign, launched a related initiative, the Durban Adaptation Charter, at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP), in December 2011. The Durban Adaptation Charter commits signatory Local Governments to local climate action in their jurisdiction that will "assist their communities to respond to and cope with climate change risks thereby reducing vulnerability." UNISDR reports that some 950 local governments have signed onto the Durban Adaptation Charter, and are working collaboratively to establish accountability standards for reporting against these commitments. More recently, the Compact of Mayors, launched during the UN Secretary-General's Climate Summit in September 2014, committed organizations representing several thousand local governments to report on the progress of their climate mitigation and resilience plans.

Assuming the Making Cities Resilient Campaign will continue through the post-2015 framework period, more emphasis could be placed on empowering local action, strengthening local authorities' accountability by clarifying roles and responsibilities, and assessing and monitoring the impact of risk reduction and resilience activities at city level.

Further recommendations call for the targets and indicators guiding the post-2015 disaster risk reduction framework to reflect the proposed sustainable development agenda targets for the resilience of cities and human settlements.¹⁷ The proposed goal is to "make cities and human settlements inclusive, safe, resilient and sustainable." The related proposed targets include significantly reducing the number of deaths and the

¹⁷ Proposal of the Open Working Group for Sustainable Development Goals, proposed goal 11; 11.5; 11b, 19 July 2014

number of affected people, and decreasing the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations, by 2030. A further proposed target calls for an increase, by 2020, in the of number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and to develop and implement in line with the forthcoming Hyogo Framework holistic disaster risk management at all levels. The proposed sustainable development goals and targets will be discussed and further developed between January and July 2015.

Other recommendations call for the successor to the HFA to recognize the need for specific public policies to address disaster risk in informal urban development.¹⁸ In addition, several Member States have recommended that territorial and urban planning should be fostered and implemented as a necessary strategy for building urban resilience and adapting to climate change.¹⁹

The Case for Building Resilience into Urban Planning and Design in the Post-2015 Framework

By 2030 it is expected there will be nearly 5 billion urban dwellers, representing 60 per cent of the world population. Through natural growth, voluntary in-migration, and displacement from a range of vectors, it is projected that our cities will house two-thirds of our global population of over 9 billion by 2050. The vast majority of this growth will occur in developing nations of Africa, Asia and Latin America (see Figure 1).

The concentration of human activity in urban areas means cities now account for 70 per cent of global GDP, making them vibrant hubs of economic growth, trade, and innovation. But cities also account for an equal share (70 per cent) of global greenhouse emissions, mainly as a result of industrial and construction activities, and are home to a rising proportion of the world's poorest communities. There are now some 1 billion people living in informal settlements. By 2020, nearly 1.5 billion people in the developing world will live in slums. By 2040, cities will be home to the majority of people who earn less than \$1 per day.

Current urban development patterns, particularly in developing countries and fragile states, are contributing to slum growth and inequitable standards of living through socially and economically segregated urban spaces and sprawl. Such conditions can contribute to the proliferation of other shocks and stresses, such as crime, high youth unemployment²⁰, and political instability, all of which exacerbate vulnerabilities and social tensions, causing a vicious cycle of risk generation.

Badly planned cities also perpetuate a reliance on high-emission, fossil fuel-generated energy and transport systems, thus contributing to climate change, which, in turn, is a driver of hazard risk. Inadequate urban plans and management are further responsible for the rising incidence and costs of urban disasters linked to weak or non-existent building codes, regulations and enforcement. Poorly planned cities and unplanned urban extensions also exacerbate pressure on natural resources and ecosystems that act as climate change mitigation instruments and physical buffers to climactic events, and

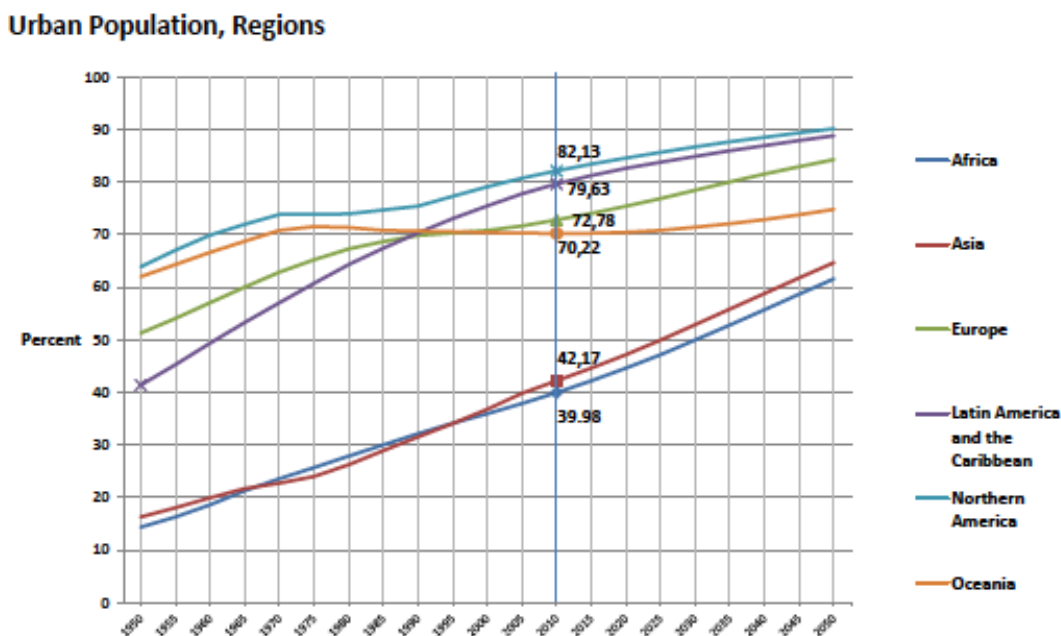
¹⁸ Suggested elements for the post-2015 framework for disaster risk reduction report to the United Nations General Assembly, 16 June 2014; A/CONF.224/PC(I)/6

¹⁹ Post-2015 Framework for Disaster Risk Reduction, Draft 1, 21 Nov. 2014

²⁰ Youth unemployment is 2-3 times higher than adult unemployment globally. Source: Sustainable Cities and Human Settlements in the Post-2015 UN Development Agenda, UN-Habitat, 2013

contribute to land degradation.

