ASSESSING CITY RESILIENCE

Lessons from Using the UNISDR Local Government Self-Assessment Tool in Thailand and Vietnam

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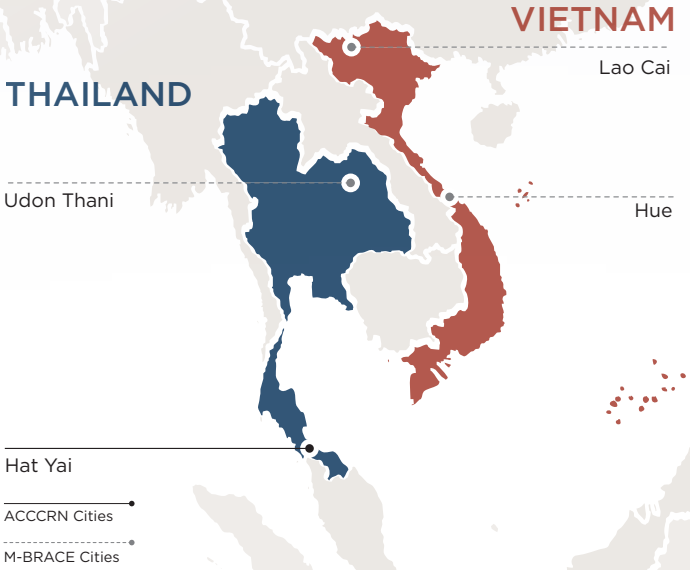
Photo by Richard Friend

1.0 INTRODUCTION



This report presents the experience and findings that have come out of applying the United Nations International Strategy for Disaster Reduction (UNISDR) Local Government Self-Assessment Tool (LGSAT) in four cities in Vietnam and Thailand. This tool was applied under the framework of the Mekong Building Climate Resilience Asian Cities (M-BRACE) program supported by United States Agency for International Development (USAID) and the Asian Cities Climate Change Resilience Network (ACCCRN) supported by Rockefeller Foundation.

In each of these cities—Hue and Lao Cai (Vietnam, M-BRACE) and Udon Thani (Thailand, M-BRACE) and Hat Yai (Thailand, ACCCRN)—the Institute for Social and Environmental Transition-International (ISET-International), the Thailand Environment Institute (TEI) and the Vietnam National Institute for Science and Technology Policy and Strategy Studies (NISTPASS) have been working for several years under programs to build city stakeholder capacity to build climate resilience by engaging directly with city stakeholders. The LGSAT was applied in collaboration with the UNISDR Asia Office in Bangkok.

Figure 1

M-BRACE & ACCCRN Programs to Build Urban Climate Resilience in South and Southeast Asia

Mekong–Building Climate Resilience in Asian Cities (M-BRACE)

Purpose: Refine and replicate tools for building urban resilience in Asian cities

Supported by: United States Agency for International Development (USAID)

Cities: Hue and Lao Cai, Vietnam; Phuket and Udon Thani, Thailand

Partners: Institute for Social and Environmental Transition-International (ISET-International), Thailand Environment Institute (TEI), Vietnam National Institute for Science and Technology Policy and Strategy Studies (NISTPASS)

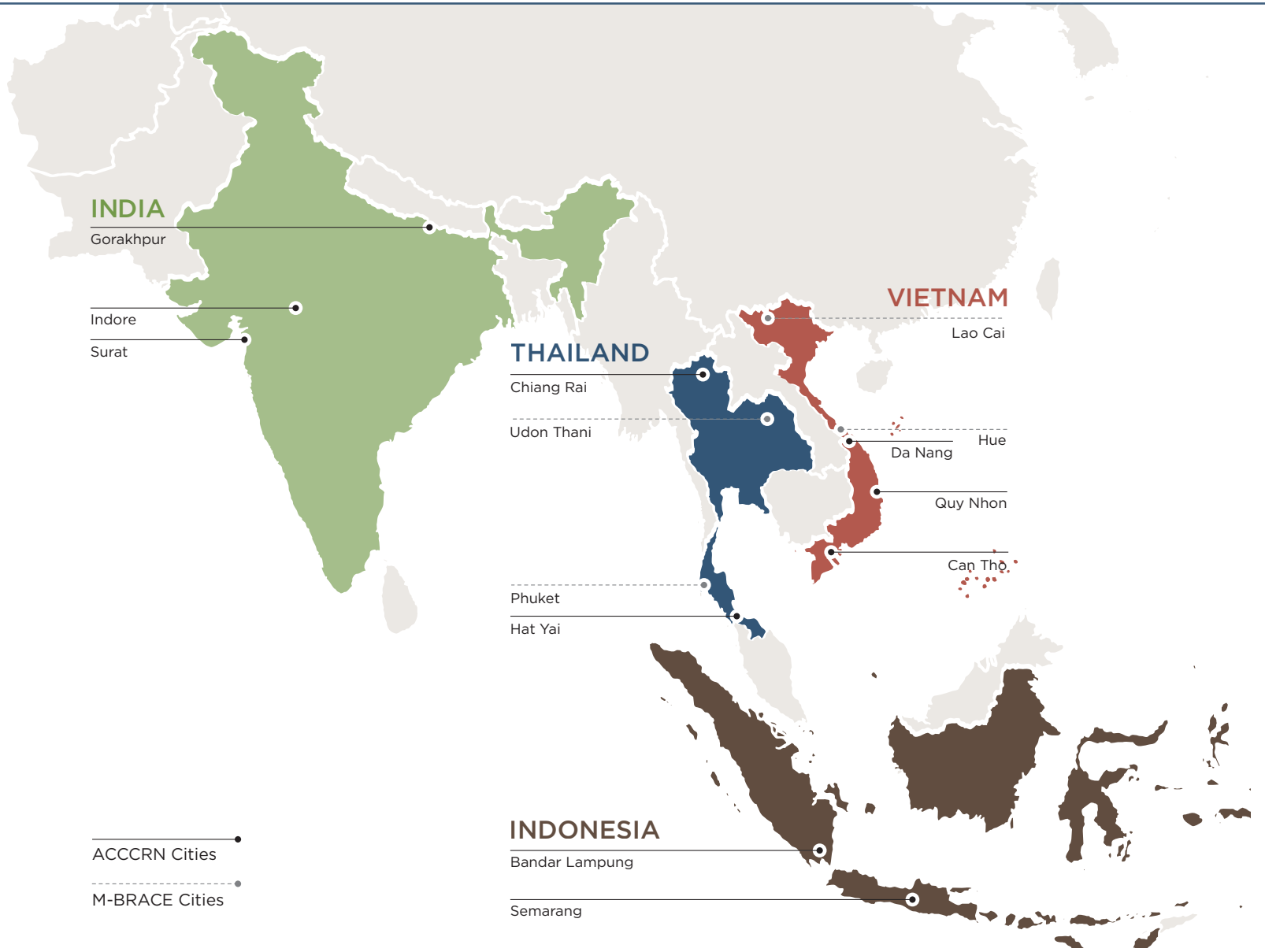
Asian Cities Climate Change Resilience Network (ACCCRN)

