

Approach Paper Towards Urban Resilience

An Evaluation of the World Bank Group's Evolving Approach (2007-2017)

December 21, 2017

Background and Context

WHY IS URBAN RESILIENCE IMPORTANT AS A DEVELOPMENT IMPERATIVE?

1. **Half of humanity – 3.5 billion people – lives in cities today and by 2030, 60% of the world's population will live in urban areas.** The pace of urban growth – and the transformation of global land use – is staggering. It is estimated that 1.4 million persons move into urban areas every week. From 2000 to 2030, urban expansion is accelerating 27 fold as compared to 1970-2000 and is expected to add 1.2 million square kilometers – an area equivalent to the entire surface area of South Africa (NAS, 2012). Most of this expansion – nearly 95% - will occur in developing countries, and will be characterized by informal and unmanaged growth (OECD, 2017).

2. **Urbanization has the potential to lift people out of poverty and increase prosperity.** Large cities generate about 75% of global GDP today and will generate 86% of worldwide GDP growth between 2015 and 2030 (Woetzel, 2016). Population growth and rising per capita income are key drivers, accounting for 58 percent and 42 percent of growth among large cities between 2000 and 2012 (Woetzel, 2016).

3. **Rapid urbanization and unmanaged growth, however, tend to generate unsustainable land use, which is nearly impossible to change after a city grows.** It is also associated with high levels of population exposure, especially for the poorest segments, to chronic stresses and shocks including environmental shocks (e.g., floods and earthquakes) and social stresses and shocks (e.g. crime and violence, conflict induced population influx).

4. **The urban poor are disproportionately affected by chronic stress and shocks.** By 2030, an estimated 325 million extreme poor will be living in the 49 countries most prone to disasters, and they will disproportionately suffer from shocks (Shepherd, et al. 2013). In these countries, the poorest and most vulnerable will live in the most exposed areas—often in informal settlements on the edge of cities—that have poor access to early warning or adequate infrastructure (ODI, 2016). Efforts to reduce poverty and disaster risks are complementary. Estimates for 89 countries find that if all natural disasters could be prevented next year, the number of people in extreme poverty—those living on less than \$1.90 a day—would fall by 26 million (World Bank, 2017). These risks can undermine sustained economic growth and social progress. For example:

- In the built environment, global expected average annual loss associated with earthquakes, floods, tsunamis, storm surges, and wind from tropical cyclones is now estimated to be USD 314 billion (UNISDR 2015a).
- At the community and household level, the urban poor are in an acute position in terms of their exposure: they have limited assets and no insurance to cover the loss of property and

belongings (ODI, 2016). Rising inequality and exclusion in many large cities threatens to undermine economic growth and social progress. This is particularly true for the 1 billion urban poor who live in informal settlements around the world (World Bank, 2015).

- Lack of urban service access, rights and opportunities for the excluded have exacerbated incidents of social upheaval, crime and violence in cities (World Bank, 2015). High crime and violence rates are, in turn, undermining growth, threatening human welfare and impeding social development. According to a recent study, crime and violence costs LAC countries, on average, between 2.4 and 3.6% of their GDPs, equivalent to total regional spending on infrastructure and equal to the total income of the region's bottom 30 percent (IDB, 2017).
- In some contexts, characterized by conflict and instability, urban systems and infrastructure are unable to absorb rapid population influxes and outflows, owing to the unprecedented number of displaced and refugee populations seeking refuge in cities (Goyes et al. 2017).

5. An increasingly acknowledged way of addressing and mitigating the complex set of social, economic and environmental risks derived from rapid urbanization and unmanaged growth is to enhance the ability of urban systems to adapt to changing conditions and withstand shocks, that is, to create *urban resilience*.

DEFINITION OF URBAN RESILIENCE

6. As articulated in *Investing in Urban Resilience: Protecting and Promoting Development in a Changing World* (World Bank 2016e), "Urban resilience has many definitions most of which take into account the ability to manage the wide range of shocks and stresses which may occur in a city." As stated in the same report, "there is no standard definition" as exemplified by the 11 definitions of urban resilience that the report includes in its annexes.

7. The 2016 report defines resilience as "the ability of a system, entity, community, or person to adapt to a variety of changing conditions and to withstand shocks while still maintaining its essential functions" (World Bank 2014). It goes on to further explain that "resilience refers to the ability of a system to maintain or quickly return to desired functionality following a disruptive event (either natural or human induced), which may not be predictable. It incorporates the ability to avoid shocks and to manage risks, while being able to constantly adapt to change when needed and quickly transforming systems which inhibit current or future adaptive capacity. Synergies and tradeoffs must also be considered in order to identify "win-win" situations that reduce the possibility of loss and increase potential benefits" (World Bank 2014). The IFC has in practice adopted the definition from Rockefeller's 100 Resilient Cities: "a city's ability to withstand shocks and stress."

8. An expanded definition of urban resilience, based on a systematic literature review of 175 urban resilience studies, is the "ability of an urban system and all of its constituent socio-ecological and socio-technical networks -across temporal and spatial scales-to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to transform systems that limit current or future adaptive capacity (Meerow et. al, 2016).

9. This evaluation refers to the definition of urban resilience presented in the Bank's 2016 work entitled *Investing in Urban Resilience: Protecting and Promoting Development in a*

Changing World” that utilizes concepts from the Bank’s 2014 “*An Expanded Approach to Urban Resilience: Making Cities Stronger*. Aspects of the broader definition – considerations of chronic stress, spatial and temporal issues and the multiple stages of recovery and transformation – will be considered within parts of the evaluation framework. These concepts form part of the evolving analytical framework and have also been identified through a review of the Bank’s analytical and lending portfolios, approved since 2014. It also recognizes that Resilience has often been associated with the capacity of communities to withstand the impacts of climate change and disasters, which represent the major development challenges of our time (World Bank, 2016e).

THE ROLE OF THE WORLD BANK GROUP IN A GLOBAL CONTEXT

10. **The international community has recognized the importance of achieving sustainable and inclusive urban development by increasing attention to the resilience of cities.** This imperative is reflected in the Sustainable Development Goal 11 that seeks to “make cities and human settlements inclusive, safe, resilient and sustainable.” (In addition, there are 25 targets related to disaster risk reduction in 10 of the 17 SDGs, firmly establishing the role of disaster risk reduction as a core development strategy (UNISDR, 2015).) These goals are also central to the *New Urban Agenda* endorsed by the United Nations General Assembly in 2016.ⁱ These two landmark agreements have motivated numerous global, regional and national urban resilience initiatives which are shaping the dialogue and practice of urban development, including in the World Bank Group.

11. The establishment of the Social, Urban, Rural and Resilience Global Practice in 2014 reinforced the Bank’s commitment to achieving resilient development, including in urban areas. The Bank has historically supported urban resilience through its work on urban development, disaster risk management (DRM) and climate change adaptation. Starting with its participation in the *Future of Urban Disaster Risk: Building Safer Cities Conference* in 2002, the Bank has contributed to the field of urban disaster risk management, mainly on crises response and reconstruction. Since then, the Bank’s approach in the urban space has expanded. Following major natural catastrophes in the mid to late 2000s’, the Bank began to systematically build risk reduction into its disaster and non-disaster projects.ⁱⁱ

12. More recently, the Bank has adopted a “Resilience Lens” highlighted in its analytical work, which incorporates support for planning and coordination, public expenditure management, land use, and financing strategies. The last five years have witnessed a scaling up of analytical work on urban resilience in the World Bank, which guides its operational approach. Since 2013, the SURR GP launched an *Inclusive Cities Programmatic Approach* – focused on the link between urban development, poverty and exclusion.ⁱⁱⁱ It was followed by an “*Expanded Approach to Urban Resilience: Making Cities Stronger*” - an effort by the Bank’s urban team to put forth a broad definition of Urban Resilience, combining environment, social and institutional considerations, emphasizing the need to apply an inter-sectoral and spatial approach to engagement in this domain.

13. During Habitat III, the World Bank and GFDRR launched *Investing in Urban Resilience: Protecting and Promoting Development in a Changing World* (World Bank, 2016e) which provides evidence that investing in urban resilience is critical to achieving sustainable development as well as the World Bank Group’s twin goals of ending extreme poverty and

promoting shared prosperity by 2030. *Investing in Urban Resilience* also provides insight into the financing needs to build Urban Resilience including the potential of private finance.

14. In 2017, the World Bank launched *Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters* which moves beyond examining asset and production losses and focuses on how natural disasters affect people's well-being. In the report, natural disaster risk and losses are measured using a metric that can capture their overall effects on poor and nonpoor people.

15. Also in 2017, the World Bank launched the *City Resilience Program* - together with the *Global Facility for Disaster Reduction and Recovery* and the *State Secretariat for Economic Affairs* (SECO) that features a functional definition, a new multi-sectoral approach, and commitments to help clients "foster resilience to shocks and threats" as stated in the *Forward Look 2030* (World Bank 2017). The *City Resilience Program* serves as a 'one stop shop' within the Bank to incentivize investment in urban resilience across sectors. It seeks to build cities' technical, regulatory, and financial capacity to integrate risk management in territorial and financial planning, and in investment programs (World Bank. 2016e). The program's objective is to enable 50 million people to escape urban poverty over two decades by integrating resilience features into the design of 400 Bank operations. Alongside this objective, the Bank has made a commitment to crowd in US \$500 billion of private capital over two decades to finance resilient infrastructure and services in 500 cities, intended to benefit one billion people (World Bank, 2016e).