Figure 1: Urban Population Growth by Region (1950-2050)



Source: United Nations

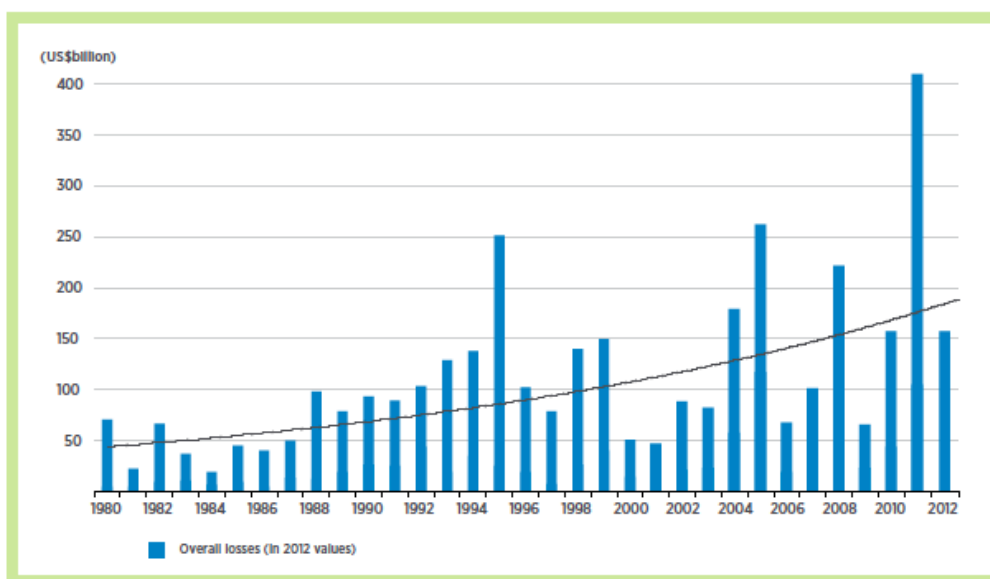
Over the past 30 years development patterns and population increases, particularly in areas highly exposed to physical hazards, have contributed to a sharp rise in the damages caused by disasters. Globally, 80 per cent of the largest cities are vulnerable to severe impacts of earthquakes, and 60 per cent are at risk from storm surges and tsunamis, and all face new impacts of climate change. From 1980 to 2012, disaster-related losses amounted to around US\$380 billion worldwide. By far the largest proportion, 87 per cent, were caused by extreme weather events (see Figure 2).²¹ The economic losses from natural events alone are estimated to have reached \$130 billion in 2013, with insured losses reaching around \$44 billion.²² Overall, the costs of natural disasters as a percentage of GDP have more than tripled in the last 40 years.²³ According to the International Monetary Fund (IMF), major disasters reduce real GDP per capita by about 0.6 per cent on average, rising to about 1 per cent in low-income countries.

Figure 2: Annual disaster losses 1980-2012

²¹ Munich Re 2013

²² The World Development Report 2014 warns that if this pattern continues, the resulting cycle of risk-insensitive development could pose a considerable impediment to socioeconomic advancement, and directly threaten poverty reduction and inclusive sustainable economic growth.

²³ Countries affected by tropical cyclones tend to experience lower GDP growth in the 15 years that follow an event. In countries with frequent severe cyclones—such as Madagascar and the Philippines—and large risk-financing gaps, growth can be lower over several decades.



The bars indicate annual disaster losses. The line indicates the trend.

Source: © 2013 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE (as of January 2013)

The need to prevent future risk, reduce existing levels of risk, and strengthen social and economic resilience is underscored by four consecutive years (2010-2014) of economic losses from disasters exceeding \$100 billion. Driven by a massive increase in hazard exposure, as private and public investments have been concentrated in hazardous areas, the current trend in disaster risk levels represent a threat to sustainable development and a shared call to build and strengthen resilient and sustainable communities.²⁴

As is often the case in the face of crisis, it is the socially and economically marginalized communities who are worst affected. Because the infrastructure of informal settlements and other poor communities are generally of low quality and built in highly exposed areas, such as coastal zones and flood-prone planes, the vulnerability of these populations, including to the effects of climate change, is increased by an order of magnitude²⁵. For example, during the 2011 Thailand floods, 73 per cent of low-income households in Bangkok were affected compared to only 21 per cent of the total city population.²⁶

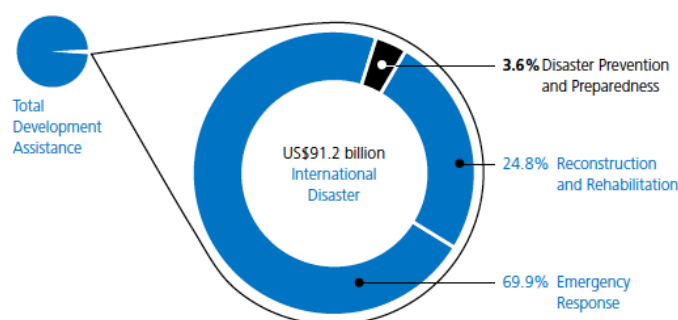
The twin challenges of unsustainable development patterns and the rising incidence of urban disasters are exacerbated by the significant gap in funding between emergency response and prevention/resilience. The World Bank Global Facility for Disaster Reduction and Recovery (GFDRR) observes that 12 low-income countries, which each received less than \$10 million in DRR funding over a 20-year period, simultaneously received over \$5 billion for disaster response (see Figure 3). Put another way, less than 0.7 per cent of total relief aid goes to disaster risk reduction, with donors spending \$160,000 on emergency response for every \$1 spent on DRR. One reason for this may be the persistent notion that resilience “costs”, rather than pays. The upfront capital investment needed to construct an earthquake resilient building, or finance early warning systems, for example, coupled with short-term planning horizons, among other factors, help keep the disaster-response-disaster cycle going.