Purpose: Develop, test and demonstrate practical strategies for responding to the impacts of climate change on urban areas

Supported by: The Rockefeller Foundation

Cities: Can Tho, Quy Nhon, and Da Nang, Vietnam; Hat Yai and Chiang Rai, Thailand; Bandar Lampung and Semarang, Indonesia; Gorakhpur, Indore, and Surat, India

Partners: Institute for Social and Environmental Transition-International (ISET-International), Thailand Environment Institute (TEI), Vietnam National Institute for Science and Technology Policy and Strategy Studies (NISTPASS), Verulam, APCO Worldwide, Arup International Development, International Council for Local Environmental Initiatives (ICLEI), International Institute for Environment and Development (IIED), International Center for Climate Change and Development (ICCCAD), Asian Disaster Preparedness Center, MercyCorps, TARU Leading Edge, Gorakhpur Environmental Action Group (GEAG), The Energy and Resources Institute (TERI)


INDIA
Gorakhpur
Indore
Surat
THAILAND
Chiang Rai
Udon Thani
Phuket
Hat Yai
VIETNAM
Lao Cai
Hue
Da Nang
Quy Nhon
Can Tho
INDONESIA
Bandar Lampung
Semarang
ACCCRN Cities
M-BRACE Cities

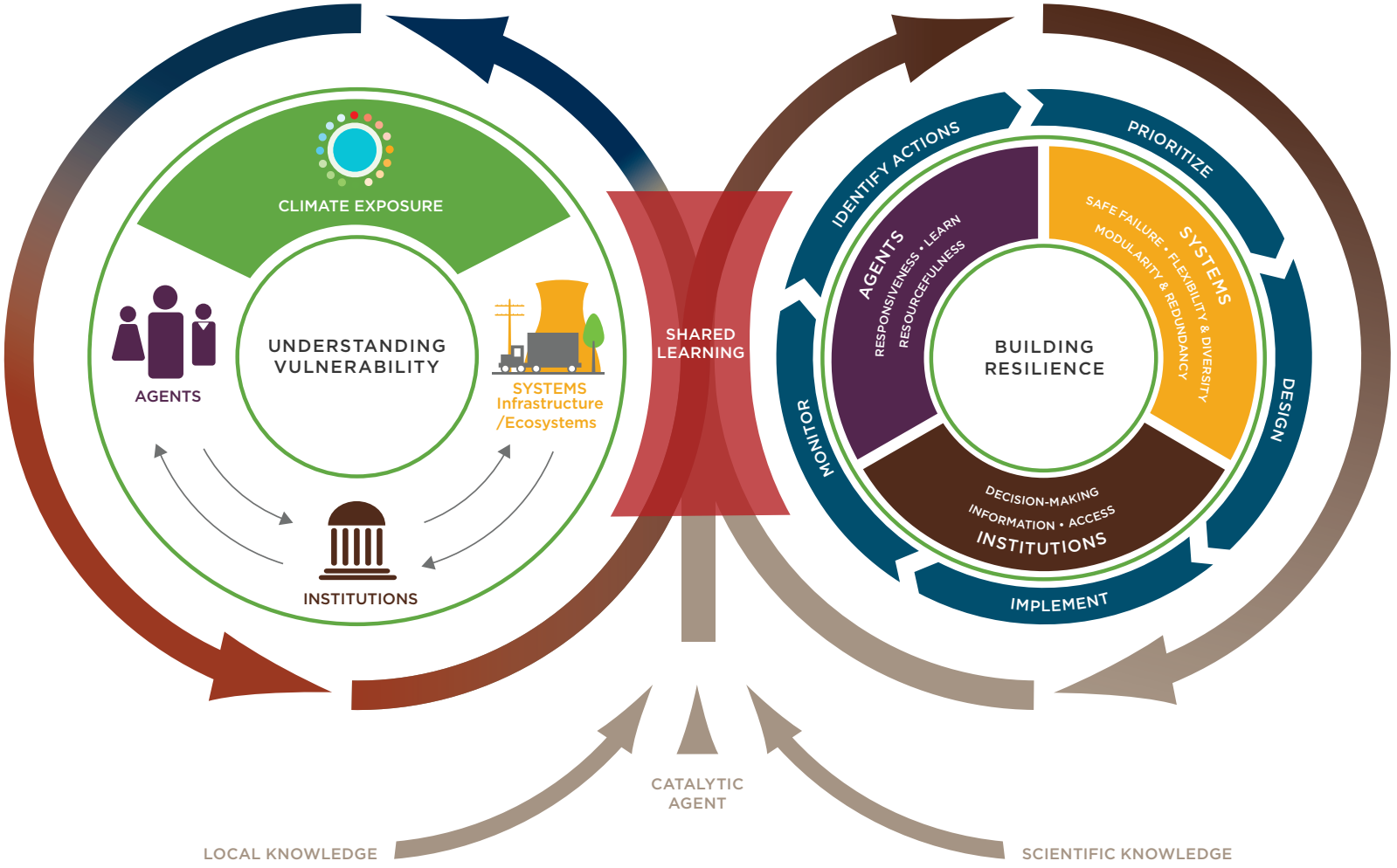
The purpose of applying the LGSAT was twofold. First, the LGSAT provides a mechanism for local stakeholders to engage in a dialogue to assess local institutional capacity for disaster risk reduction (DRR) and for climate adaptation. As such the LGSAT contributed to vulnerability assessment processes that were already being carried out by city stakeholders under the M-BRACE program. A key part of the analysis of vulnerability employed in these vulnerability assessments focused on the interaction between institutions, agents and infrastructure within urbanizing systems. The emphasis on institutional capacity in the LGSAT provides insight into critical areas of adaptive capacity in urban development and planning as well as disaster and climate change planning and response. Moreover, the participatory principles of self-assessment that underpin the LGSAT fit neatly within ISET-International's Climate Resilience Framework (CRF). The CRF is the conceptual framework which guides the M-BRACE program, in which shared learning dialogues that bring together diverse stakeholders and knowledge are at the heart of an iterative process of vulnerability assessment and taking actions to build climate resilience (see Figure 2).

Figure 2

CLIMATE RESILIENCE FRAMEWORK

The objective of M-BRACE is to develop city stakeholder capacity to address the challenges and uncertainty associated with climate change, disasters, and urbanization. By stressing the uncertainty and unpredictability of all types of change and disturbance, including natural hazards, M-BRACE is helping city stakeholders build the capacity to learn and reorganize as they address these challenges.

The Climate Resilience Framework (CRF) provides a conceptual framework for assessing vulnerabilities and risk, identifying resilience strategies—and creating an open, inclusive learning process to identify specific measures and processes that can address the uncertainties of climate change through action and implementation.