16. *Indicative Lending Volumes*. The Bank has reported providing US\$24.72 billion between 2002-2016 to help cities prepare for, and respond to, natural hazards (World Bank, 2014; World Bank 2016). Part of this financing is for disaster risk management, which has increased from US \$3.7 billion in FY12 to US\$ 5.7 billion in FY15. It includes both direct activities and mainstreaming in agriculture, water, energy, and transport (World Bank, 2016e). The evaluation will verify the Bank's reported portfolio data and generate independent information on its financial contribution towards urban resilience.

17. **The Role of IFC.** IFC invested US\$6.8 billion in 221 city related projects and provided advisory services through an additional 164 projects to 87 cities in over 60 countries between 2004-2013. While many of these investments may have indirect effects on the resilience of cities, it is only recently that IFC has directly pivoted a part of its portfolio towards urban resilience building. IFC's resilience building includes the *Cities Initiative*, while resilience is not a requirement for all investments under the Cities Initiative, according to IFC, most projects would meet the Rockefeller definition of resilience. IFC also associates resilience with its performance standards. The Cities initiative is partly supported by the Rockefeller Foundation, which aims to "support the development of infrastructure projects that will help build resilience in emerging markets." Specifically, the initiative is piloting a new project development facility that – based on eligibility – provides grant funding to support legal, technical, and financial advice to governments working with IFC on infrastructure projects that help cities build resilience and support poor and vulnerable people. The goal is to leverage US\$40-\$90 million from other partners which could build demand for up to 80 medium-to large scale resilience projects globally.

18. In line with IFC's *Cities Initiative*, this evaluation seeks to learn early lessons from this project development facility to inform future scale up in this area. A sample of IFC's wider

portfolio of city related projects will be included in the city case study analysis which will include IFC strategic cities where the evaluation will apply a “one World Bank Group” lens. The evaluation will also cover MIGA in the city studies when it is present to guarantee relevant city operations.

19. *The World Bank as a Partner.* Partnership is key to the World Bank Group’s Urban Resilience approach. Partners range from those that provide knowledge and access – like the *Rockefeller 100 Resilient Cities Program* and the *Medellin Collaboration for Urban Resilience* – to those that raise awareness and provide finance like the *Global Facility for Disaster Reduction and Recovery* hosted by the World Bank (Box 1).

Box 1: The Global Facility for Disaster Reduction and Recovery (GFDRR)

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership program administered by the World Bank Group. GFDRR supports developing countries to: (i) mainstream disaster risk management and climate change adaptation in development strategies and investment programs, and (ii) improve the quality and timeliness of resilient recovery and reconstruction following a disaster. GFDRR was launched on September 29, 2006 to support implementation of the Hyogo Framework for Action 2005-2015 (HFA). On March 18, 2015, the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework) was adopted. GFDRR now supports the implementation of this framework. The mission of GFDRR, aligned with the Sendai Framework, is to help build resilient societies that manage and adapt to emerging disaster and climate risks, and to contribute to the substantial reduction of disaster risk and losses in lives, livelihoods, and health, and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities, and countries.

Source: GFDRR website.

THE ROLE OF IEG: WHY AN EVALUATION ON URBAN RESILIENCE?

20. **This evaluation is designed to provide insights into *how and how well* the World Bank Group is positioned to support the Third Pillar of the *Forward Look 2030: Fostering Resilience to Shocks and Threats in urban areas*.**^{iv} With the recent WBG stated aim to crowd in US \$500 billion to finance resilient infrastructure and services, - as part of its Maximizing Finance for Development (MFD) – this evaluation will offer lessons from experience on the effectiveness of efforts to integrate resilience into urban systems - across sectors – and through different financing vehicles.^v The complex nature of the urban challenge intensifies the need for learning about the approaches that cities use to build resilience and that benefit the poor. Shocks have the potential to perpetuate poverty traps, making it increasingly difficult for the urban poor, who are impacted frequently by shocks or chronic stresses, to emerge from poverty (Hallegatte et al, 2017).

21. IEG is well placed to conduct a multi-dimensional evaluation of urban resilience. Resilience is a complex theme requiring cross-sectoral analysis of WBG interventions - at multiple levels -and to assess how such interventions affect system change. The evaluation also addresses an evidence gap: while IEG has conducted evaluations of urban services and climate change, there

have been no major IEG evaluation of urban resilience, except for elements in IEG's *Synthesis Crisis Response and Resilience to Systemic Shocks Learning Engagement (2017)*.

Evaluation Framework

PURPOSE, OBJECTIVE AND SCOPE

22. The purpose of this evaluation is to provide evaluative insights on the WBG's role in helping clients foster urban resilience in the face of shocks, threats and chronic stress. The specific objective of this evaluation is to assess how well the WBG is helping clients to build urban resilience – to cope, recover, adapt and transform - in the face of shocks and chronic stress as the World Bank Group seeks to scale up its advice and investment in this domain. The evaluation will place attention on how urban resilience initiatives are linked to the Bank's broader poverty reduction goals.

23. *Scope.* This is a layered evaluation that delimits the identification of the urban resilience portfolio by the presence of thematic codes (adapted from the Bank's 2014 resilience review methodology which was updated in 2016). Due to the multi-dimensional nature of resilience, the evaluation takes a cross-sectoral approach. While SURR is the main technical counterpart, the majority of projects with resilience themes are also mapped to Transport, Water, Energy and Extractives, Environment, HNP and Social Protection. (Climate change adaptation is a cross-cutting theme often linked to DRM in the portfolio). The evaluation period is 2007 to 2017, chosen to support an assessment of resilience over time, including its evolution as a theme and the way that it has been integrated into operations. Regarding the IFC, given the emergent nature of its work on urban resilience, this evaluation will focus on an upstream assessment of the resilience characteristics of the *IFC Cities Initiative* and on the IFC portfolio of *Strategic Cities*.

24. *The evaluation scope is further delineated at the country level.* The evaluation will conduct deeper, systems level analysis at the country and city case study level. The scope is bound by the selection process designed to identify reasonable approximations of the Bank's work on urban resilience at the country and city level, in the face of two key types of shocks or chronic stresses: (i) environmental (disaster and non-disaster); and (ii) social (e.g urban crime and violence, rapid urban migration due to conflict).

25. In order to ensure complementarities and synergies with planned evaluations on Cities and Growth (FY20) The Urban Resilience evaluation will focus more broadly on the ability of cities to recover and adapt from social and environmental shocks and chronic stress. The scope does not include economic risks, such as the impact of global, regional or national financial crisis and its impact on the economy of cities, or technological risks, which will be covered by the evaluation on *Cities and Growth*. Furthermore, the evaluation will not focus on the operational details of DRM, rather on the broader strategic choices at the city portfolio level where DRM is one of many responses to ensure urban resilience.

Intervention Logic and Design

26. The WBG does not have an explicit *Theory of Change* on Urban Resilience. This evaluation conducted a review of the concepts set forth in the Bank's analytical work on urban

resilience as well as IFC's operational approach. In parallel, it conducted an evaluability exercise of a purposive sample of projects with resilience themes across sectors to develop an indicative set of activities, outcomes and impacts (Figure 1). A literature review supplemented the exercise, providing concepts to develop an intervention logic of urban resilience activities and to ensure it is grounded in an advanced and widely accepted understanding of urban resilience. Key supplemental sources include the OECD Resilient Cities report (2017) and the resilience themes around the SDG 11 targets. Working towards a *Theory of Change* the approach paper developed an Intervention Logic based on the Bank's analytical work which will be further refined in an operational workshop with key counterparts during the early stages of the evaluation period. It is expected that the approach will include a systems analysis of urban resilience at the city case level which will capture multiple and diverse urban resilience building paths, with a focus on the WBG's contribution in this space.