²⁴ Implementation of the International Strategy for Disaster Reduction Report of the Secretary-General, UNISDR 04 July 2014, DRAFT

²⁵ *Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience*, World Bank, 2013

²⁶ Global Assessment Report, UNISDR, 2013

Figure 3: Share of ODA on disaster response vs. resilience (USD\$)



Source: GFDRR Managing Disaster Risks for a Resilient Future: A Strategy for the Global Facility for Disaster Reduction and Recovery 2013-2015

But with growth comes opportunity. Some 60 per cent of the area expected to be urban by 2030 remains to be built. The projected expansion in urban land cover between 2000 and 2030 is in the range of 56-310 per cent.²⁷ By 2030, an estimated \$25- \$30 trillion will be invested in new infrastructure, including urban road construction, water and sanitation, energy and transport systems, and buildings. It is expected that roughly \$700 billion a year will be spent on financing new urban infrastructure in low- and middle-income countries over this period.

To put the potential economic risk of this future infrastructure boom into perspective, it is estimated that global losses to urban produced capital from earthquake and cyclonic wind damage alone represent approximately \$180 billion per year. Sea level rise and subsidence in the 136 largest coastal cities could result in losses of \$1 trillion or more per year by 2050. With climate change and subsidence, present protection will need to be upgraded to avoid unacceptable losses of US\$1 trillion or more per year²⁸. The 2013 Global Assessment Report estimated the exposure of economic assets in 13 of the most populous cities that are also vital global supply chains is expected to increase between 2005 and 2070 from \$416 billion to \$3.5 billion in Miami; \$8 billion to \$544 billion in Dhaka, and; \$84 billion to \$3.5 billion in Guangzhou.

This implies a brief window of opportunity to reflect resilience in policy, planning, design and investment decisions that will ultimately shape the long-term physical, social, and environmental urban landscape. To achieve these aims, it is necessary to ensure that future development patterns avoid the pitfalls of the previous generation of urbanization. Cities are consuming land at an alarming pace, increasingly, to accommodate new developments. In some regions, urban land has grown much faster than the urban population, resulting in less dense and, in general, more inefficient land use patterns. In addition, this is often happening in the absence of a viable spatial structure. Pressure on land also results in increased land prices and consequent occupation of marginal land by slums or leapfrogging development with urban sprawl. As a result, living conditions deteriorate and low density makes it costly and inefficient to provide services and infrastructure. These conditions, in turn, reduce the overall efficiency of cities and hinder development.

²⁷ Intergovernmental Panel on Climate Change Fifth Assessment Report, Working Group III, 2014

²⁸ Future flood losses in major coastal cities, Hallegatte et al. 2013

Among the greatest opportunities for pro-poor, climate-sensitive, resilient, sustainable development are in the rapidly urbanizing areas in developing nations where urban form and infrastructure are not yet 'locked in'²⁹. Nevertheless, it is in these locations where significant governance challenges and limited capacities to realize such opportunities exist. Further, in many low- and middle-income countries, the institutional capacity required to implement the regulatory mechanisms to support these approaches is widely lacking.³⁰ Many cities and small urban centres also lack critical information on vulnerability, particularly in informal settlements, to inform planning decisions and investments that can reduce risk and build resilience.

Overcoming these challenges will require new urban plans to include “packages of mutually reinforcing policies”, according to the IPCC Fifth Assessment Report. These include co-locating high residential with high employment densities, achieving high diversity and integration of land uses, increasing accessibility, and investing in public transport and other mitigation interventions. Such interventions can improve standards and quality of living, close poverty gaps, and deliver multiple co-benefits for communities and economies.

Improving policies, plans and designs for more compact, socially inclusive, better integrated and connected cities that foster sustainable urban development, which are considerate of their environmental and ecological footprint, and increase resilience to multiple shocks and stresses, must be at the core of national and sub-national disaster risk reduction strategies. Relationships must be forged with international associations of planners, architects and design experts to promote the integration of resilience strategies into international design standards.

Whether cities are able to absorb the projected growth sustainably depends largely on whether they harness the efficiency advantages of agglomeration. Agglomeration provides compactness, concentration and connectivity. The more compact a city the more productive and innovative it is and the lower its per capita rates of resource use and emissions. Therein lies an extraordinary opportunity to make the future city more productive, socially inclusive, environmentally sound, and resilient.

The Hyogo Framework for Action and Human Settlements

Resilience through Strategic Planning, Development and Management

Evidence shows that no country has ever achieved sustained economic growth and rapid social development without urbanizing.³¹ The transition from low- to middle-income country status is almost always accompanied by a transition from a rural to an urban economy. However, despite the fact that urbanization has the potential to make cities more prosperous and countries more developed, many cities, particularly in the developing world, have found themselves largely unprepared for the array of spatial, demographic, social and environmental challenges they face.

²⁹ Intergovernmental Panel on Climate Change Fifth Assessment Report, 2014

³⁰ Understanding the nature and scale of urban risk in low- and middle income countries and its implications for humanitarian preparedness, planning and response, IIED, 2013

³¹ State of the World's Cities, UN-Habitat, 2010/2011

The same factors that contribute to the creation of risk --such as unequal economic development, poorly planned and managed urban development, weak governance and local capacities, and climate change³²—are barriers to sustainable development. Likewise, the strategies needed to reduce these underlying risk drivers, and thus achieve the goals of the HFA and its successor framework, are also critical towards delivering the post-2015 sustainable development agenda.

The report of the Secretary-General's High Level Panel on the post-2015 development agenda states that, "cities are where the battle for sustainable development will be won or lost". It also highlights that, "cities are the world's engines for business and innovation. With good management they can provide jobs, hope and growth, while building sustainability". The urban future has great potential for humanity in terms of greater equitability, economic growth, strengthened social cohesion, improved environmental outcomes and human development.

It is now widely recognized that achieving sustainable development goals is dependent upon ensuring that even the most modest development gains are protected against losses triggered by natural and human-induced disasters and crises. That the majority of the world population lives in urban areas demands an integrated and inclusive sustainable urbanization approach.