CLIMATE EXPOSURE
AGENTS
UNDERSTANDING VULNERABILITY
SYSTEMS Infrastructure /Ecosystems
INSTITUTIONS
SHARED LEARNING
IDENTIFY ACTIONS
PRIORITIZE
DESIGN
IMPLEMENT
MONITOR
AGENTS
RESPONSIVENESS • LEARN
RESOURCEFULNESS
SYSTEMS
SAFE FAILURE • FLEXIBILITY & DIVERSITY
MODULARITY & REDUNDANCY
BUILDING RESILIENCE
DECISION-MAKING
INFORMATION • ACCESS
INSTITUTIONS
CATALYTIC AGENT
LOCAL KNOWLEDGE
SCIENTIFIC KNOWLEDGE

'I call for the need of world leaders to address climate change and reduce the increasing risk of disasters- and world leaders must include mayors, townships and community leaders.'

—Ban Ki-moon, UN Secretary-General
Incheon Conference "Building an Alliance of Local Governments for Disaster Risk Reduction", August 2009

Second, applying the LGSAT in this context, with a primary focus on urban climate change resilience, is also an opportunity to test the extent to which the self-assessment tool can be applied to address the diverse concerns around climate change specifically, rather than just disaster risk reduction. The LGSAT comes out of global concerns to assess institutional capacity to address disasters as outlined in the Hyogo Framework for Action. While concerns for disasters and climate change do overlap, they do not always mesh completely. As climate change resilience becomes an increasingly important area of concern within the global campaign to which the LGSAT contributes—the Making Cities Resilient Campaign—testing the tool in cities that are engaged in an ongoing process to address climate change has provided insights into how the LGSAT might be adapted in order to be more clearly focused on climate change concerns.

The LGSAT was applied and tested in multi-stakeholder collaborative discussion groups similar to the shared learning dialogues in ACCCRN and M-BRACE. Successful application of the tool started with preparing facilitation teams in each city so that they could lead and encourage dialogue around the tool. Through this training, the Thai and Vietnamese translations of key

sections of the tool were reviewed and refined and facilitators familiarized themselves with the tool. With the facilitation teams it was agreed that the primary focus would be on generating stakeholder dialogue around the topics in ways that could accommodate divergent views and scorings of particular sections of the self-assessment. The emphasis was thus on the dialogue element of the assessment rather than on reaching consensus around specific rankings. However, the rankings that are presented in this report—and in particular the frequency of relatively low rankings—do in themsleves indicate that local stakeholders perceive critical gaps in key areas of DRR and climate change adaptation (CCA).

As a tool that allows for regular assessment of progress, the LGSAT has proved valuable within the broader framework of supporting institutional capacity development. The LGSAT process allows for continued reflection on progress, but also for identifying key gaps that need to be addressed. In this way, the LGSAT has contributed to the design and implementation of specific activities in the cities (particularly under the M-BRACE program) that aim to put in place the information generation, public consultation and participatory processes that would allow for more effective DRR and climate change adaptation policy and practice. The LGSAT clearly guided local stakeholders to these softer type interventions that would lay the groundwork for more strategic policy and planning processes at city level.

This report summarizes key lessons emerging from the assessments themselves as well as our experience in applying the LGSAT. The final sections of the report explain how the findings of the LGSAT process and the vulnerability assessments have been taken up under the M-BRACE program, as well as recommendations for how climate change resilience can be incorporated within the tool.

Endnotes

1. Making Cities Resilient: My City is Getting Ready. 2013, from http://www.unisdr.org/campaign/resilientcities/
2. UNISDR (2012). How to Make Cities More Resilient—A Handbook for Local Government Leaders. Geneva, Switzerland.
3. Ibid.

2.0 INSTITUTIONAL STRUCTURE FOR DRR & CCA

In order to set the scene for the discussion of the LGSAT itself, this section provides a summary overview of the national level institutional arrangements for DRR and CCA in Thailand and Vietnam.

2.1 Thailand

Thailand introduced the Disaster Prevention and Mitigation Legislation in 2007 under the responsibility of the Ministry of Interior (MoI). The MoI established the Disaster Prevention and Mitigation Department that is charged with providing trainings and building local capacity in disaster prevention and mitigation. The meaning of disasters stated in the legislation is broad, covering both natural and man-made hazards. At the city level, the city municipality and the local Disaster Prevention and Mitigation Department are expected to collaborate in preventing and mitigating disasters under the chairmanship by the Provincial Governor. In case of a specific event occurring, the Provincial Governor is responsible for establishing relevant local committees for managing emergency response. The Provincial Governor will chair the committees and has the highest authority in making decisions.

Regarding climate change adaptation, the Office of Natural Resources and Environmental Policy and Planning (ONEP) under the Ministry of Natural Resources and Environment (MONRE) is the key agency that is responsible for developing the National Climate Change Adaptation Strategy and providing guidance in climate change adaptation to government agencies, public administration, civil society and private sectors. The draft of this national strategy includes a section devoted to urban climate change issues and is currently going through a public consultation process. However, other line agencies have also taken on climate change in their own sectoral strategies, and the MoI hosts a climate change office under the Department of Public Works and Land Use Planning.

2.2 Vietnam

2.2.1 Disaster risk reduction institutions

Disaster risk management in Vietnam is coordinated foremost by the Central Committee for Flood and Storm Control. Additionally, each sectoral ministry has a ministerial Committee for Flood and Storm Control that cooperates with the National Central Committee and offices at provincial level. In each ministry or sector, there is a committee in charge of flood and storm control, usually chaired by a vice minister or equivalent. Sectoral and ministry committees are responsible for flood and storm preparedness and mitigation within the areas under their sector's management, including the protection of people and materials, the supply of materials, equipment, and technologies, and the evaluation and sharing of lessons learned related to flood management, control, and preparation. However, these committees are only active during the flood and storm season and only within their ministry or sector—they have little interaction with other ministries.

Central government structures are complemented by a management system extending to provincial and local levels. From the provincial level down to the commune level, the People's Committee (PC) is fully in charge of the flood and storm control as well as search and rescue activity. Committees for flood and storm control (CFSC) are established at the provincial, district, and commune level and are chaired by the chairman of the People's Committee at each respective level. The CFSC includes representatives of the various relevant ministries, as well as the Department of Dyke Management, Flood and Storm Control, the Hydro-meteorological Service, and the Vietnam Red Cross. The CCFSC have responsibility for gathering data, monitoring flood and storm events, issuing official warnings and coordinating disaster response and mitigation measures.