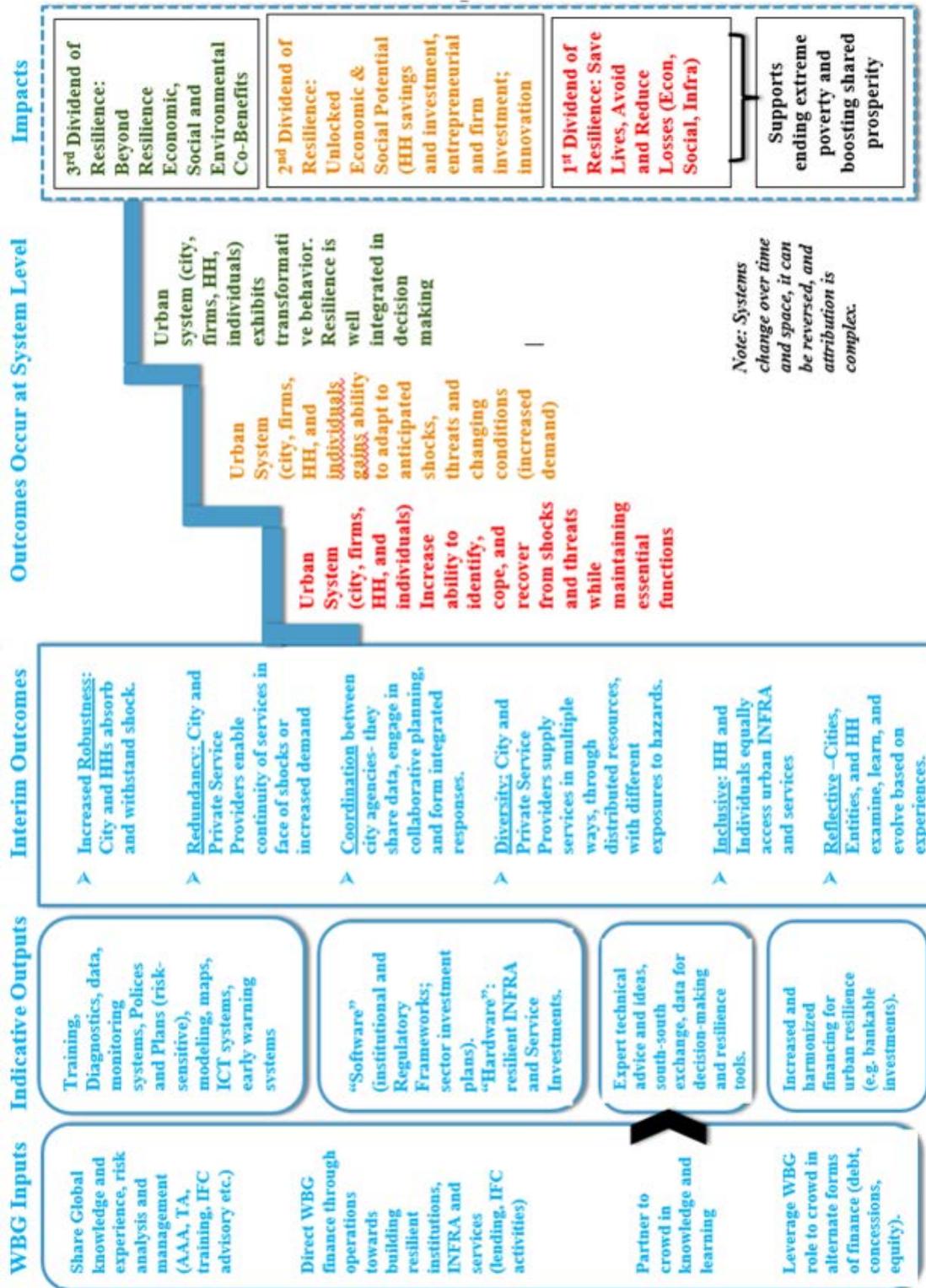
(1) The **inputs** reflected in the intervention logic is derived from a preliminary review of the World Bank Group's urban resilience activities, including the (1) production and sharing of knowledge, including through IFC advisory services; (2) investment through World Bank lending and select IFC activities; (3) the leveraging of partnerships to crowd in both knowledge and investments, including by leveraging private sector finance in support of bankable sustainable investments in risk prone urban areas.

(2) The intervention logic illustrates an indicative, rather than exhaustive, list of **outputs** that are aligned with the inputs. Knowledge and technical assistance generates capacity for resilience planning, risk sensitive policy-making, diagnostics and modeling, and the use of ICT for monitoring and decision-making. Integrating resilience characteristics into lending fosters more resilient infrastructure and services. Strategic partnering helps to pool resilience lessons. WBG resources can be leveraged to crowd in alternative sources of financing for resilience, including through debt, concessions and equity.

(3) The **interim outcomes** are consistent with the six resilient characteristics that stem from the Bank's analytical work and the external literature and that are integral to achieving urban resilience. They are: *robustness* to withstand shocks; *redundancy* to continue providing services; *coordination* between systems and agencies; *diversity* to supply services in multiple ways; *inclusive* access to services; and *reflectivity* or learning from experience. While mutually exclusive and collectively exhaustive, each city will have a unique and dynamic resilience profile which is shaped by national and local political processes.

(4) **Outcomes** occur at a systems level. They require the behavioral change of government entities at the city level, private actors, communities, households and individuals. Urban systems, and their composite parts, at the most basic level, must be able to *identify* shocks, threats and chronic stresses, *withstand* them while maintaining essential functions, and *recover*. As a system evolves, it and its parts, must be able to *adapt*, based on learning, and in anticipation of changing conditions. System transformation takes place when policies and investments unlock suppressed economic and social potential. For example, in the context of the World Bank support to *Can Tho* (Vietnam), the city has undertaken diagnostics and invested in modeling to identify its resilience risks, including flooding and rapid urbanization. Based on those diagnostics, it has strengthened its institutional capacity and legislative frameworks to develop an integrated disaster management approach.

Figure 1. Preliminary Intervention Logic of World Bank Group Urban Resilience Activities



The city is proactively guiding spatial growth to areas with lower flood risks, including higher elevation areas. These measures are unlocking economic and social potential in the urban core.

(5) The envisioned **impacts** are linked to what is referred to as the “*Triple Dividend of Resilience*” (World Bank, 2015). The high levels of poverty and vulnerable population in urban areas settlements make the triple dividends relevant in meeting the twin goals. The *first dividend* focuses on saving lives and reducing losses (economic, social, and infrastructure). The *second dividend* unlocks suppressed economic potential, by raising saving and investment rates, incentivizing investment by firms and entrepreneurs, and by spurring innovation. The *third dividend* goes beyond resilience and generates positive economic, social and environmental co-benefits (e.g. flood protection that supports fisheries; dual use infrastructure; watershed protection).

Evaluation Questions

27. The overarching question of the evaluation is in line with the *Forward Look 2030*: “**How and to What Extent is the WBG effectively supporting clients to achieve urban resilience outcomes in response to shocks and chronic stress?**”

28. The overarching question is supported by two main evaluation questions:

➤ **Question 1: How and how well have World Bank Group activities contributed to the development of resilience characteristics of client urban systems and to their ability to cope, adapt or transform when facing or anticipating shocks and threats?**

➤ 1a. How and through what mechanisms is the WBG contributing to clients’ awareness of urban resilience (*Identifying Risks*)?

➤ 1b. How and how well is the World Bank Group engaging in cities in a strategically relevant way?

➤ 1c. How and how well has the WBG integrated urban resilience into country dialogue, its training and technical assistance, diagnostics, and strategies?

➤ 1d. How well are WBG supported mechanisms helping clients to respond to and withstand shocks while maintaining essential functions? (*Coping*)

➤ 1e. How well and to what extent have these mechanisms helped clients to establish systems to adapt to resilience risks and changing conditions, while maintaining essential functions (*Adapting*)?

➤ 1f. How well and to what extent have clients begun to transform their systems, institutions, planning (including land use) and services in line with anticipatory future shocks thanks to WBG interventions (*Transforming*)?

➤ 1g. What good practices can be derived from the WBG’s support for building urban resilience?

29. **Question 2: How and to what extent is the WBG effectively leveraging its knowledge, human capital and financial resources to help clients achieve urban resilience in the face of shocks and threats**

➤ 2a. At the corporate and city level, how well has the WBG utilized key partnerships to help clients strengthen urban resilience (UN, MDBs, GFDDR, Rockefeller, Medellin Collaboration, Japan-WB).

➤ 2b. How effectively has the WBG leveraged its role to attract and mobilize private capital to develop bankable projects for urban resilience?

➤ 2c. How and how well is the WBG coordinating its work (i) internally and (ii) externally with partners at the city level to foster urban resilience?

METHODS: EVALUATION BUILDING BLOCKS

30. The evaluation methods have been designed to support data collection needs linked to the two main evaluation questions (See Methodology Attachment 2).

Figure 2. Building Blocks		
Layer	Question 1	Question 2
Global Layer	<p>Portfolio Tools (World Bank): “Design Analysis” of resilience activities in projects at an early stage of implementation (prior to mid-term review) (n=400); Retrospective Analysis (results of resilience activities) utilizing ICRRs of 306 projects;</p> <p>Comparative Analysis of “Like” or “Phased” projects to study evolution of resilience in WB. The Portfolio review will apply cross-cutting analysis issues pertaining to targeting, poverty gender, and inclusion, and distributional impacts, to the extent that data is available.</p> <p>Portfolio IFC: A Design analysis of the Cities Initiative investments supported by Rockefeller Foundation through the respective Project Development Facility</p>	<p>Direct citation/co-citation analysis to map the flow of information and evolution of urban resilience concepts between relevant actors and institutions (Bibexcel software). Directed network analysis will also be used to better understand this flow of information to measure influence (Gephi open-source network visualization software).</p>
	<p>Key WBG interviews determined by a stakeholder analysis that seeks to obtain a cross-sectional pool of staff mapped to relevant Global Solution Groups, Knowledge Silo Busters, and Thematic Groups (e.g. GSG on Resilience and Disaster Management; KSB: Safe and Inclusive Cities; Land Thematic Groups etc.) Interviews will include IFC and MIGA staff working in the urban space, as well as private sector clients of IFC and MIGA with investments in cities</p>	<p>Key Interviews with Partners (GFDDR, Rockefeller, OECD, Medellin, Japan-World Bank TF, 100 Resilient Cities). A workshop with the Rockefeller team supporting IFC’s Cities Program; Key private partners associated with WBG</p>
	<p>With structured template and interviews, ASA assessment will study utility of ASA from the global and client perspective.</p>	<p>HR analysis of skill sets and team composition aligned with urban resilience agenda in the WBG</p>
	<p>ToC Operational Workshop/Concept Review Meeting to ground and test the theory of change in the operational context. This will be conducted in a workshop during the first part of the evaluation period.</p>	
Country Layer	<p>Systematic Review of Resilience Integration in Systematic Country Diagnostics and Country Partnership Frameworks</p> <p>Analysis in the application of World Bank Financing Instruments to build Urban Resilience</p>	<p>Interview with Key Country Counterparts (Relevant Ministries, WB CMU, PMUs, Partners) as part of the City Case Studies.</p>
City Layer	<p>City Case Studies. The case study approach will use the portfolio review and the literature to underpin mapping and development of a systemic theory. Based on this, the evaluation will identify the type of template and data collection methods that are needed to understand and measure the components of the theory. The case study mission will collect data on the main attributes, mapping the contribution of main institutions, including by collecting qualitative data on the evolution of the system. It will then map the causal influence of the WBG into that system. Due to the data collection and mapping needs of this approach, the evaluation will limit the number of full city case studies. In other cases, it will take a supply oriented perspective to trace the causal influence of the Bank’s work in a generalizable way. Attention will be paid, as part of this process, to how the Bank’s contributions support the Bank’s wider aims of poverty alleviation from a resilience perspective.</p>	<p>City Case Studies As part of the city case study, the evaluation will assess the World Bank’s role vis a vis other actors in the space, with the aim of understanding how the WBG is leveraging its human capital, financial resources, and relationships (partners) to help clients build urban resilience.</p>