BOX 1: The HFA emphasizes five key DRR measures in the context of land-use planning

1. Incorporating disaster risk assessments in urban planning and management of disaster-prone settlements;
2. Mainstreaming disaster risk considerations into planning procedures for infrastructure projects;
3. Developing, upgrading and encouraging the use of guidelines and monitoring tools for DRR in land use planning;
4. Incorporating disaster risk assessments into rural development planning and management, and;
5. Encouraging the revision of existing or the development of new building codes, standards, rehabilitation and reconstruction practices at the national and local level, with the aim of making them more applicable in the local context, particularly in informal settlements.

UN-Habitat assists governments at the city, regional, and national levels to improve policies, plans, and designs for more compact, socially inclusive, and better integrated and connected cities that foster sustainable urban development and are resilient to climate change.³³ In this way, the relationship between the HFA and strategic human settlements planning, development and management can be understood across three key areas of work supported by the Agency.

First is the emphasis on a pro-poor, human rights based approach to urban planning

³² Suggested elements for the post-2015 framework for disaster risk reduction, UNISDR, 16 June 2014 (A/CONF.224/PC(I)6)

³³ UN-Habitat's approach helps to deliver many of the activities outlined across the three pillars of Priority Area Four: (1) social and economic development practices; (2) environmental and natural resource management, and; (3) land-use planning and other technical measures.

that prioritizes the needs of informal settlement populations, and discourages the location of housing in high-risk areas, including in the context of urban poverty reduction and slum-upgrading programmes.

Second is the promotion of access to diversified income options, and ensuring income and assets are not driven by private and public self-interest development policies, which may marginalize certain communities, drive up poverty and inequality levels, and increase people's vulnerability to disasters. Urban planning and design should focus on how to bring people and places together. By focusing on accessibility, optimizing urban densities, and minimizing land zoning, cities can take advantage of the 'urban advantage' by increasing the proximity between urban dwellers and goods and services, and encouraging investment and equitable economic opportunities.

Third is the promotion of high density, compact cities as a means to encourage the sustainable use and management of ecosystems and minimize cities' environmental impact. The main goal of expansion and densification plans is the provision of enough land and spatial structures to support sustainable urban development and to attract investments. The co-benefit of high density, compact cities is a cleaner environment with a smaller ecological footprint. Well-designed public spaces not only contribute to improving the overall visual character and social cohesion of a city, but also invigorate economic activities and enhance the functionality of the city. High density neighbourhoods with adequate public space and infrastructure that facilitates non-motorized and public transport, encourage walking, cycling, and other forms of eco-friendly mobility, lead to a reduction in carbon emissions and reliance on fossil fuels.

Within the most rapidly urbanizing regions of Africa, Asia, and Latin America, the absence of effective urban planning and management is contributing to the expansion of human settlements in hazard-prone areas, creating new patterns of risk that previously did not exist. The unplanned extension of human settlements across the world in locations highly exposed to climatic events is an especially worrying trend, as the effects of climate change are expected to intensify over time. Over the past 30 years the proportion of the global population living in flood-prone river basins increased by 114 per cent and on cyclone-exposed coastlines by 192 per cent.³⁴ The Intergovernmental Panel on Climate Change Fifth Assessment Report on Adaptation (Working Group II) observed, "There is clear evidence that incorporation of climate change considerations into wider city planning is still a challenge".

³⁴ Global Assessment Report, UNISDR 2013

BOX 2: How urban planning can contribute to resilience and disaster risk reduction

- Working with multiple stakeholders throughout the planning process to identify known risks, needs and potential solutions, realizing the potential of communities to contribute to risk reduction.
- Incorporating risk assessment – considering exposure, vulnerability and hazards, urban settlements development and services- in all urban development designs, projects and programmes.
- Making safe land available for urban development, avoiding construction in disaster- prone areas, leaving buffers and providing recreational areas.
- Ensuring that public space for streets, infrastructure and parks is identified and protected.
- Upgrading informal settlements, with attention to access roads, flood-risk, and other safety measures.
- Installing risk-reducing infrastructure, including drainage and sewerage systems
- Assessing how urban development contributes to improving the lives of the poorest or most vulnerable people in a city.
- Developing good information on risk and communicating risk information widely.
- Protecting ecosystems to allow proper storm water drainage, avoid extensive erosion and protect against storms and tidal waves.
- Developing plans for post-disaster reconstruction that reduces future risk.

Sound urban plans and designs can have far-reaching social, environmental and economic benefits (see Box 2)³⁵. Planning allows towns and cities to be arranged as a system, comprised of various sectors and institutions. This is crucial in coping with interdependencies among failures in infrastructure in disaster situations. Urban planning also contributes to preventing secondary disasters and delays in the rehabilitation and recovery process.

Well-planned, compact cities that offer a mix of land uses, building typologies, transport and access to employment generally also offer higher levels of well-being at lower rates of resource use and emissions. Mixed-use urban development has inherent advantages in resilience. If one part of the system breaks down, other parts can continue to function, which reduces the risks of a total collapse of the system and reduces economic losses incurred through the crisis in the system.

Planning initiatives should include suburban densification, area redevelopment, layout of new areas with higher densities, brownfield development – the rehabilitation of land previously used for industrial purposes – building conversions, and transit-oriented developments. This approach emphasizes preventative, problem-focused planning, and encourages planning in phases, beginning with ensuring adequate access to basic urban services, especially water and sanitation, and linking planning with financial capacities.

³⁵ Abstracted from UNISDR's Making Cities Resilient Report 2012, prepared by Cassidy Johnson, Bartlett Development Planning Unit, University College London, 2012

The planning exercise can reinforce institutional frameworks and partnerships among all urban stakeholders, particularly planners architects, engineers, disaster and risk reduction management specialists, sectoral specialists, private sector, and communities. Sound urban plans and designs can also strengthen the legal planning frameworks and codes in urban areas to support resilience, guide urban expansion, and meet the needs of low-income citizens, including upgrading of informal settlements.³⁶

In the world's fastest urbanizing nations, where there are already severe threats to development gains, widening inequality, slum growth, sprawl, and pressure on the natural environment, among other challenges, UN-Habitat is ground-testing a new methodology known as Planned City Extensions (PCE).