2.2.2 Climate Change Adaptation Institutions

Climate change adaptation is emerging as a priority policy issue for Vietnam. Global assessments have consistently identified Vietnam as being highly vulnerable to impacts of climate change. In 2008, the National Target Program to Respond to Climate Change (NTP-RCC) was launched. The National Committee of Climate Change (NCCC) directs and coordinates climate change response activities under that program. The NCCC is housed in the Ministry of Natural Resources and Environment (MONRE), who serves as the ultimate focal organization for coordinating climate change adaptation and mitigation activities across line ministries and related branches. At the provincial level, Steering Committees for responding to climate change have also been set up to develop strategies and policies to respond to climate change according to their roles and functions.

3.0 SUMMARY OF KEY FINDINGS

While the specific answers to LGSAT questions were illuminating, there were common themes that emerged from the process. This section highlights these common themes.

3.1 The Process of Carrying Out the LGSAT

Applying the LGSAT in a facilitated dialogue forum provided an opportunity for city stakeholders to identify and reflect on strengths and weaknesses in areas of institutional capacity. Having an internationally applied framework with performance benchmarks allowed for dialogue around a common structure.

Further, the LGSAT dialogue highlighted how different stakeholder groups viewed institutional readiness and capacity. While the final assessment scores provide important insights into the overall institutional capacity of the cities, the debates around the scoring and the requirement to provide evidence to support scoring produced significant insights into how different groups of stakeholders identified various problems and possible solutions. This divergent scoring was partly related to how different stakeholders understood the questions and the scoring system itself that allows for different interpretations of rankings. But across all four cities, there tended to be a divergence between perceptions of state and non-state representatives: while state representatives aimed to provide a more positive assessment, non-state actors were more inclined to offer critical assessments.

There are clear gaps between policy and practice, planning, and implementation across the board in both countries. Where there has been progress at the policy and planning level it has not always been accompanied by progress in implementation.

This is most clearly the case in areas that are critical to both DRR and CCA—land use planning, building codes, and ecological planning.

In addition, some key terms applied in the LGSAT are open to broad and divergent interpretation. For example, definitions of 'good participation' and 'coordination' vary between the two countries and among stakeholders. Local government actors took participation in DRR planning as relating to participation of different state agencies, rather than the participation of civil society organizations and communities. This suggests the need for some kind of agreed indicators of what would qualify as 'good participation'.

In its current form questions around CCA are included within questions around DRR. This is problematic. Generally, knowledge of DRR and actions around DRR are more established than those regarding CCA. Assessments of institutional capacity for DRR and CCA therefore rarely correspond. In some cases during the dialogues these questions were separated allowing for more detailed assessments. This suggests the need to restructure the LGSAT to allow for separate questions along the same themes, but directed specifically to CCA. Additionally there is also room to develop questions that address CCA and concepts of climate resilience more specifically.

Clear gaps have arisen between policy and practice, planning, and implementation across the board in both countries. Key terms applied in the LGSAT are open to broad and divergent interpretation. For example, definitions of 'good participation' and 'coordination' vary between the two countries and among stakeholders.

3.2 Findings From the Self-Assessment

Planning for DRR appears to be much further advanced than for climate change adaptation.

There are strong national institutions for addressing DRR and translating national policy objectives to provincial and local levels. However, structures to support work on climate change and climate change adaptation are relatively new and do not have strong mechanisms for supporting local activities.

Assessment of hazards and risks is limited.

The assessments that are carried out are not done so with a long-term strategic perspective. Assessment of disaster hazards was often interpreted as post-disaster assessment, rather than planning in advance of hazard risks. Long-term climate vulnerabilities have only been carried out under the auspices of the Urban Climate Resilience programs (M-BRACE and ACCCRN), except for in the case of Hue, Vietnam.

Urban land use planning remains an area of critical weakness.

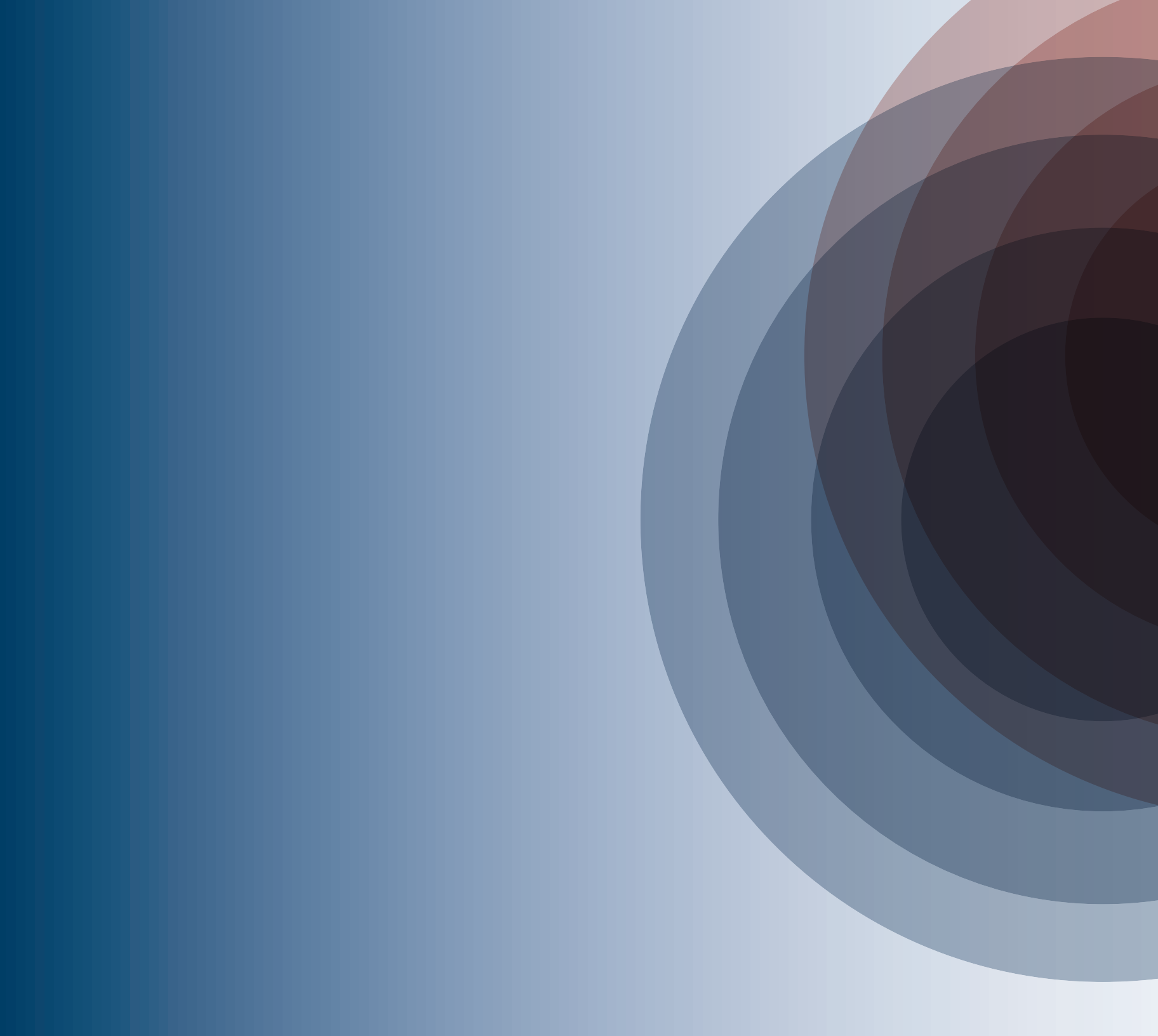
Where land use planning is carried out it is largely around zoning and is rarely informed by assessment of natural disaster hazards or long term climate vulnerability. More significantly, the implementation of land use planning is widely identified as a critical weakness, with limited enforcement, with limited public access to information around land use planning.