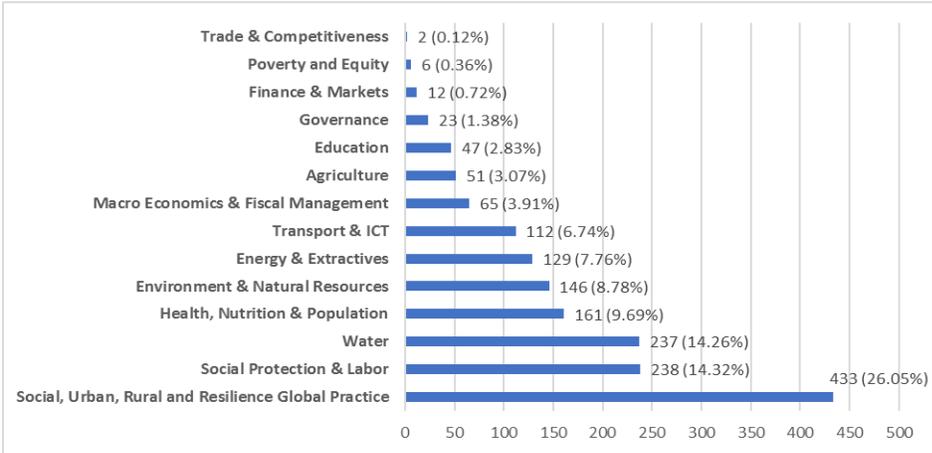
	<p>Client Survey at City Level of Resilience Officers using the roster of resilience officers from Part II Countries within the 100 Resilient Cities Program (Rockefeller).</p>	<p>City Level Interviews of Key elected and technical officials, project management units, private sector, partners, beneficiaries</p>
--	--	---

PORTFOLIO IDENTIFICATION “THE URBAN RESILIENCE UNIVERSE”

31. The portfolio identification is built on two existing Urban Resilience Portfolios developed by the World Bank’s Urban teams for projects that have a resilience theme approved between FY06-FY16.^{vi} This evaluation used the existing portfolio identification methodologies to test and reconstruct the urban resilience evaluation portfolio for FY07-FY17. Based on the literature review conducted for the approach paper, the evaluation team then added four new thematic codes to the Bank’s portfolio: social safety nets, land administration, urban housing policy, and other urban development (*See Attachment 2 for Expanded Portfolio Methodology*).

32. **Initial Portfolio Screen.** The World Bank approved 6,299 projects and trust funded activities between FY07 and FY17. Of these, 2,769 projects had at least one thematic code (at a level of 20% or more) that was used by the World Bank’s urban resilience portfolio to identify projects with resilient characteristics. Once the exhaustive universe was identified, the IEG team performed a first order portfolio screen (review of codes; text analytics of PADs) to develop the universe of projects with urban resilience themes. Projects were classified per their majority resilience theme and screened for: (i) *thematic coverage* (at least one resilience theme had to equal 20% or more); (ii) *urban content* (projects with primarily a rural focus were removed); (iii) *scope and relevance – avoid overlap* (projects with primarily a growth theme were identified and will be utilized for the FY20 *Cities and Growth* evaluation. Other themes linked to ongoing IEG evaluations (e.g., regional integration, trade facilitation and market creation) were also identified and will be assessed in cooperation with those evaluation teams.¹ The resulting universe of projects with urban resilience themes is 1,662 projects (See Figure 3).

Figure 3. IEG’s “Universe” of World Bank projects (FY07-FY17) supporting urban areas with Resilience Themes, by GP



¹ These themes included: state-owned enterprise restructuring and privatization, micro, small and medium enterprise support; financial sector development, regulation and competition policy etc.

33. **IFC.** IFC investments linked to the *Cities Initiative Portfolio* and the *IFC Strategic Cities Initiative* will be identified with the aim of learning lessons from this portfolio that can be applied in a prospective way to the sectors financed by IFC. Projects will also be identified in the countries and cities where the case study analysis will be applied.

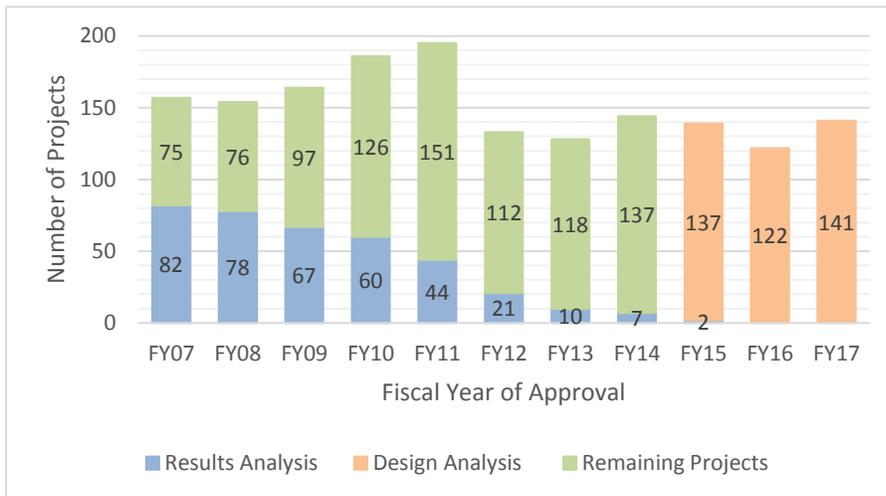
Portfolio Analysis

34. This evaluation will not construct a definitive or exhaustive portfolio of all WBG projects and investments that have resilience characteristics. Rather, it proposes to work within the identified universe of projects with resilience characteristics to answer the questions posed by the evaluation, as follows:

35. **The evaluation will conduct a Design Analysis of 400 Urban Resilience Projects approved between FY2015 and FY2017.** These projects are at mid-term or prior, providing an upstream baseline of information on urban resilience characteristics that can be used as a learning tool for counterparts in operations. The design analysis is based on an evaluability exercise conducted on a purposively selected, stratified sample of projects with urban resilience features across GP. This evaluation will apply a set of portfolio analysis tools designed to answer the first evaluation question, and its subordinate parts (see Attachment 2). The analysis applies an analytical frame that identifies and code multiple aspects of urban resilience and its benefits. Specific probes include an analysis of poverty mapping, beneficiary identification and targeting, inclusion (gender, vulnerable persons including persons with special needs), distributional impacts linked to the identified resilience themes and relevant metrics, alongside the coding of resilience risks, and the characteristics of project financed activities to mitigate these risks. Spatial and temporal issues will also be considered.

36. **Results Analysis.** A second exercise will obtain data on how the World Bank has supported the integration of resilience characteristics into urban systems – and to learn about their outcomes. The portfolio review will unpack the attributable effects of resilience interventions at the component and activity level of 306 closed and evaluated projects approved between FY2007 and FY2014. This analysis will also apply the same probes that are outlined above, including on recording the link between resilience related outcomes and poverty. For those projects that are mapped to the case study cities, the evaluation will undertake an expanded analysis of their resilience achievements, with attention on the effects on the poor.

Figure 4. Urban Resilience Delineated Set of Projects for Portfolio Analysis



37. **Comparative Analysis.** A third exercise- using the above referenced cohort of projects - will conduct a comparative analysis of two cohorts of projects (FY07-FY14; FY15-FY17) with like characteristics (GP/Sector Board/sub-sector, theme) to discern the progression of resilience integration into design over time, compare levels of integration, and map gaps. The team will also review FY18 projects mapped to the *Transport and Water GPs* to test for further resilience integration being supported by the City Resilience Program.

Illustrative Examples of World Bank Projects with Urban Resilience Characteristics

38. Recognizing that resilience is linked to multiple themes and multiple activities in a project, it is useful to illustrate some typical examples of the way that urban resilience features manifest themselves in World Bank projects across sectors (Figure 5).