PCE focuses on a city and country's enabling factors, ordered by priority, and in a context of scarce resources, by which large and rapid extensions provide a substantive push to the amount and quality of public space and, equally important, to the availability of buildable plots. Currently, the practical application of this methodology is being piloted in regions including Africa, where there is limited capacity to keep pace with the demands of urbanization.

The vision underpinning the PCE methodology is that cities are spaces that facilitate social, economic, and environmental progress. For cities to develop in a sustainable and inclusive way, they must become more compact, absorbing population growth by increasing their density. Only through agglomeration will cities have the power to innovate, generate wealth, enhance quality of life, and accommodate more people in a sustainable manner (with a smaller environmental footprint through lower per capita resource use and lower per capita emissions than any other settlement pattern). Such plans should aim to minimize transport and service delivery costs, optimize the use of land, and support the protection and organization of urban open spaces.

Instead of waiting for a country or city to build the capacity it needs to service its growing urban populations, PCE calls for plans to be based on existing "implementability" capacity. That is to say, cities and nations' development and re-development plans are based on their current conditions, rather than pursuing the implementability capacity of a 'master plan'. In this way, the PCE methodology represents a significant shift in thinking from conventional development strategies. This more basic, direct approach toward urban planning, focusing on the street layout and the plotting regulation, for example, enables local authorities to respond to the demands of urbanization while avoiding the complexities and protracted timescales associated with developing and implementing master plan methodologies and the excesses of zoning, among other administrative burdens.

The aim of UN-Habitat's support on planned city extensions is to increase residential and economic densities with compact communities while guiding new redevelopment to areas better suited for urbanization. This would contribute to more efficient and sustainable development. This type of intervention would also free more land for development, thus reducing speculation and increasing accessibility for the poor, as well as local revenue. The transformation of land use from rural to urban purposes creates wealth and value, and produces assets and income. Tapping into such wealth is a key challenge for local governments in any developing city. By avoiding leapfrogging practices, urban expansions fight against speculative behaviour, minimize the city's ecological footprint and reduce pressure of development on environmentally sensitive

³⁶ Adapted from UN-Habitat's contribution to the Making Cities Resilient Report, UNISDR, 2012

areas.

City expansions and densification plans can be realized in large areas of vacant or underutilized land in central areas or on the fringes of the city. These plans need to provide sufficient land supply to minimize the fragmentation of the built-up area, particularly farther out of the urban periphery. In addition, city expansions and densification plans are to be developed in a progressive manner, selecting some areas which could be further developed in the coming years as demand grows and financial conditions are available. To be successful, it is important to go “back to basics” and prioritize the resolution of core issues, providing a foundation for more complex interventions in the future (see Box 3).

Box3: Results of city expansions and densification plans:

- The creation of spatial structures in order to support urban development and attract investments;
 - Availability of large areas of land for development, thus reducing land prices and speculation;
 - Increase in urban densities, accommodating population growth more efficiently; and
 - Minimization of the city’s ecological footprint with more compact cities.
- Additional benefits include:
- Increased density that promotes economic agglomeration advantages, including lower costs of providing infrastructure and services;
 - Strengthened social interactions and reduced mobility demand; and
 - Mixed use of land that increases social heterogeneity and generates economic densities.

A New Framework for Resilience

City Resilience Profiling Programme: Building Resilience in All Human Settlements

UN-Habitat’s City Resilience Profiling Programme (CRPP) is the Agency’ primary global framework for integrating disaster risk reduction and resilience factors into social, economic, and environmental protection and development. It is also the main mechanism through which UN-Habitat is contributing to the UN Plan of Action on Disaster Risk Reduction for Resilience.

Resilience against crises not only refers to reducing risks and damage from disasters (i.e. loss of lives and assets), but also the ability to quickly return to a stable state with limited disruption to the processes and services upon which all urban dwellers depend. In this way, the CRPP defines resilience as “*the ability of any urban system to withstand and recover quickly from any plausible hazard (natural and man-made) and maintain continuity of services*.” The urban systems model upon which CRPP is based provides a forward-looking, multi-sectoral, multi-hazard, multi-stakeholder approach, which integrates all aspects of human settlements. The model is designed to be adaptable to any settlement, with attributes for hazard, risk and vulnerability.

The primary aim of the CRPP is to help local governments reduce the uncertainty of the impacts from multiple natural and manmade threats. In doing so, the CRPP enables local

authorities to develop a comprehensive, integrated and resilient urban planning and management strategy that improves their capacity to protect urban citizens and assets, close equity gaps, and realize development opportunities.

