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# Strengthening urban resilience in ASEAN through cooperation

Guidelines in 12 Action Areas focusing on aspects in  
climate change adaptation, disaster risk management  
and sustainable urban development

Supported by:



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Guidelines in 12 Action Areas focusing on aspects in  
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and sustainable urban development

The ASEAN Secretariat  
Jakarta

## Imprint

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967.  
The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.  
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# Executive Summary

This document is a contribution to strengthening urban resilience in the Association of Southeast Asian Nations (ASEAN) through increasing cooperation. It outlines twelve implementation-focused Action Areas with a total of 37 concrete Activities for specific stakeholders in ASEAN. The Action Areas are the document's centrepiece. They focus on selected aspects within Climate Change Adaptation (CCA), Disaster Risk Management (DRM) and sustainable urban development, especially where the three intersect. The Action Areas are based on a gap and opportunity analysis, within this focus, in the urban resilience ASEAN policy landscape and on formats with different ASEAN Actor groups. As such, the Guidelines with their Action Areas should serve as a contributing part of a more holistic ASEAN strategy to strengthen urban resilience overall.

**Target Group:** The Guidelines are mainly for policy-makers and Working Group officials working on CCA, urban planning, urbanization and DRM in ASEAN member states (AMS). They can also serve development agencies and civil society organizations, as well as practitioners in the field of urban planning and CCA, as a piece of guidance in their work.

**Objective:** Urban resilience is a cross cutting and vast topic. It has gained traction in the past decade in ASEAN, for example in prominent publications addressing urbanization, disaster risks, and climate change. However, a coordinated regional approach to urban resilience has yet to be established in ASEAN. Such an overall strategy does not yet exist. The main objectives of the Guidelines are to contribute both to this strategy and to strengthening urban resilience in ASEAN through increasing cooperation, mainly by more effectively combining CCA, DRM and sustainable urban planning and development, and improving cross-sectoral integration.

**What are the Action Areas, and what do they recommend?** The twelve implementation-focused

Action Areas are grouped into four Thematic Clusters. The Action Area titles are already formulated as recommendations:



**Cluster A** is about **supporting integration across sectors and governance levels:**

**Action Area 1:** Improve collaboration and coordination on urban resilience across policy levels

**Action Area 2:** Accelerate the integration of Disaster Risk Reduction Climate Change Adaptation, and their mainstreaming, into urban planning

**Action Area 3:** Better link and integrate health, Disaster Risk Reduction and climate action amidst increasing health risks and evident synergies



**Cluster B** is about **promoting and mainstreaming responses to selected climate-related key risks** – in step with Climate Change Mitigation (CCM) – to urgently reduce e.g. risks to health from increasing heat and from air pollution; as well to life and infrastructure from flooding in urban contexts:

**Action Area 4:** Promote Nature-based Solution measures to increase urban resilience to various risks and simultaneously provide Climate Change Mitigation and Climate Change Adaptation benefits

**Action Area 5:** Further nuance flooding risk and risk reduction in urban contexts in ASEAN regional documents

**Action Area 6:** Strengthen action reducing risks to health of urban populations from increasing heat – in synergy with climate change mitigation and other health benefits

**Action Area 7:** Address health risks from high air pollution concentrations in urban areas





**Cluster C** is about **addressing vulnerable groups and gender aspects** and promoting them in resilience action, with a focus on participatory approaches and sustainable, inclusive, and equitable urban planning and development:

**Action Area 8:** Strengthen participation and support the empowerment of people in vulnerable situations

**Action Area 9:** Explicitly consider vulnerable groups and gender aspects in climate risk analyses, initiatives and urban planning



**Cluster D** is about **capacity building and implementation** – increasing capacity among AMS and relevant ASEAN Working Groups (AWGs) and ASEAN institutions:

**Action Area 10:** Improve access to finance and financial strategies

**Action Area 11:** Step up capacity building in urban resilience

**Action Area 12:** Strengthen the dissemination of relevant knowledge, data and methods

Each Action Area consists of actionable, practical Activities (an overview is provided in Table 1 in the Annex): Each Activity is systematically structured by a title, ideas for cooperation and implementation, potential concrete bodies as leads, synergies with AWG Action Plans, work programs and projects, indicators for monitoring, and important synergies with other Activities in the Guidelines. In more than one cluster, Action Areas