Figure 5. Illustrative Examples of Urban Resilient Characteristics in WB projects in Key Sectors Analysis

Resilience Characteristic (Project Screen)	SURR (DRM)	Transport	Energy	Water
Robustness	Enhance technical capacity for DRM and emergency response, strengthen critical public facilities for earthquake resistance, support measures for building code enforcement	Heightened roads in anticipation of flooding; Constructing all seasons roads	Strengthen regulatory framework to mitigate climate and other risks. Regulations include diversification of energy generation and supply; establishment of back-up generating systems for critical services.	Upgrade and modernize the water and sanitation systems to increase coverage and provided more efficient service
Redundancy (spare capacity and back-up systems that enable continuity)		Establishment of Alternate Routes in anticipation of floods or other Shocks	Supports excess capacity which can be used in times of disaster. A contingency fund that can cover unexpected damages to the energy infrastructure/facilities in case of shocks such as earthquakes, flooding, etc.	Support alternative waste water supply systems- rainwater catchment, water tanks, bottled water, etc. water treatment kits; Plans for alternative waste water treatment facilities;
Coordination	Coordination within different agencies within the municipalities, establishing integrated rescue and response systems with other agencies, and improving systems		Foster coordination between power utilities and regulatory authorities to influence power utilities to provided service in the event of disruptions	Coordination among water, sanitation and drainage utilities to facilitate planning for future demand

	for generating and disseminating early warnings			and response in case of service disruption.
Diversity		Multiple modes of passage (roads, metros, bus, bicycle etc.	Diversify energy supply in terms of different sources such as solar, hydro; and provision (private, public, imported).	.
Inclusion	Targeting of low-income areas prone to disaster risk.	Improve access for low-income public transport users; women; people with disabilities.	Creation of specific laws/policies targeting socially excluded individuals	Equal coverage and service quality; Affordable services to low-income households. Informal settlements included.
Reflectiveness		Road planning tools to help decide which roads should be rebuilt based on past disaster experience	Planning tools that help utilities understand vulnerabilities from past shocks and help the utilities make informed design changes for the future.	Monitor WSS service disruption, evaluate vulnerability and gaps and address in design; Identify strategic facilities and plan for them in case of disaster.

CASE STUDY SELECTION

39. A layered analysis using external data on risk and vulnerability (UNISDR’s multi-hazard index) the rate of urbanization (from ECOSOC, Population Division 2016), social risks (Fragility Index) and the presence of a broad lending portfolio (that touches on multiple resilience themes) will guide the selection of case studies. The evaluation will select cities and interventions that are considered reasonable approximations – or illustrative examples- of the World Bank’s work in different urban scenarios in the context of a prevailing or “lead” type of risk or reoccurring hazard.

40. The country selection method utilizes the portfolio data to identify links between countries with high disaster and social risks and country and city portfolios that have a depth and breadth of resilience activities across sectors. For example, in East Asia, the Philippines and Vietnam have high disaster risks, and a breadth of activities in social development, urban services and housing, disaster risk management, climate change, city-wide infrastructure, and urban environmental policy (see Attachment 2 for methodology).

CASE STUDY APPROACH

41. The case study approach will develop a framework of select urban resilient systems. It will use the portfolio review and the literature to underpin the mapping and development of a systemic theory. This will be validated by counterparts, mainly through interviews. Based on this, the evaluation will identify the type of template and data collection methods that are needed to understand and measure the components of the theory. The case study mission will collect data on the main attributes, mapping the contribution of main institutions, including by collecting qualitative data on the evolution of the system. It will then map the causal influence of the World Bank group into that system. Due to the data collection and mapping needs of this approach, the evaluation will limit the number of full city case studies. In other cases, it will take a supply oriented perspective to trace the causal influence of the Bank’s work in a generalizable way.

Attention will be paid, as part of this process, to how the Bank's contributions support the Bank's wider aims of poverty alleviation from a resilience perspective. An expanded case study tool will be designed during the design workshop of the evaluation.

Previous Evaluations

42. There have been no major IEG evaluation on Urban Resilience, except for elements covered in the Synthesis Crisis Response and Resilience to Systemic Shocks Learning Engagement (2017). There is potential to explore urban resilience themes in several evaluations and reviews conducted between 2003 and 2017, including Natural Disaster Response (2011) and the Global Facility for Disaster Risk Reduction Global Review (2012). These reviews are scheduled to be updated through a meso-evaluation of disaster risk management that will be informed by this evaluation and through project assessments. Other relevant evaluations include Climate Change Adaption (2012), Country Cluster Program Evaluation of Small Island States (2016), Mobile Metropolises (2017). The evaluation will coordinate with ongoing IEG evaluations with linkages to urban resilience including Subnational Finance and Forced Displacement.

Design Limitations

43. Despite its strength, the evaluation design faces certain limitations:

- There is a risk that a traditional retrospective evaluation may fall short in providing consequential insight. In this context, the evaluation will identify multiple ongoing mechanisms being used by the WBG to help clients build urban resilience. These mechanisms reflect a range of approaches including diagnostics and subsequent investments and efforts to leverage resources and partnerships to strengthen existing city and sectoral development plans.
- The proposed country and city case studies will also face limitations in metropolitan areas that have poor data and record keeping. To mitigate this risk, the evaluation will focus case studies in cities where the Bank has an established portfolio and which have recently undertaken urban resilience diagnoses.

Quality Assurance Process

44. This Approach Paper has been peer reviewed by an urban evaluation expert and a leading Urban planning practitioner (i and ii below) to ensure relevance of evaluation questions, scope and issues covered, and appropriateness of the methodology. In addition, specialized experts will be engaged throughout the evaluation process (iii and iv below), including:

i) **Uma Adusumilli.** Since 2004, Uma Adusumilli is head of the regional planning division of Mumbai Metropolitan Region Development Authority.

ii) **Michael Bamberger** International evaluation expert. Former Senior Sociologist in the Bank’s Urban Department, where he published “*Monitoring and Evaluation Urban Development Programs.*”

iii) **Peter Calthorpe.** Urbanist and global practitioner on urban resilience. Author of *Urbanism in the Age of Climate Change.*

iv) **Santiago Uribe Rocha,** Chief Resilience Officer for the City of Medellin.

Expected Outputs, Outreach and Tracking

45. **Reporting.** A final report that summarizes the findings of the evaluation will be delivered to the Committee on Development Effectiveness (CODE). It will be tailored to strategic decision makers within the WBG, its partners, and client countries. The evaluation will be disseminated publicly through a targeted campaign informed by a stakeholder analysis, and as part of a wider learning and uptake strategy.

46. **Outreach strategy.** This is a collaborative evaluation that seeks to engage key operational touchpoints throughout the lifecycle of the evaluation. The evaluation methods include mechanisms to achieve WBG and client voice, including feedback loops and triangulation of interim and evolving findings. Upon reflection of management comments, and once the report is approved by CODE, IEG will launch the report in Washington DC in the presence of internal and external actors and institutions. A preliminary selection of stakeholders will include WBG management and staff, country and city level policy and planning officials, resilience experts, partners including Rockefeller, OECD- bilateral and multilateral agencies and civil society. The evaluation will work with IEG’s Knowledge and Communication team to plan a detailed outreach strategy during the evaluation.

Resources

47. **Timeline and budget.** The evaluation will be submitted to CODE by the end of Q2 FY19. The budget for the study is estimated at \$1.0 million, in line with the evaluation framework and associated methods, including outreach activities.

46. **Team and Skills Mix.** The skills mix required to complete this evaluation includes expertise in urban planning, evaluation, environmental and social, gender, private sector (including knowledge of IFC), and partnerships. The evaluation will be conducted by Victor Vergara (TTL) and Lauren Kelly (Co-TTL) with core support from Kavita Mathur, Victoria Alexeeva, Jingwen Zang, Pallavi Sengupta, and Diana Rangel-Alfaro. Local consultants will be recruited for data collection at the city level.

Attachment 1: Bibliography

World Bank

- Arnold, Margaret, Robin Mearns, Kaori Oshima, and Vivek Prasad. 2014. "Climate and Disaster Resilience: The Role for Community-Driven Development." Social Development Department, World Bank, Washington, DC.
- Baker, Judy L. 2011. *Climate Change, Disaster Risk, and the Urban Poor: Cities Building Resilience for a Changing World*. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-8845-7
- Burohappold Engineering. 2016. *Comprehensive Urban Resilience Masterplan for the City of Beirut Report*. http://www.preventionweb.net/files/48242_160315unisdrbhe.pdf
- Crookes, Yusupha B. and Ede Jorge Ijjasz-Vasquez. 2015. "Rising Through Cities in Ghana: Time Time for Action is Now to Fully Benefit from the Gains of Urbanization". News Release, World Bank, May 14.
- Ellis, Peter and Mark Roberts. 2016. *Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability*. Washington, DC: World Bank. DOI: 10.1596/978-1-4648-0662-9
- Jha, Abhas K., Barenstein, Jennifer Duynne, Phelps, Priscilla M., Pittet, Daniel, and Sena, Stephen. 2010. *Safer Homes, Stronger Communities: Resources for Reconstructing Housing and Communities after Natural Disasters*. Washington, DC: World Bank. DOI 10.1596/978-0-8213-8045-1
- Jha, Abhas, K., Bloch, Robin, and Lamond, Jessica. 2012. *Cities and Flooding. A Guide to Integrated Urban Flood Risk Management for the 21st Century*. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-8866-2
- Jha, Abhas K., Todd W. Miner, and Zuzana Stanton-Geddes. 2013. *Building Urban Resilience: Principles, Tools, and Practice*. Directions in Development: Environment and Sustainable Development. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-8865-5
- Kariuki, R. Mukami et al. 2013. "Harnessing Urbanization to End Poverty and Boost Prosperity in Africa: An Action Agenda for Transformation." Working Paper 82546, World Bank, Washington, DC.
- Kok Shun, Sung Heng C. 2015. *Cote d'Ivoire - Urbanization Review: Diversified Urbanization*. Washington, D.C: World Bank. <http://documents.worldbank.org/curated/en/403571468027247309/Cote-d-Ivoire-Urbanization-review-diversified-urbanization>
- Ozlu, Mehmet Onur et al. 2015. "Ethiopia - Urbanization Review: Urban Institutions for a Middle-Income Ethiopia." Working Paper 100238, World Bank, Washington, DC.
- Park, Jaegil et al. 2011. *Urbanization and Urban Policies in Korea*. Republic of Korea: Korea Research Institute for Human Settlements. http://www.gdpc.kr/data/data/Urbanization_and_Urban_Policies_in_Korea.pdf
- Prasad, Neeraj, Federica Ranghieri, Fatima Shah, Zoe Trohanis, Earl Kessler, and Ravi Sinha. 2009. *Climate-Resilient Cities: A Primer to Reducing Vulnerabilities to Disasters*. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-7766-6
- Samad, Taimur, Nancy Lozano-Garcia and Alexandra Panman. 2012. *Colombia Urbanization Review: Amplifying the Gains from the Urban Transition*. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-9522-6
- World Bank. 2004. *Sri Lanka: Reshaping Economic Geography: Connecting People to Prosperity*. The World Bank Colombo Office. Colombo, Sri Lanka.
- World Bank. 2010. *World Development Report 2010 : Development and Climate Change*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/4387>
- World Bank. 2011. "Making Women's Voices Count: Addressing Gender Issues in Disaster Risk Management in East Asia and the Pacific." Gender and Disaster Risk Management - Guidance Notes, Working Paper 65833, World Bank, Washington, DC.