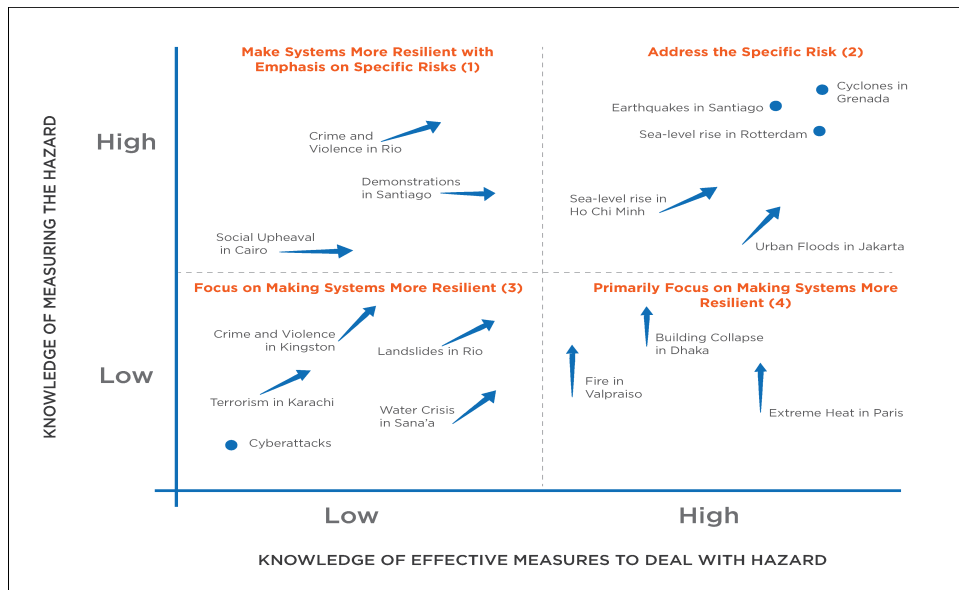
Factors that influence resilience include the range and predictable severity of hazards, the risk to lives and property, the vulnerability of human, social, and environmental systems, and the degree of preparedness of both physical and governance systems for any catastrophe. While these four factors are currently addressed in separate, often diverging strategies, there are no models or frameworks for integrating, analysing and quantifying them in a unique set of indices for urban (or rural) resilience. Rather, conventional risk reduction approaches tend to focus on a specific hazard, leaving out risks and vulnerabilities due to other types of perils. In addition, there are no models for integrated measurement of the resilience of the unique competitive advantages that underpin job rich and inclusive economic growth and inherent propensity to reduce poverty/contribute to food security for the populations of both urban centres and their feeder rural areas through the creation of decent work (i.e. productive jobs and incomes).

While advances are being made in shifting the emphasis from risk reduction to resilience, to date, no means of measuring urban resilience has been developed, leaving city and town administrations understanding only what their inherent vulnerabilities may be. Until now, the most developed tool for building resilience is the Local Government Self-Assessment Tool developed by UNISDR and partners.

The CRPP is responding to this gap in three important ways. First, the CRPP's urban systems model framework builds on existing advocacy and risk reduction tools by expanding the threat/hazard envelope to identify a host of possible risks facing urban areas, from earthquakes and climate-related crises to political conflict and economic shocks. Second, the model accounts for both the individual and aggregate impacts of a variety of social, economic and environmental factors in the context of local conditions. Third, the CRPP determines a city's capacity to withstand and recover quickly from a particular shock, or set of crises, based on its unique physical, organizational, spatial, and functional characteristics. In all three ways, the CRPP provides a holistic view of the inherent interdependencies and vulnerabilities of *each* part of an urban system and is applicable to any human settlement. The intended outcome is an added layer of certainty that reduces risks and contributes to smarter, more resilient planning, development, and investment decisions.

A recent analysis of resilience methodologies conducted by the World Bank highlighted the value of an urban systems approach in bringing more certainty to the risk landscape. For example, in the case of the collapse of Rana Plaza in Dhaka, Bangladesh in 2013, the knowledge of how to avoid building collapse (e.g. enforcement of building codes, sound design and construction, etc.) is high, but data on the condition of the building stock that would help to measure the likelihood of collapse of specific buildings is low (see Figure 4).

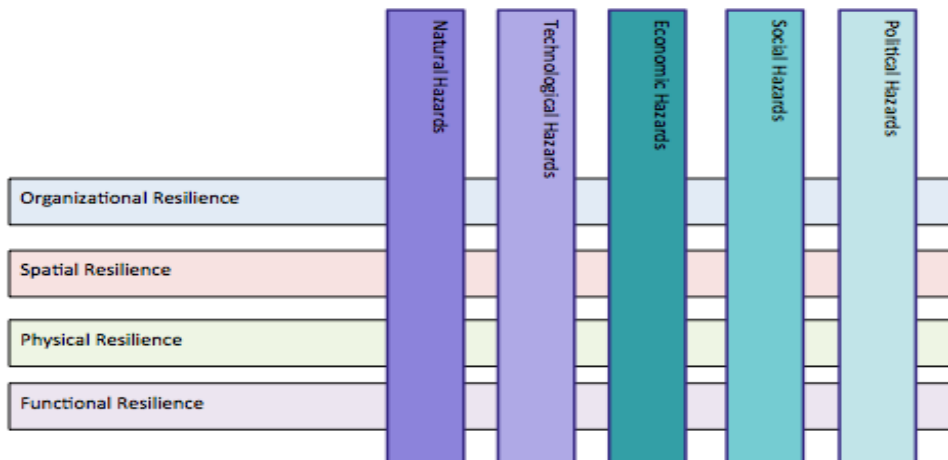
Figure 4: Plotting certainty of man-made and natural crises



Source: World Bank, An Expanded Approach to Urban Resilience: Making Cities Stronger 2014 (DRAFT)
Adapted from World Economic Forum, 2013 and Comfort et al, 2013

The tragedy also highlighted the functional weaknesses of the city system, such as the institutional mechanisms that must be in place to enforce building codes and standards that are in place. Under the CRPP, a city's resilience is measured across physical, organizational, spatial, and functional scales in relation to a number of known and plausible threats (see Figure 5).

Figure 5: Urban Systems Model Approach



Source: UN-Habitat

These scales can be associated with the three basic 'ingredients' that form the fabric of a city: people, assets and processes. The resilience of the public and private assets of a city, including its public spaces and built environment, are measured across the physical and spatial scales. A city's organizational resilience refers directly to its people, including individuals, associations, and organizations that are both directly and indirectly responsible for the system's well being. The functional aspect refers to all of the processes that enable a city to operate—or function—on a day-to-day basis. This includes the operational, institutional, and governance elements of a city that are responsible for activities such as the enforcement of building codes.

UN-Habitat maintains that an urban system is only resilient if it is measured across each of these scales, and takes into account the interdependent nature of these elements. In other words, “*a city is either resilient or it’s not*”. Keeping the example of Bangladesh, there is clear evidence that resilience building strategies to address the perennial threat from storms is working through interventions such as early warning systems, which, in recent years, have resulted in fewer human casualties and injuries and physical damage (source: World Bank, 2013)³⁷. However, as the tragedy of the Rana Plaza demonstrated, good flood risk management does not a resilient *system* make.