- increase cooperation and integration across policy levels (e.g. national and municipal governments), sectors (e.g. AWGs), and the region (e.g. across ASEAN Member States and city initiatives);

- improve enabling conditions in the region to strengthen urban resilience;
- contribute to closing gaps, and using opportunities, by using existing and upcoming regional policy responses, such as strategies, frameworks, work programs, and Action Plans;
- highlight the crucial role of urban planning in increasing urban resilience, and integrating CCA, Disaster Risk Reduction (DRR) and equity considerations into urban planning;
- emphasize Nature-based Solutions (NbS) and their high potential to reduce various risks, while at the same time providing benefits for CCM, human well-being and biodiversity;
- provide entry points for empowering and strengthening the resilience of vulnerable groups in ASEAN cities;
- use health as a tangible framing or entry point to help strengthen urban resilience through cooperation. Health is an easily understood, approachable topic for stakeholders and the general population, and is highly affected by most climate risks;
- aim to contribute to reducing risks to health of urban populations from increasing heat - in accordance to the size of increasing and projected health risks, yet as a win-win, in synergy, with deep CCM and other health issues;
- use synergies, and avoid and reduce negative trade-offs, for example between work programs, Action Plans, and Action Areas. This is crucial. An example: using synergies to better link health with DRR, CCA, and CCM. But at the same time, it is key to ensure trade-offs with CCM are avoided, and reduced as much as possible, from the outset, such as between types of cooling for buildings and CCM.

**Scope:** The Action Areas address some aspects of a few topics in the huge range of topics in urban resilience. They address some aspects of the AWGs in question, and some aspects in the intersection of CCA, DRR and sustainable urban development – not all. Thereby the focus is on cooperation. The Guidelines and Action Areas consequently, and obviously, address yet a few (important) aspects of what is required to strengthen urban resilience in ASEAN overall, because these Guidelines have a focus based on the underpinning project. For example, they focus on selected climate-related key risks in ASEAN, not all. Therefore, the Guidelines also emphatically call for deepening and expanding the scope for strengthening urban resilience in ASEAN, and that also includes the scope within which concise Guidelines and Action Areas to this end exist.

A few important links and synergies with CCM are highlighted in some Action Areas, as well as a few major needs to avoid trade-offs. CCM is not in focus in these Guidelines due to the underpinning project. Urgent, deep CCM action is absolutely key for both strengthening urban resilience in ASEAN and a strategy to increase urban resilience. This must also include developing complementary Guidelines and Action Areas with CCM in focus.

**Project background:** The Guidelines were developed under the project “Cooperation for Resilience in Urban Centres” (2021-2023) within the ASEAN-Germany Development Partnership. The project aimed to help further establish urban resilience as an integrative, holistic concept within ASEAN through cooperation. It brought together ASEAN sectoral bodies, focusing on the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) the ASEAN Working Group on Climate Change (AWGCC), as well as the ASEAN Committee on Disaster Management Working Group on Prevention and Mitigation (ACDM WG P&M) in dialogue formats. The Guidelines development was guided by objectives in these AWGs’ Action Plans and was based on a preceding scoping study,<sup>1</sup> which identified gaps, opportunities, and subsequent recommendations based on how urban resilience is addressed by the ASEAN policy landscape. The Actions Areas are also based on further formats with representatives of AWGs, 2<sup>nd</sup> and 3<sup>rd</sup> tier cities, city networks, development partners and academic institutions.

<sup>1</sup> ASEAN Secretariat (2024): Towards Strengthening Cooperation for Urban Resilience in ASEAN. Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development.