- World Bank. 2011. *Vietnam Urbanization Review: Technical Assistance Report*. A World Bank Study. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/225041468177548577/Vietnam-urbanization-review-technical-assistance-report>
- World Bank. 2012. “Indonesia - The Rise of Metropolitan Regions: Towards Inclusive and Sustainable Regional Development”. Working Paper 71740, World Bank, Washington, DC. <http://documents.worldbank.org/curated/en/520931468269430645/Indonesia-The-rise-of-metropolitan-regions-towards-inclusive-and-sustainable-regional-development>
- World Bank. 2012. “Planning for Uganda’s Urbanization.” Working Paper 69523, Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/353841468318588458/Planning-for-Ugandas-urbanization>
- World Bank. 2012. “Improving the Assessment of Disaster Risks to Strengthen Financial Resilience. Experience and Policy Lessons from the Work of the World Bank.” In *Improving the Assessment of Disaster Risks to Strengthen Financial Resilience: A Special Joint G20 Publication by the Government of Mexico and the World Bank*. Working Paper 70988, Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/606131468149390170/Improving-the-assessment-of-disaster-risks-to-strengthen-financial-resilience>
- World Bank. 2013. “Beyond the City Limits: Report Finds Rapid Suburban Growth in India, Potential for Sustainable Cities to Reduce Poverty”. *Feature Story*, World Bank, October 21.
- World Bank. 2013. “New World Bank report Offers Policymakers Roadmap for Building Resilient Sustainable Cities”. *Press Release*, World Bank, January 22.
- World Bank and the Development Research Center of the State Council, P. R. China. 2014. *Urban China: Toward Efficient, Inclusive, and Sustainable Urbanization*. Washington, DC: World Bank. DOI: 10.1596/978-1-4648-0206-5
- World Bank. 2014. *An Expanded Approach to Urban Resilience: Making Cities Stronger*. Urban Development and Resilience Unit, Sustainable Development Network, Washington, DC : World Bank.
- World Bank. 2015. *Rise of the Anatolian Tigers: Leveraging and Managing Urbanization in Turkey*. Social, Urban, Rural, Resilience Global Practice Group, Washington, DC: World Bank.
- World Bank. 2016a. *From Oil to Cities: Nigeria’s Next Transformation*. Directions in Development. Washington, DC: World Bank. doi:10.1596/978-1-4648-0792-3.
- World Bank. 2016b. “Malawi Urbanization Review: Leveraging Urbanization for National Growth and Development.” Working Paper AUS10133, World Bank, Washington, DC.
- World Bank. 2016c. *Republic of Kenya: Kenya Urbanization Review*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/23753>
- World Bank. 2016d. *Vietnam - Can Tho Urban Development and Resilience Project*. Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/316951467987903833/Vietnam-Can-Tho-Urban-Development-and-Resilience-Project>
- World Bank Group. 2016e. *Investing in Urban Resilience: Protecting and Promoting Development in a Changing World*. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/25219> License: CC BY 3.0 IGO.”

OECD

- OECD. 2012. *Compact City Policies: A Comparative Assessment*. OECD Green Growth Studies, OECD Publishing. <http://dx.doi.org/1.1787/9789264167865-en>
- OECD. 2014. *Guidelines for resilience systems analysis: How to Analyze Risk and Build a Roadmap to Resilience*. The Development Assistance Committee: Enabling Effective Development, OECD Publishing. <https://www.oecd.org/dac/Resilience%20Systems%20Analysis%20FINAL.pdf>
- OECD. 2016. *Resilient Cities*. <http://www.oecd.org/cfe/regional-policy/resilient-cities.htm>

Asian Development Bank

- Asian Development Bank. 2014. *Urban Climate Change Resilience: A Synopsis*. Mandaluyong, Philippines: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/149164/urban-climate-change-resilience-synopsis.pdf>
- Lindfield, Michael, and Steinberg, Florian. 2011. *Inclusive Cities*. Mandaluyong, Philippines: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/29053/inclusive-cities.pdf>
- Lindfield, Michael, and Steinberg, Florian. 2012. *Green Cities*. Mandaluyong, Philippines: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/30059/green-cities.pdf>
- Sandhu, Sonia Chand, Ramola Naik Singru, John Bachmann, Vaideeswaran Sankaran, and Pierre Arnoux. 2016. *Green Solutions for Livable Cities*. Mandaluyong, Philippines: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/181442/green-solutions-livable-cities.pdf>
- Vojinovic, Zoran and Huang, Jingmin. 2014. *Unflooding Asia: The Green Cities Way*. Manila, Philippines: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/149304/unflooding-asia.pdf>

Africa Development Bank

- African Development Bank Group. (no date). *The Bank Group's Urban Development Strategy: Transforming Africa's Cities and Towns into Engines of Economic Growth and Social Development*. Operational Resources and Policies Department. <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Urban-Development%20Strategy-Rev%201.pdf>

IADB

- Ellis J. Juan et al. 2014. *Methodological Guide: Emerging and Sustainable Cities Initiative*. 2nd Ed. Inter-American Development Bank. https://issuu.com/ciudadesemergentesysostenibles/docs/methodological_guide_esci

100 Resilient Cities

- 100 Resilient Cities. 2016. *Global Migration Resilient Cities at the Forefront: Strategic Actions to Adapt and Transform Our Cities in An Age of Migration*. Network Exchanged Program. <http://action.100resilientcities.org/page/-/100rc/pdfs/Global%20Migration%20Resilient%20Cities%20At%20The%20Forefront%20DIGITAL%20%28High%20Res%29.pdf>
- 100 Resilient Cities. 2017. "Catalyzing the Urban Resilience Market." For more information, see <http://www.100resilientcities.org/catalyzing-the-urban-resilience-market/>
- 100 Resilient Cities. 2017. *City Strategies*. For more information, see <http://www.100resilientcities.org/strategies/>
- The Rockefeller Foundation. 2014. *City Resilience Framework*. For more information, see <https://assets.rockefellerfoundation.org/app/uploads/20140410162455/City-Resilience-Framework-2015.pdf>
- The Rockefeller Foundation. 2017. *Cities Taking Action: How the 100RC Network is Building Urban Resilience*. http://100resilientcities.org/wp-content/uploads/2017/07/WEB_170720_Summit-report_100rc-1.pdf

Regional Plan Association

- Regional Plan Association. 2017. *Fragile Success: Taking Stock of the New York Metropolitan Region*. For more information, see <https://fragile-success.rpa.org/>

United Nations

- Global Facility for Disaster Reduction and Recovery. 2010. *Partnership Charter: Committed to Reducing Vulnerabilities to Hazards by Mainstreaming Disaster Reduction and Recovery in Development Strategies*. <https://www.gfdr.org/sites/default/files/publication/partnership-charter-2010.pdf>

UNISDR. 2012. *How to Make Cities More Resilient: A Handbook For Local Government Leaders*. Geneva, Switzerland. For more information, see http://www.unisdr.org/files/26462_handbookfinalonlineversion.pdf

United Nations. 2016. *New Urban Agenda*. Habitat III Secretariat: Quito, Ecuador. <http://http://habitat3.org>

United Nations. 2017. *UN Sustainable Development Goals*. For more information, see <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

UN Habitat. 2017. *City Resilience Profiling Programme*. For more information, see <https://unhabitat.org/urban-initiatives/initiatives-programmes/city-resilience-profiling-programme/>

Others:

Anh, Tran Tuan, Tran Van Giai Phong, Nguyen Thi Kim Ha and Dinh Quang Cuong. 2016. "Gender Analysis in Building Climate Resilience in Da Nang: Challenges and Solutions." Asian Cities Climate Resilience, Working Paper Series 35. <http://pubs.iied.org/pdfs/10784IIED.pdf>

Braithwaite, Jeanine, and Daniel Mont. 2009. "Disability and Poverty: A Survey of World Bank Poverty Assessments and Implications." *European Journal of Disability Research* (3): 219-232, Elsevier Masson. DOI: 10.1016/j.alter.2008.10.002

C3 Living Design Project. 2017. *Resilience Action List and Credit Catalog*. For more information, see http://c3livingdesign.org/?page_id=5110

Davis, Diane E. 2012. *Urban Resilience in Situations of Chronic Violence*. Final Report, MIT. <http://cis.mit.edu/sites/default/files/documents/urbanresiliencereport2012.pdf>

Dieu, Pham Thi. 2016. "Gender Roles in Urban Climate Resilience: Lessons from Hue, Vietnam." Asian Cities Climate Resilience, Policy Brief, IIED, London.