The CRPP’s ‘resilience life cycle’ starts with the development of a City Resilience Profile. The profile is designed to help city officials and other stakeholders prioritize policy and investment decisions, and contribute to the development and delivery of longer-term Resilience Action Plans. The city profiles will deliver clear standards that planners, engineers, architects, economists, and other professionals who manage cities can target and use to ensure cities actually do become measurably more resilient and that progress can be compared (see Box 3).

The CRPP is being implemented through partnerships with multiple stakeholder groups, including international agencies such as UNISDR, academic and research institutes, private sector actors, and NGOs. The current Partner Cities of the Programme are: Balangoda, Sri Lanka; Barcelona, Spain; Beirut, Lebanon; Dagupan, Philippines; Dar es Salaam, Tanzania; Lokoja, Nigeria; Portmore, Jamaica; Talcahuano/Concepcion, Chile; Tehran, Iran; and Wellington, New Zealand. In addition, the CRPP is working with many ‘associate’ cities through partnerships with UNISDR, the World Bank, Rockefeller Foundation and others.

The City Resilience Profiling Tool (CRPT) is the primary instrument local governments use to create an initial baseline and develop a resilience profile. Designed as a self-assessment underpinned by a robust means of verification, the CRPT includes over 2,000 data points to identify aspects within the city to be addressed to enhance its level of resilience and to produce profiling results that are comparable over time. It is not meant to compare the status of resilience among cities, but rather to enable cities to benchmark their own performance based on their unique conditions and isolate areas which are most in need of addressing. At present the tool delivers a view of resilience over short (1 year), medium (3-5 years), and long-term (10+ years) time scales.

Through the CRPT and other areas of the programme, the CRPP is supporting the delivery of the HFA in several ways.

First, it offers a structured mechanism through which disaster risk considerations can be reflected into planning procedures for major infrastructure projects, including the criteria for design, approval and implementation of such projects and considerations based on social, economic and environmental impact assessments.

As previously mentioned in this paper, urban population growth will be concomitant with an enormous infrastructure boom that will more than double urban land cover and see billions of dollars in investment in housing, transport, and other sectors by 2030 and beyond. Infrastructure choices made today will therefore have critical implications for the future sustainability of cities across the world. If disaster impact assessments inform infrastructure investments, cities will benefit from long-term resilience to hazards.

Making resilience a criterion for investment will help to ensure that new physical assets

³⁷ Building Resilience, Integrating Climate and Disaster Risk into Development, World Bank, 2013

avoid current and future high-risk locations, as well as consider broader elements defined by the urban systems model approach. This includes steering investment toward areas where there is opportunity for high density and connectivity between residential and commercial settlements; reclaiming the city centre to attract new economic activities, and; maximizing public spaces for mixed-use and livability. Combined, these factors will work to maximize investments by minimizing potential losses from disasters, including those linked to climate change, as well as improve the social and environmental value of the city. Resilience also delivers “dividends” in the form of increasing a city’s competitiveness, attractiveness to investors, businesses, and other factors.³⁸

Broadly speaking, donors and investors alike understand that resilience is worth the upfront monetary investment, even if current development aid levels do not reflect this thinking. Early warning systems have been proven to save countless lives worldwide, and typically yield benefits that are 4–36 times higher than initial costs.³⁹ The World Bank estimates it costs 50 per cent more to design and build safer buildings and infrastructure after a disaster, for example. More generally, the Bank figures that every \$1 invested in resilience saves between \$4 to \$7 in response, and \$5 to \$10 in ‘avoided’ economic losses. Building resilience into new investment decisions will help to strengthen the case for these upfront costs and increase the recognized ‘Return on Investment’ for resilience.

Second, by providing a framework for the assessment, tracking, and improvement of urban plans, the CRPP fulfills one of the recommended activities outlined in Priority for Action 4, “to develop, upgrade and encourage the use of guidelines and monitoring tools for the reduction of disaster risk in the context of land-use policy and planning”. Third, the CRPP’s urban systems model encourages the development, or revision of, building codes, standards, rehabilitation and reconstruction practices by facilitating engagement between local authorities and multiple stakeholders, including municipal planners, the private sector, and communities. The CRPT assessment is specifically designed to be a consensus-based tool that offers a view of a city’s functional capacity to monitor and enforce building codes and standards. Where no such standards or established practices exist, or are inadequate in the face of new development patterns, the CRPT provides a methodology to prioritize actions that address existing gaps. In this way, the tool helps to foster disaster-resistant structures and make them more applicable in the local context, particularly to informal settlements.

Fourth, the CRPP model is being used to support cities’ access to finance and the development of innovative financial instruments that address disaster risk. In developing countries, only a fraction of the largest cities, about 4 per cent, have access to finance in international markets, while only 20 per cent have the ability to tap into local markets (source: World Bank). In response, UN-Habitat is now working with the World Bank to embed resilience principles and practices in urban Capital Investment Plans through the Bank’s Creditworthiness Academy initiative. The programme plans to certify 300 low-income cities ‘creditworthy’ over the next 4-5 years, opening access to short and long-term debt, overseas investment opportunities, and innovative finance mechanisms that will allow like-minded cities to ‘club’ together to access more favourable lending rates. As part of the World Bank’s Low Carbon Livable Cities Initiative, a key focus of the creditworthiness programme is to encourage investment in climate-smart infrastructure that makes efficient use of energy and embraces low emissions technologies while cities are at relatively early stages of development and

³⁸ The “Resilience Dividend” was coined by Rockefeller Foundation President Judith Rodin

³⁹ Building Resilience, Integrating Climate and Disaster Risk into Development, World Bank, 2013

planning.