Much of the effort around DRR (and similarly around CCA) is based around physical infrastructure.

However, the maintenance of existing infrastructure is often so poor as to undermine its functionality, creating additional risks and hazards. The distribution of such risks across different geographical areas and groups of people is an area that also needs to be included in the LGSAT.

Definitions of who might constitute vulnerable groups differed across stakeholders.

While there was some consensus on the identification of some groups, such as women and the elderly, other groups of people were less easily identified. While there is a link between poverty and vulnerability, official poverty rates for urban areas are often inadequate to capture the realities of urban life. Moreover, as the population make up of cities changes with migration (including from other countries) significant proportions of the urban population might be excluded from assessments of vulnerable populations.



4.0 TEN ESSENTIALS ELEMENTS FOR MAKING CITIES RESILIENT

This section presents a summary of the responses from the four cities according to each of the LGSAT Ten Essentials. In many instances, city stakeholders reflected on the status of the given issue at the country level, and in these cases findings are generalized across the whole of Thailand or Vietnam. The scores that each city assigned for each essential are presented here.

LGSAT TEN ESSENTIALS

Essential 1
Put in place organization and coordination to clarify everyone's roles and responsibilities

Essential 2
Assign a budget and provide incentives for homeowners, low-income families, and the private sector to invest in risk reduction

Essential 3
Update data on hazards and vulnerabilities; prepare and share risk assessments

Essential 4
Invest in and maintain risk-reducing infrastructure, such as storm drainage

Essential 5
Assess the safety of all schools and health facilities and upgrade these as necessary

Essential 6
Enforce risk-compliant building regulations and land use planning, identify safe land for low-income citizens

Essential 7
Ensure education programs and training on disaster risk reduction are in place in schools and communities

Essential 8
Protect ecosystems and natural buffers to mitigate hazards and adapt to climate change

Essential 9
Install early warning systems and emergency management capacities

Essential 10
Ensure that the needs and parrticipation of the affected populations are at the center of reconstruction

DESCRIPTION OF PROGRESS LEVEL FOR OVERALL RANKING FOR EACH QUESTION

1 Low	2 Below Average	3 Average	4 Medium-High	5 High
Achievements are minor and there are few signs of planning or forward action to improve the situation	Achievements have been made but are incomplete, and while improvements are planned, the commitment and capacities are limited	There is some institutional commitment and capacities to achieving DRR, but progress is not comprehensive or substantial	Substantial achievement has been attained, but with some recognized deficiencies in commitment, financial resources or operational capacities	Comprehensive achievement has been attained, with the commitment and capacities to sustain efforts at all levels

PLEASE NOTE: Some cities did not address all questions when completing the LGSAT. Blank results indicate a question that was not answered by the city.

ESSENTIAL 1

Put in place organization and coordination to clarify everyone's roles and responsibilities

Both Thailand and Vietnam have central policies in place for DRR; however, in both countries there has been limited success in building capacity and sharing resources. Vietnam has established a strong national institutional structure on DRR administration, and, as a result, state agencies are seen as having relatively stronger DRR capacity. While there is a national DRR structure in Thailand, it is still relatively new and remains under development. State agencies were generally rated as being weaker in Thailand.

In contrast to DRR capacity, there is very limited CCA capacity across all four cities. Nationally, CCA responsibility lies in different institutional structures in both countries, and there is no clear mechanism that links the two areas of responsibility. Vietnam has seen some limited progress on this front as each province has been required to establish a Provincial Committee for Climate Change Adaptation; yet, roles and responsibilities remain unclear and technical capacity is still fairly limited.

Stakeholders in the Vietnamese cities rated the level of participation and partnership amongst stakeholders such as agencies, local governments and communities in DRR activities as a relative strength. In particular Vietnamese cities noted high levels of participation of agencies and communities in flood and storm prevention planning through such mechanisms as consultative workshops, meetings, and submissions of proposals by provincial governments. By contrast, stakeholders in Thailand noted few partnerships among key stakeholders and said there was very little participation in DRR planning.

However, these conversations did reveal a different understanding of partnership and participation amongst citizens and government between the cities in the two countries. In Vietnam, particularly in Hue where disasters are common, high marks were given for citizen participation in planning and prevention processes. In general, participation in Vietnam referred to citizen participation in state-led or state-sanctioned processes. In Thailand, by

contrast, participation was understood as a process where DRR and CCA efforts are citizen-led or directed. Stakeholders in Thai cities reflected low scores for this type of participation, but their conversations illustrated more critical understandings of and interest in 'meaningful' forms of participation. This was particularly reflected in conversations about vulnerable groups, which in Thailand noted that while some groups are obviously vulnerable (women, elders), there are many factors that influence vulnerability, and participation processes should accommodate this type of wider understanding.

Finally, the use of the LGSAT tool raised questions about its heavy focus on DRR capacities, with stakeholders noting that high ratings for their cities in relation to this essential element may only reflect capacity for DRR and not necessarily for CCA.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 1	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
1.1 How well are local organizations (including local government) equipped with capacities (knowledge, experience, official mandate) for disaster risk reduction and climate change adaptation?	3	3	**3**	3	2.5	**2.8**	**2.9**
1.2 To what extent do partnerships exist between communities, private sector and local authorities to reduce risk?	2	4	**3**	2	2	**2**	**2.5**
1.3 How much does the local government support vulnerable local communities (particularly women, elderly, infirmed, children) to actively participate in risk reduction decision-making, policy making, planning and implementation processes?	2	3	**2.5**	2	1.5	**1.8**	**2.1**
1.4 To what extent does the local government participate in the national DRR planning?	3	1	**2**	1	1	**1**	**1.5**

ESSENTIAL 2

Assign a budget and provide incentives for homeowners, low-income families, and the private sector to invest in risk reduction