Disability Inclusive and Accessible Urban Development Network. 2016. *The Inclusive Imperative: Towards Disability-Inclusive and Accessible Urban Development: Key Recommendations for an Inclusive Urban Agenda*. CBM. http://www.cbm.org/article/downloads/54741/The_Inclusion_Imperative__Towards_Disability-Inclusive_Development_and_Accessible_Urban_Development.pdf

Enterprise Community. 2015. *2015 Enterprise Green Communities Criteria Checklist*. For more information, see <https://www.enterprisecommunity.org/solutions-and-innovation/green-communities/criteria>

International Federation of Red Cross and Red Crescent Societies. *Gender and Diversity for Urban Resilience: An Analysis*. For more information, see http://www.preventionweb.net/files/44450_genderdiversityurbanresilience.pdf

Mancini, Francesco, and Súilleabháin, Andrea Ó. 2016. "Building Resilience in Cities under Stress." International Peace Institute, New York.

ⁱ The New Urban Agenda was agreed upon by UN member states and will serve as a guideline for urban development for the next twenty years (2016-2036). The World Bank Group and other IFIs are part of this process.

ⁱⁱ During this period, the Bank produced seminal analytical pieces on *Cities and Climate Change: An Urgent Agenda* (2010), *Climate Change Adaptation in Cities* (2011), *Urban Risk Assessment* (2012), and *Climate Change, Disaster Risk and the Urban Poor: Cities Building resilience for a changing world* (World Bank, 2012).

ⁱⁱⁱ The suite of socially oriented knowledge products related to urban resilience includes the Bank's work on *Building Resilience to Disaster and Climate Change through Social Protection* (World Bank, 2013) and in the health sector, a *Guidance Note for Integration of Disaster Risk Reduction in World Bank Health Sector Projects* (2009).

^{iv} This is also aligned with IEG's 3rd Strategic Engagement Area: *Fostering Resilience to Shocks and Threats*.

^v See *Investing in Urban Resilience: Protecting and Promoting Development in a Changing World* (World Bank, 2015).

^{vi} See "An Expanded Approach to Urban Resilience: Making Cities Stronger", World Bank Group, Urban Development and Resilience Unit, Sustainable Development Network. June 15th, 2014. See also, "Investing in Urban Resilience: Protecting and Promoting Development in a Changing World", World Bank Group, Global Facility for Disaster Reduction and Recovery, 2015.

Attachment 2: Urban Resilience Portfolio Identification and Analysis Methodology

Learning from and Building on an Existing Portfolio.

The portfolio identification built on two existing Urban Resilience Portfolios developed by the World Bank’s Urban teams for projects approved between FY06-FY16 that were determined to have a resilience theme.² The existing Bank portfolios use 25 of the Bank’s pre-2016 codes (the theme codes were revised in 2016). These were divided into two categories: Core and Non-Core. Core included Disaster Risk Management and Climate Change projects and Non-Core included projects with 23 theme codes and were grouped in a category called “Other Urban Resilience.”³ This evaluation learned from the existing portfolio identification methodologies used by the World Bank, and used these methodologies to test and reconstruct the urban resilience evaluation portfolio. To reconstruct the evaluation portfolio, this evaluation team undertook the following steps:

Identifying the Project Universe. IEG used Business Intelligence to validate and update the existing portfolio (FY07-FY17) to ensure that the entire universe of potential projects with resilience theme codes would be captured. IEG downloaded all 6,299 projects approved between FY07-FY17. It then pulled every project from this portfolio that had at least one resilient theme code. In the absence of information regarding the magnitude of thematic content that was used by the two Urban Reviews to create their baseline portfolios, IEG assigned a 20% rule. That is, for a project to be included in the universe of projects with an urban resilience theme, at least one of the resilient themes must weigh 20% or more. This resulted in a universe of 2,431 projects. Based on the literature review conducted for the approach paper, the evaluation team then added four new thematic codes to the universal portfolio. These theme codes included social safety nets, land administration, urban housing policy, and other urban development. This resulted in a total universe of 2,769 projects.

Classification of the Project Universe. Once the project universe was identified, the evaluation team conducted a thematic analysis – using mainly the theme codes- to determine the majority theme of the project (by percentage), and coded the projects accordingly. Projects have multiple theme codes (up to five). In the event of a tie, the team manually screened the project content to determine the majority theme. When a project had a single relevant theme that was less than 20%, it was dropped from the evaluation portfolio.

² See “An Expanded Approach to Urban Resilience: Making Cities Stronger”, World Bank Group, Urban Development and Resilience Unit, Sustainable Development Network. June 15th, 2014. See also, “Investing in Urban Resilience: Protecting and Promoting Development in a Changing World”, World Bank Group, Global Facility for Disaster Reduction and Recovery, 2015.

³ Public Expenditure, Financial Management and Procurement; Climate Change; City-Wide Infrastructure and Service Delivery; Natural Disaster Management; Urban Services and Housing for the Poor; Other Urban Economic Development; Water Resource Management; Micro, Small and Medium Enterprise Support; Conflict Prevention and Post-Conflict Reconstruction; Pollution Management and Environmental Health; Environmental Policies and Institutions; Other Environment and Natural Resources Management; Global Food Crisis Response; Improving Labor Markets; Nutrition and Food Security; Other Social Protection and Risk Management; HIV/AIDS; Other Communicable Diseases; Municipal Governance and Institution Building; Social Inclusion; Vulnerability Assessment and Monitoring; Injuries and non-communicable diseases; Malaria; Municipal Finance; Tuberculosis;

Determining the Evaluation Portfolio Universe

First Screen: Remove Rural projects from the Evaluation Portfolio Once the universe of projects was assembled, the evaluation team screened for rural content through several sequential methods. It identified and screened out all projects that had only rural theme codes, and no urban codes. Since in many cases, projects are not spatially descriptive, the team then used manual text analytics (by reading project abstracts, objectives and project description). A total of 499 projects with rural content were removed.⁴

Second Screen: Move projects that have a clear Growth theme to Cities and Growth (IEG's forthcoming evaluation).⁵ Once the project universe was classified, and screened for rural content, the evaluation team then screened the total remaining classified portfolio for urban projects that had primarily a growth theme. The evaluation team identified a set of six private sector theme codes that were observed to often work in tandem, and that were present in the identified project universe. These theme codes are “other private sector development”, “infrastructure for private sector development”; ‘Privatization and State Owned Enterprise Restructuring’; “Trade Facilitation”; “Regulation and Competition policy” and “MSME.” The evaluation utilized a decision-rule that stipulated that if these themes constituted the majority of the thematic content (as a % of the total thematic content), then they were moved to the Cities and Growth evaluation. While this method creates a clear delineation for the purpose of parsing projects across two major sequential evaluations in IEG, IEG recognizes that private sector oriented projects with a small amount of resilience content would have been removed. The evaluation team removed a total of 610 *Cities and Growth* projects.

The Urban Resilience Evaluation Portfolio Universe

The resulting urban resilience portfolio is 1,662 projects, of which 1,456 projects are associated with the “top 7 GPs” that will be prioritized by the review, including: SURR, Social Protection & Labor, Water, HNP, Environment & Natural Resources; Energy & Extractives, and Transport & ICT.

⁴ Rural Services and Infrastructure; Rural non-farm Income Generation; Rural Markets; Rural Policies and Institutions and Other Rural Development.

⁵ Infrastructure services for private sector development; State-owned enterprise restructuring and privatization; Micro, Small and Medium Enterprise support; Other Financial Sector Development; Regulation and competition policy; Legal institutions for a market economy; Other Private Sector Development; International financial standards and systems; Regional integration; Trade facilitation and market access; Export development and competitiveness.

Figure 6. IEG’s “Universe” of World Bank projects (FY07-FY17) supporting urban areas with Resilience Themes, by GP



Portfolio Analysis

Three different portfolio analysis methods will be utilized to contribute evidence to the first evaluation question:

The first exercise is a **“Real Time” Analysis** of 400 Urban Resilience Projects whose implementation is at mid-term or prior, with the aim of providing an upstream baseline of information on urban resilience characteristics that can be used as a learning tool for counterparts in operations and with clients. The real time analysis is based on an evaluability exercise that was conducted on a purposively selected, stratified sample of projects with urban resilience features across GP. This evaluation will apply a set of portfolio analysis tools designed to answer the first evaluation question, and its subordinate parts (See Box 2).

Box 2. Urban Resilience Portfolio Analysis: Key Queries

Basic Data: Names and types and sizes of cities, including spatial elements (e.g. vulnerable regions).

Beneficiaries: Are projects supporting Systems, Entities, Communities and/or Individuals? How is data disaggregated?