Finally, the CRPP is driving new partnerships with multiple stakeholders to connect cities with the technical and financial resources they need to mitigate disaster risk as part of a broader sustainable development agenda. The role of urban planning and design in delivering sustainable, equitable urban development featured as key theme during the Seventh World Urban Forum (WUF7), held in April 2014 in Medellin, Colombia. WUF7 served as the platform to announce collaboration between UN-Habitat, UNISDR, and seven other organizations, which collectively work in over 2,000 cities globally and commit over \$2 billion annually toward advancing resilient urban development. The *Medellin Collaboration on Urban Resilience* includes UN-Habitat, UNISDR, the World Bank, Inter-American Development Bank, GFDRR, Rockefeller Foundation and the 100 Resilient Cities Initiative, the C40 Cities Climate Leadership Group, and ICLEI-Local Governments for Sustainability. The collaboration is based on the challenges cities face in promoting sustainable urbanization, in particular the increasing urban exposure to various shocks and stresses. The goal of this collaboration is to facilitate the flow of knowledge and financial resources necessary to help cities become more resilient to disruptions related to climate change, disasters caused by natural hazards, and other systemic shocks and stresses.

BOX 4: CRPP Outputs

The CRPP will deliver the following four outputs:

1. Research on Operational Framework: Completing the research required to investigate current urban systems thinking, existing risk mapping, and mitigation techniques, and developing an urban systems model that is adaptable to any human settlement;
2. Indexing and Profiling: Establishing a set of indicators and standards for calibrating urban systems' ability to withstand a crisis, and a set of city resilience profiles for pilot cities;
3. Tools/ Software Development: Developing a software interface for urban manager and practitioners to develop their city resilience profiles; and
4. Normative Guidance: Establishing global standards set for urban resilience and a new normative framework for monitoring urban systems globally.

Strategic View for the Next Decade

Delivering a New Urban Agenda for the 21st Century

UN-Habitat's strategic vision for the next decade is embodied in the New Urban Agenda. This vision is grounded in a Sustainable, Equitable and Prosperous approach to urbanization in the 21st century (SEP21c, see Box 4). The New Urban Agenda proposes a paradigm shift towards a new model of urbanization that can better respond to the challenges of our age, optimizing resources to harness the potentialities of the future. The proposed New Urban Agenda is inclusive and people-centred, with the possibility to articulate different scales, from the neighborhood to the global level, and diverse human settlements, from the village to the megacity.

The impetus for the New Urban Agenda is the United Nations General Assembly decision to convene the Habitat III Conference to reinvigorate the global commitment to sustainable urbanization, building on the Habitat Agenda of Istanbul in 1996. The

objective of the Habitat III Conference is to secure renewed political commitment for sustainable urban development, assess accomplishments to date, address poverty, and identify and address new and emerging challenges.⁴⁰

Habitat III will be the first UN global summit after the adoption of the Post-2015 Sustainable Development Agenda and, hopefully, a new climate change agreement. It offers an opportunity to discuss the important challenge of how cities, towns and villages are planned and managed, in order to fulfil their role as drivers of sustainable development, and hence shape the implementation of new global development and climate change goals.

The vision for the New Urban Agenda recognizes that the challenges associated with development are exacerbated by poorly planned and managed urbanization. In this way, the New Urban Agenda makes a critical connection between urban sustainability and sustainable development writ large, as well as the post-2015 disaster risk reduction agenda.

It recognizes urbanization as the centrepiece of our time to help the world to overcome some of its major challenges, including poverty, inequality, environmental degradation, and vulnerability to multiple shocks and stresses, including climate change. This vision further aims to unlock the advantages of the urban space, in its form, structure and functionality, to positively influence social, economic, and environmental change.

Within this context, some of the key topics under consideration for discussion at Habitat III are how to effect more efficient economic growth through better allocation of land, labour and capital; promote shared prosperity with an equitable access to the benefits of urbanization, and; protect natural resources, ecosystems and biodiversity at local and global levels, allowing present and future generations to live in sustainable cities.

The many opportunities of urbanization today could be the basis for harnessing its transformative force and activating a pattern of urban growth that could positively impact other spheres of national development. Key principles underpinning the vision of a new urbanization model include a universal and adaptable approach to different national circumstances, based on the key urbanization challenges and opportunities shared by all countries; mechanisms and procedures that respect, protect and promote human rights; promoting equitable urban development and inclusive urban growth, which entails bringing equality and non-discrimination considerations, including gender equality, to the centre of urban development; promoting the integration in the implementation of a new urbanization model in order to address the environmental, social and economic objectives of sustainability, and; promoting green cities and environmental sustainability, which involves establishing a critical connection between science, environment, economic growth, urban planning and governance.⁴¹

The international community is at a critical juncture. The intersection between disaster risk reduction, sustainable development, climate change, and human settlements marks a global opportunity that touches all levels of government and society.

The outcomes of the post-2015 framework for disaster risk reduction will influence the achievement of the sustainable development agenda and vice-versa. The climate change agenda is also intrinsically linked to the post-2015 framework for disaster risk

⁴⁰ United Nations General Assembly resolution 67/216

⁴¹ Adapted from the Executive Summary, Urbanization and Sustainable Development: Towards a New United Nations Urban Agenda, submitted to the High Level Committee on Programmes of the United Nations Chief Executives Board, 2014

reduction, given that climate change is an underlying risk driver. The outcomes of these various post-2015 frameworks will influence the setting of a New Urban Agenda.

Unless disaster risks are effectively managed, increasing disaster losses and impacts will undermine development achievements, and contribute to environmental degradation. At the same time, the post-2015 sustainable development agenda's overarching aim to eradicate global poverty must be supported by implementable and enforceable policies and regulations that avoid the creation of new risks which can trap people in cycles of impoverishment, thus contributing to chronic social and economic inequality and vulnerability. Likewise, a global climate change agreement must facilitate investment by public and private sectors to combat the underlying risk drivers associated with rising greenhouse gas emissions levels, and inspire innovation and low carbon growth. Equally important to building the resilience of future generations will be the 'road-testing' of new approaches to urban planning and design that enable communities to withstand and recover quickly from multiple shocks and stresses.

The many societal, economic, and environmental demands of rapid urbanization require all three landmark agreements set for 2015 to recognise the role of cities in contributing to an equitable and resilient future. The 'urban advantage' is within reach. The post-2015 disaster risk reduction framework marks an important first step in determining the future resilience and prosperity of all human settlements. It is an opportunity to learn from previous successes and change the course of more alarming trends, not only for the next decade, but generations to come.

[END]