In both Thailand and Vietnam, funds for DRR are transferred from the central government; however stakeholders in all cities noted that the levels of funding were below what was required. The majority of budget funds that are made available are directed for physical infrastructure projects. Stakeholders in all four cities highlighted good post-disaster business recovery support for small and medium enterprises. For all kinds of businesses, the existing incentives for pre-disaster risk reduction are not considered attractive or innovative. Other kinds of disaster aid are limited. In Vietnam, disaster recovery aid exists but is limited. In Thailand, loans are provided for disaster victims, but there are significant challenges distributing and accessing recovery aid. Across both countries, there is no clear budget made available for CCA.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 2	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
2.1 How far does the local government have access to adequate financial resources to carry out risk reduction activities?	2	2	**2**	-	1	**1**	**1.7**
2.2 To what degree does the local government allocate sufficient financial resources to carry out DRR activities, including effective disaster response and recovery?	2	2	**2**	-	2	**2**	**2**
2.3 What is the scope of financial services (e.g. saving and credit schemes, macro and micro-insurance) available to vulnerable and marginalised households for pre-disaster times?	2	3	**2.5**	-	1	**1**	**2**
2.4 To what extent are microfinance, cash aid, soft loans, loan guarantees, etc. available to affected households after disasters to restart livelihoods?	2	2	**2**	-	3	**3**	**2.3**
2.5 How well established are economic incentives for investing in disaster risk reduction for households and businesses (e.g. reduced insurance premiums for households, tax holidays for businesses)?	2	2	**2**	-	1	**1**	**1.7**
2.6 To what extent do local business associations, such as chambers of commerce and similar, support efforts of small enterprises for business continuity during and after disasters?	3	2	**2.5**	-	1.5	**1.5**	**2.2**

ESSENTIAL 3

Update data on hazards and vulnerabilities; prepare and share risk assessments

In both Thailand and Vietnam there is some institutional commitment to and capacity for hazard and vulnerability assessments. Multiple studies have been conducted at the city and/or government level by both government agencies and development partners to assess vulnerability to disasters. However, it is not clear to what extent hazard and vulnerability assessments are confined to post disaster assessments, rather than more strategic assessments before events. Responses from stakeholders across the four cities focused on the cities' capacity for monitoring impact rather than assessing risks before events, suggesting that even with these kinds of analyses the cities still focus more on response rather than preparation. Hue is the only city of the four where climate change vulnerability assessments have been carried out independent of M-BRACE and ACCCRN.

Regular monitoring of the costs and impacts of specific disasters is conducted by the cities. However, monitoring reports on disasters only cover estimates of total, large-scale economic loss. Loss is not broken down into detail, impacted groups are not identified, and a range of non-monetary impacts is not monitored.

When conducting hazard and vulnerability assessments, stakeholders noted that the leadership and interest of the local government is key in building connections between central and local policies. A positive role for the government can help ensure that assessments and any programs to build capacity for participating in or carrying out assessments are consistent within the city.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 3	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
3.1 To what degree does the local government conduct thorough disaster risk assessments for key vulnerable development sectors in your local authority?	3	3	**3**	2	-	**2**	**2.7**
3.2 To what extent are these risk assessments regularly updated, e.g. annually or on a bi-annual basis?	3	4	**3.5**	4	-	**4**	**3.7**
3.3 How regularly does the local government communicate to the community information on local hazard trends and risk reduction measures (e.g. using a Risk Communications Plan), including early warnings of likely hazard impact?	4	3	**3.5**	2	-	**2**	**3**
3.4 How well are local government risk assessments linked to, and supportive of, risk assessments from neighbouring local authorities and state or provincial government risk management plans?	2	3	**2.5**	4	-	**4**	**3**
3.5 How well are disaster risk assessments incorporated into all relevant local development planning on a consistent basis?	2	2	**2**	3	-	**3**	**2.3**

ESSENTIAL 4

Invest in and maintain risk-reducing infrastructure, such as storm drainage

In Thailand, most public facilities and infrastructure are located in central areas that are conveniently accessible. However, public facilities and infrastructure have not been assessed as to whether they are located in hazard or disaster risk sensitive areas. In Vietnam the construction and location of public facilities is based on flood and storm risk assessments but is not yet based on climate change scenarios. In both countries there are few protection measures in place for public facilities. In Vietnam, there is policy consideration for the ongoing risk assessment and maintenance of public facilities; however, there has been little progress implementing these policies. Further, protection and assessment measures do not yet incorporate climate change adaptation.

Both countries have made efforts to develop infrastructure development plans and projects to support DRR that focus heavily on building infrastructure. Still, maintenance, monitoring, and evaluation of DRR infrastructure and plans are quite weak. In Thailand, there is growing concern that other infrastructure projects, such as new roads and highways, are being built in such a way that they exacerbate and intensify existing flood and disaster risk; but, city and national infrastructure plans do not yet reflect these concerns.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 4	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
4.1 How far do land use policies and planning regulations for housing and development infrastructure take current and projected disaster risk (including climate related risks) into account?	3	4	**3.5**	1	-	**1**	**2.7**
4.2 How adequately are critical public facilities and infrastructure located in high-risk areas assessed for all hazard risks and safety?	3	3	**3**	2	-	**2**	**2.7**
4.3 How adequate are the measures that are being undertaken to protect critical public facilities and infrastructure from damage during disasters?	2	2	**2**	3	-	**3**	**2.3**

ESSENTIAL 5

Assess the safety of all schools and health facilities and upgrade these as necessary

In Hue, Vietnam, a city that is subject to regular disasters, there are regular assessments of the safety and risk of schools and hospitals. However, there are no risk assessments for these kinds of facilities in the other cities. Moreover, despite regular assessment in Hue, all of the participating cities reported almost no progress in ensuring maintenance and compliance with building codes, general safety standards, and/or weather-related risks. To the extent such actions are undertaken, they occur almost exclusively in the healthcare sector, focusing only on flood, storm, and fire hazards but without addressing other potential risks such as earthquakes.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 5	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
5.1 To what extent have local schools, hospitals and health facilities received special attention for 'all hazard' risk assessments in your local authority?	1	4	**2.5**	-	-	**-**	**2.5**
5.2 How safe are all main schools, hospitals and health facilities from disasters so that they have the ability to remain operational during emergencies?	2	4	**3**	-	-	**-**	**3**
5.3 To what degree do local governments or other levels of government have special programs in place to regularly assess schools, hospitals and health facilities for maintenance, compliance with building codes, general safety, weather-related risks, etc.?	1	2	**1.5**	-	-	**-**	**1.5**
5.4 How far are regular disaster preparedness drills undertaken in schools, hospitals and health facilities?	1	2	**1.5**	-	-	**-**	**1.5**

ESSENTIAL 6

Enforce risk-compliant building regulations and land use planning, identify safe land for low-income citizens