Resilience Activities and funding, identified and coded against 6 resilience characteristics and their definitions:

1. **Robustness.** Deals with the strength of the system, its reliability, and its ability to absorb and withstand disturbances.
2. **Inclusiveness.** Equity in access to infrastructure and services underpins social cohesion and opportunity.
3. **Redundancy.** Provisions for spare capacity or back-up systems that enable continuity of service or functionality in the event of a disturbance or increase in demand.
4. **Diversity.** Services can be supplied in several ways, including using distributed resources or multifunctional equipment, with different exposures to hazards. If one service channel gets disrupted, another can be used.
5. **Coordination.** Coordination between systems and agencies means that knowledge is shared, planning is collaborative and strategic, and responses are integrated for mutual benefit.
6. **Reflectiveness.** Resilient urban systems examine, learn, and evolve based on their past experiences.

For DPOs, prior actions will be reviewed for resilience characteristics.

Anticipated Results (PDO and Non-PDO Indicators) linked to resilience activities, disaggregated by gender and welfare category, also mobility impaired groups (e.g. disabled, elderly etc.).

Innovations including science and technology, financing schemes, emergency components or other clauses, awareness raising and social mobilization tools etc.

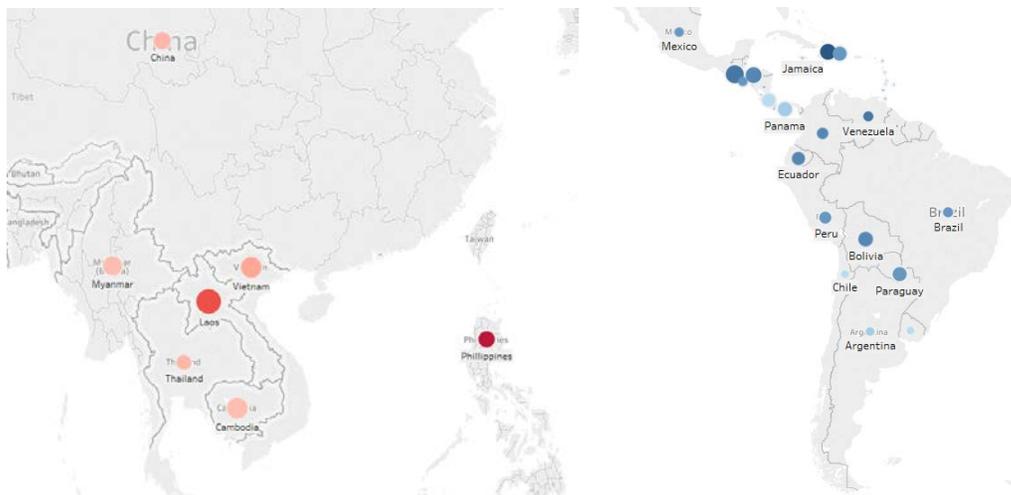
Retrospective Analysis. The second exercise has been designed obtain data on how the World Bank has supported the integration of resilience characteristics into urban systems – and to learn about their outcomes – the portfolio review will unpack the attributable effects of resilience interventions at the component and activity level of 306 closed and evaluated projects mapped to the “Top 7 Sectors.” In the absence of evidence, the portfolio team will request supplementary data on resilience features from TTLs in the World Bank. For those projects that are mapped to the case study cities, there will be expanded analysis of their resilience achievements.

Comparative Analysis. The third exercise is to conduct a comparative analysis of two cohorts of projects (FY07-FY13; FY14-FY17) that have like characteristics (GP/Sector Board/sub-sector, theme) to discern the progression of resilience integration into project design over time, compare levels of integration, and to map gaps. As discussed with operational counterparts in SURR, the team will also review FY18 projects mapped to the Transport and Water GPs to test for further resilience integration that is being supported by resilience community of practices initiatives.

Attachment 3: Country Selection Methodology and Approach

The case studies will be selected through a layered analysis of risk and vulnerability, the rate of urbanization, and the presence of a broad lending portfolio (that touches on multiple resilience themes). Based on this taxonomy, and using the country as an entry point, the evaluation will select cities and interventions that are considered reasonable approximations of the World Bank’s work in different urban scenarios in the context of a prevailing or “lead” type of risk or reoccurring hazard.

Data on urbanization rates was obtained from the United Nations Department of Economic and Social Affairs, Population Division (2016). Vulnerability is mapped using the “Multi-Hazard indicator of social exposure to natural disaster” (earthquakes, wind, storm surges, tsunamis, floods and volcano related incidents) from the *Global Risk Data Platform* of the UN Office for Disaster Risk Reduction (UNISDR) and UNEP. To map social risks, the evaluation uses the *Fragile States Index*, that utilizes and weights indicators related to security, cohesion, economic fragility, demographic pressure, refugee and IDP flows into a single indicator.



The country selection method then utilizes the portfolio data to identify links between countries with high disaster and social risks and country and city portfolios that have a depth and breadth of resilience activities across sectors. For example, in East Asia, the Philippines has high disaster risks, and a breadth of activities in social development, urban services and housing, disaster risk management, climate change, city-wide infrastructure, and urban environmental policy (Table 1).n

Table 1: Heatmap of Urban Resilience Themed Projects by Country (EAP Region)

Country	Climate Change	Disaster Risk	City-Wide Infra. and Services	Urban Services and Housing, other urban Services	Municipal Governance and Finance, PER, PFM, Labor Markets	Environment, Policies, and Institutions	Water Mgmt	Conflict Prevention, Post-Conflict Prevention, Social Inclusion, protection and risk management, PDNAs.	Food Security, Health (pandemics and disease)	Urban Land admin
Cambodia	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%
Indonesia	6%	9%	3%	38%	9%	13%	6%	13%	3%	0%
Lao	0%	8%	8%	0%	8%	17%	8%	0%	42%	9%
Mongolia	0%	0%	0%	20%	20%	40%	0%	0%	20%	0%
Myanmar	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Papua Guinea	0%	0%	0%	0%	50%	0%	0%	50%	0%	0%
Philippines	9%	12%	9%	18%	3%	9%	3%	30%	7%	0%
Thailand	25%	0%	0%	25%	0%	25%	0%	25%	0%	0%
Vietnam	12%	10%	24%	17%	2%	18%	5%	5%	5%	2%
China	24%	4%	30%	4%	3%	26%	5%	0%	3%	1%

CASE STUDY APPROACH

Since resilience is a multi-dimensional concept, the case studies will examine how the World Bank Group positions itself vis a vis other players using institutional mapping in addition to questions on implementation fidelity, coordination and causality. The assessments will assess whether the Bank is meeting local demands: country or city or GP, operational demands and local utilization. The case studies will be collaborative. They will pair with key counterparts (e.g. urban resilience officers) to validate the constructed theory of change of urban resilience and to ground it in the relevant context, at the city and systems level, drivers and the Bank’s contribution, and include an analysis of the role of IFC.

Attachment 4: Previous Evaluations

PREVIOUS IEG PRODUCTS BY URBAN RESILIENCE DRIVER

Dimension	Title of Relevant IEG Evaluation	FY
Economic	Industry Competitiveness and Jobs, Evaluation	2017
	Evaluation of the World Bank Group's Response to the Global Economic Crisis: Phase I	2016
	Investment, Climate Reforms: An Independent Evaluation of World Bank Group Support to Reforms of Business Regulations (Thematic Evaluation)	2014
	Youth Employment Programs - An Evaluation of World Bank and IFC Support (Evaluation)	2013
	Cluster Country Program Evaluation on Small States—Pacific Island Countries Program Evaluation (FY05–15)	2010
Institutional	Crisis Response and Resilience to Systemic Shocks: Lessons from IEG Evaluations, Learning Product	2016
	World Bank Group Support to Health Financing	2014
	Responding to Global Public Health: Learning from Evaluation of the World Bank Experience with Avian Influenza 2006–13	2014
	Improving Institutional Capability and Financial Viability to Sustain Transport (Evaluation)	2013
	Improving Municipal Management for Cities to Succeed	2009
	A Decade in Action in Transport: An Evaluation of World Bank Assistance to the Transport Sector, 1995-2005	2007
Social	Violence and Conflict in Middle-Income Countries, Evaluation	2016
	Fragility and Conflict in Low-income Countries	2013
	Social Safety Nets: An Evaluation of World Bank Support, 2000-2010 (Evaluation)	2011
Environment	Pollution Management	2018
	Mobile Metropolises: An IEG Evaluation of the World Bank's Group Support for Urban Transport	2016
	The World Bank Group and the Global Food Crisis: An Evaluation of the World Bank Group Response	2013
	Adapting to Climate Change: Assessing the World Bank Group Experience Phase III	2012
	The Global Facility for Disaster Reduction and Recovery (GFDRR)—Global Program Review	2012
	Natural Disaster Response: Lessons from Evaluations of the World Bank and Others	2011
	Responding to Floods in West Africa: Lessons from Evaluation	2010
	Water and Development: An Evaluation of World Bank Support, 1997-2007 (Evaluation)	2010
	Climate Change and the World Bank Group: Phase I: A Evaluation of World Bank Win-Win Energy Policy Reforms	2009
	Environmental Sustainability: An Evaluation of World Bank Group Support	2008
	Hazards of Nature, Risks to Development: An Evaluation of World Bank Assistance for Natural Disasters. (Evaluation)	2008
	Supporting Environmental Sustainability: An Evaluation of World Bank Group Experience, 1990-2007 (Evaluation)	2008