Effective land use policy and planning is a serious concern in both countries. In Thailand, city planning and the enforcement of city plans does not support DRR or CCA goals. While there are some regulations and laws to promote these activities, they are weak and enforcement is even weaker. Ultimately, land use plans and building codes do contain policies and regulations that would support local DRR efforts, but they are rarely implemented and enforced. In Vietnam, plans for construction and development are required to follow national laws, which require them to take natural disasters into account. However, beyond these plans, current land-use and building regulations do not work to facilitate DRR at the local level. A shared concern across cities in both countries is that planning for development is happening in such a way that it is increasing and redistributing risks. In Thailand, for example, there is evidence that efforts to prevent or limit flooding in one area can actually exacerbate flood risks in other nearby areas.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 6	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
6.1 How well are risk-sensitive land use regulations, building codes, and health and safety codes enforced across all development zones and building types?	1	3	**2**	2	1	**1.5**	**1.8**
6.2 How strong are existing regulations (e.g. land use plans, building codes, etc.) to support disaster risk reduction in your local authority?	1	2	**1.5**	2	1	**1.5**	**1.5**

ESSENTIAL 7

Ensure education programs and training on disaster risk reduction are in place in schools and communities

Both cities in Vietnam reported significant action around education and training. Even though there are no formal textbooks developed for schools, training and education for students and communities on DRR is carried out on regular basis. Currently there is no such effort around climate change. Central and provincial governments were recognized for providing high quality DRR training for local officials and community leaders. However, despite these training efforts, stakeholders noted that student and teacher capacity for DRR and CCA at the local level is still weak. In Thailand, there are also efforts from the central government to provide training for local leaders, but there are still very few efforts at the local level to provide training to people in the city.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 7	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
7.1 How regularly does the local government conduct awareness-building or education programs on DRR and disaster preparedness for local communities?	4	3	**3.5**	-	-	**-**	**3.5**
7.2 To what extent does the local government provide training in risk reduction for local officials and community leaders?	4	3	**3.5**	-	-	**-**	**3.5**
7.3 To what degree do local schools and colleges include courses, education or training in disaster risk reduction (including climate-related risks) as part of the education curriculum?	2	2	**2**	-	-	**-**	**2**
7.4 How aware are citizens of evacuation plans or drills for evacuations when necessary?	4	4	**4**	-	-	**-**	**4**

ESSENTIAL 8

Protect ecosystems and natural buffers to mitigate hazards and adapt to climate change

Across all four cities there are several environmental projects addressing management, conservation and rehabilitation that are being implemented at the local level. However, partly because of the gaps in existing DRR policies and strategies, there are no clear linkages between these efforts and either DRR or CCA. In Vietnam, national efforts to develop payments for ecosystem services, forest and mangrove protection, and consideration of ecosystem needs in mining and hydropower projects may all contribute to DRR and CCA. Further, stakeholders and policy-makers in both countries reported that protecting ecosystems is an important policy priority.

Despite similar reports of actions and activities in Thailand and Vietnam, stakeholders rated their progress differently. Part of this may be due to different expectations relating to ecosystem and environmental protection. Further, while many of the efforts in Vietnam are done by or in partnership with the government, environmental efforts in Thailand are predominately the domain of non-governmental organizations. either country is there very strong participation by the private sector. In neither country is there very strong participation by the private sector.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 8	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
8.1 How well integrated are local government DRR policies, strategies and implementation plans with existing environmental development and natural resource management plans?	5	3	**4**	1	2.5	**1.8**	**2.9**
8.2 To what degree does the local government support the restoration, protection and sustainable management of ecosystems services?	4	4	**4**	1	1.5	**1.3**	**2.6**
8.3 To what degree do civil society organizations and citizens participate in the restoration, protection and sustainable management of ecosystems services?	4	3	**3.5**	1	2.5	**1.8**	**2.6**
8.4 To what degree does the private sector participate in the implementation of environmental and ecosystems management plans in your local authority?	4	2	**3**	1	-	**1**	**2.3**

ESSENTIAL 9

Install early warning systems and emergency management capacities

Both Thailand and Vietnam have made some progress in developing early warning systems and emergency management capacities, but there is still significant room for improvement. Across all four cities, there are strong emergency communications systems and operations centers. All levels of government have plans and equipment for communicating during emergencies.

There has been mixed success between the cities in setting up early warning systems. Hue has a well established system that is considered to be quite effective. Hat Yai has only recently established an early-warning system with support from ACCCRN, but early reports about its effectiveness are positive. In Lao Cai, which experiences regular flash floods and would benefit from an early warning system, there is only a provincial system; there is no system specifically for the city. Udon Thani has not established an early warning system. Even where there are early warning systems in Thailand, though, there has been minimal planning for how early warnings might trigger evacuations and how these evacuations might be carried out, despite repeated disasters. Across both Thailand and Vietnam, there is minimal capacity for forecasting the weather—a critical element of early warning systems.

There is a significant difference in funds available for early warning and disaster management between Thailand and Vietnam. In Vietnam funds are allocated from the central level and are accessed by local officials. Due to Hue's history of extreme weather events, there are more funds available in Hue, but these funds are often targeted at infrastructure projects. Lao Cai has access to a fund, but it is considered inadequate to meet local needs. Comparatively, local institutions in Thailand have minimal access to financial resources. The resources that do exist are exclusively designated for infrastructure projects. Preparation activities for communities in Thailand are volunteer efforts based in local health departments.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 9	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
9.1 To what degree do local institutions have access to financial reserves to support effective disaster response and early recovery?	4	2	**3**	1	-	**1**	**2.3**
9.2 To what extent are early warning centres established, adequately staffed (or on-call personnel) and well resourced (power back ups, equipment redundancy, etc.) at all times?	4	2	**3**	4	-	**4**	**3.3**
9.3 How much do warning systems allow for adequate community participation?	2	3	**2.5**	3	-	**3**	**2.7**
9.4 To what extent does the local government have an emergency operations centre (EOC) and/or an emergency communication system?	5	4	**4.5**	3	-	**3**	**4**
9.5 How regularly are training drills and rehearsal carried out with the participation of relevant government, non-governmental, local leaders and volunteers?	2	4	**3**	3.5	-	**3.5**	**3.2**
9.6 How available are key resources for effective response, such as emergency supplies, emergency shelters, identified evacuation routes and contingency plans at all times?	4	4	**4**	1	-	**1**	**3**

ESSENTIAL 10

Ensure that the needs and participation of the affected populations are at the center of reconstruction

Local institutions in both Thailand and Vietnam have good access to resources and expertise to connect to and support victims of disasters. In Vietnam these experiences are systematically cataloged and considered within longer-term planning processes. In Thailand, there are fewer formal mechanisms for feeding the experiences of affected populations into planning, but ad-hoc discussions and institutional knowledge provide some ways for these needs to be considered. However, despite these relative successes, stakeholders in both countries expressed concern about transparency and fair distribution of resources, a question that was not raised in the LGSAT itself.

LGSAT ESSENTIAL ELEMENTS SCORING RESULTS Essential 10	VIETNAM			THAILAND			Total
	Hue	Lao Cai	Average	Udon Thani	Hat Yai	Average	Overall Average
10. 1 How much access does the local government have to resources and expertise to assist victims of psycho-social (psychological, emotional) impacts of disasters?	5	4	**4.5**	-	3	**3**	**4**
10.2 How well are disaster risk reduction measures integrated into post-disaster recovery and rehabilitation activities (i.e. build back better, livelihoods rehabilitation)?	4	4	**4**	2	-	**2**	**3.3**
10.3 To what degree does the Contingency Plan (or similar plan) include an outline strategy for post-disaster recovery and reconstruction, including needs assessments and livelihoods rehabilitation?	4	4	**4**	-	3	**3**	**3.7**

5.0 CONCLUSION

The four cities reported here all found the process of completing the LGSAT extremely useful. The tool allowed stakeholders to assess capacity and preparedness across key elements of their city in order to better understand their ability to deal with disasters and other risks. As an internationally agreed-upon framework, applying the LGSAT provided the city stakeholders with standards of institutional capacity, and a sense of direction for how to build capacity in the future.

One of the most important outcomes of the LGSAT experience was the creation of baseline data for the UNISDR Ten Essential Elements that can be used to track progress as the cities continue to build disaster and climate resilience. City stakeholders noted that they would find value in an additional element to the tool that would help them lay out their baseline and subsequent data, perhaps through the use of visual tools such as spider-graphs.

The discussions around the key essentials and associated questions also led stakeholders to start to consider what actions could be taken to improve low scores. If the LGSAT tool were to tie guidance about actions and improvements related to specific indicators, it may be a way to spur action following the completion of the assessment. Under M-BRACE, the LGSAT has made an important contribution to identifying priority actions within the cities. This has shifted focus from the original program target of preparing city-level climate resilience strategies, towards softer, process-oriented interventions.

The city-level dialogues around the LGSAT brought attention to key institutional and policy gaps that would need to be addressed in order for the cities to be in a position to start developing appropriate urban climate resilience strategies, policies, and actions. Reflecting this new understanding, city-level interventions implemented under M-BRACE address similar themes, including:

Photo by Richard Friend

- Support more participatory processes that bring state and non-state actors together in generating, collating and sharing data and information. This includes involving citizens and school students in monitoring weather and climate conditions, and in monitoring floods and extreme events;

- Collate and sharing data across different government agencies and actors;

- Build public awareness of and engagement in climate resilience building efforts, and

- Apply capacity building tools and methods for city level stakeholders and organizations.

Finally, one of the most significant takeaways from the workshops was the importance of discussion amongst stakeholders. The most valuable discussions occurred when different stakeholders—such as different government agencies, and representatives of civil society, the business sector, and academia—were brought together. In this context, the LGSAT provided a reference point for constructive dialogue. But this dialogue was also contingent on effective facilitation that in turn required considerable preparation. Through such facilitated dialogue it was possible to draw out different perceptions and assessments, allowing for divergence of views as much as pushing towards consensus.

These discussions were captured within the 'key findings' section of the report, but because of the focus on 'scoring' sometimes the important aspects of the discussion were discounted. Future applications of the LGSAT should seek to emphasize the importance of discussion and of the 'key findings' that also constitute important baseline data.

There is a difficult balance to strike between supporting multi-stakeholder dialogue as the main focus of the LGSAT versus the need to contribute to a global assessment of city resilience. While we hope that continued application of the LGSAT can allow for cities to participate formally in the global assessment scoring online, it seems that the critical entry point for meaningful application of the LGSAT lies in creating the space for such dialogue.

During the process of completing the LGSAT, some specific suggestions arose for adjusting the LGSAT in order to address climate change directly. While the focus of the LGSAT is naturally on DRR, it is also important to include climate change as a specific area of assessment in its own right. Including climate change within questions on DRR does not always allow for full discussion. Institutional capacity for DRR and climate change is not the same, and assessments need to be separated. This separation of questions can be achieved within the same LGSAT framework, and in line with the existing UNISDR essentials. However there is perhaps a more fundamental question when considering climate change regarding the need to identify specific priority areas for action (such as 'climate change essentials'), and to clarify terminology around climate change adaptation and climate change resilience. Addressing these more fundamental concerns about climate change would require some restructuring of the LGSAT and inclusion of additional questions.

Acronyms

ACCCRN	Asian Cities Climate Change Resilience Network
ADPC	Asian Disaster Preparedness Center
CCA	Climate Change Adaptation
CFSC	Committees for Flood and Storm Control
DRR	Disaster Risk Reduction
GEAG	Gorakhpur Environmental Action Group
ICCCAD	International Center for Climate Change and Development
ICLEI	International Council for Local Environmental Initiatives
IIED	International Institute for Environment and Development
ISET-International	Institute for Social and Environmental Transition-International
LGSAT	Local Government Self-Assessment Tool
M-BRACE	Mekong-Building Climate Resilience in Asian Cities
MoI	Ministry of Interior Thailand
MONRE	Ministry of Natural Resources and Environment
NCCC	Vietnam National Committee of Climate Change
NISTPASS	Vietnam National Institute for Science and Technology Policy and Strategy Studies
NTP-RCC	Vietnam National Target Program to Respond to Climate Change
ONEP	Thailand Office of Natural Resources and Environmental Policy and Planning
TEI	Thailand Environment Institute
TERI	The Energy and Resources Institute
UNISDR	United Nation International Strategy for Disaster Reduction
USAID	United States Agency for International Development

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This report reviews the outcomes and findings from applying the UNISDR Local Government Self-Assessment Tool (LGSAT) in four cities across Thailand and Vietnam. The LGSAT is designed to help cities reflect on and assess their own capacity for disaster risk reduction. By creating a space for dialogue and assessment around key capacities, the LGSAT enables cities to understand their vulnerability and start making changes to address them.

The four cities that this report focuses on, Hat Yai and Udon Thani, Thailand and Hue and Lao Cai, Vietnam, are all involved in long-term resilience building processes through the USAID funded Mekong–Building Climate Resilience in Asian Cities (M-BRACE) program or the Rockefeller Foundation funded Asian Cities Climate Change Resilience Network (ACCCRN).

While there are interesting specific findings that come out of each city, this report also focuses on some of the common themes and trends that emerged from reviewing the results across all four cities. The ability for the LGSAT to convene and support dialogues around these issues has been one of most significant outcomes. Both within individual cities as well as within the M-BRACE and ACCCRN processes, the LGSAT is influencing ways of thinking and acting. As these programs progress, continued attention to the issues raised in the LGSAT may offer a chance for influencing long-term positive change in cities.

Journal Article: A Framework For Urban Climate Resilience
http://tinyurl.com/o98b6fr

UNISDR "Making Cities Resilient Campaign"
http://www.unisdr.org/campaign/resilientcities/

Journal Article: "Shared learning" for building urban climate resilience – experiences from Asian cities
http://tinyurl.com/oh3dd7n