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## List of Abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
AATHP	ASEAN Agreement on Transboundary Haze Pollution
ACB	ASEAN Centre for Biodiversity
ACDM	ASEAN Committee on Disaster Management
ACDM WG P&M	ACDM Working Group Prevention and Mitigation
ACW	ASEAN Committee on Women
ACWC	ASEAN Commission on the Promotion and Protection of the Rights of Women and Children
AF	Adaptation Fund
AFAADM	ASEAN Framework on Anticipatory Action in Disaster Management
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AHP	ASEAN Heritage Parks
AIESC	ASEAN Initiative on Environmentally Sustainable Cities
AMF	ASEAN Mayor's Forum
AMS	ASEAN Member States
AQIP	Air Quality Improvement Program
AR6	Sixth Assessment Report
ASCC	ASEAN Socio-Cultural Community
ASCCR	ASEAN State of Climate Change Report
ASCN	ASEAN Smart Cities Network
ASEAN	Association of Southeast Asian Nations
ASEC	ASEAN Secretariat
ASUS	ASEAN Sustainable Urbanisation Strategy
AWGCC	ASEAN Working Group Climate Change
AWGEE	ASEAN Working Group on Environmental Education
AWGESC	ASEAN Working Group on Environmentally Sustainable Cities
AWGNCB	ASEAN Working Group on Nature Conservation and Biodiversity
AWGs	ASEAN Working Groups
AWGWRM	ASEAN Working Group on Water Resources Management
CASA	Clean Air for Sustainable ASEAN Project
CBA	Community-Based Adaptation
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
COP	Conference of the Parties
CRD	Community Relations Division
DFIs	Development Finance Institutions
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAS	East Asia Summit

EAS HLS-SC	EAS High Level Seminar on Sustainable Cities
ESC	Environmentally Sustainable Cities
ESG	Environmental, Social and Governance
GCF	Green Climate Fund
GEF	Global Environment Facility
GCoM SEA	Global Covenant of Mayors Southeast Asia
GHG	Greenhouse Gas
HLS-SC	High Level Seminar on Sustainable Cities
ICLEI SEAS	Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat
IGES	Institute for Global Environmental Strategies
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JAIF	Japan-ASEAN Integration Fund
NbS	Nature-based Solutions
PaSTI	Partnership to Strengthen Transparency for Co-Innovation
PPP	Public-Private Partnership
SGAC	Smart Green ASEAN Cities
SDGs	Sustainable Development Goals
SDGs-FC2	SDGs Frontrunner Cities Program Phase 2
SOMHD	ASEAN Senior Officials Meeting for Health Development
SWOT	Strengths, Weaknesses, Opportunities and Threats
TWG	Technical Working Group on Transboundary Haze Pollution
UN	United Nations
UNCDF	United Nations Capital Development Fund
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	UN Environment Program
WG II	The Working Group II of the Intergovernmental Panel on Climate Change: Impacts, Adaptation, and Vulnerability

# 1 Introduction and context

## Who is this for?

The Guidelines document is mainly for policymakers and Working Group officials working on Climate Change Adaptation (CCA), urban planning, urbanization and Disaster Risk Management (DRM) in Association of Southeast Asian Nations (ASEAN) Member States (AMS). The document can also serve development agencies and civil society organizations, as well as practitioners in the field of urban planning and CCA, as a piece of guidance in their work.

## Overview – what is this about?

This document (“Guidelines” hereafter) recommends 12 Action Areas to contribute to strengthening urban resilience in ASEAN through increasing cooperation, and through an improved cross-sectoral integration of the topic. The Action Areas are the centrepiece of the document. The Guidelines and 12 Action Areas focus on selected aspects within CCA, DRM and sustainable urban development. As such, the Guidelines are to be understood as a contributing part of an ASEAN strategy to strengthen urban resilience overall. Both this focus and the framing as Guidelines are results of the project the document is based on.

For each Action Area, concrete Activities are proposed – 37 in total. The Activities provide ideas for implementation and highlight synergies with existing action plans, work programs and projects.

The document’s main objective is to contribute to strengthening urban resilience in ASEAN through cooperation, mainly through more effectively combining selected aspects within CCA, DRM and sustainable urban planning and development, through an improved cross-sectoral integration of the topic. To this end, multiple Action Areas

- increase cooperation and integration across policy levels (e.g. national and municipal governments), sectors (e.g. AWGs), and the region (e.g. across ASEAN Member States and city initiatives);
- improve enabling conditions in the region to strengthen urban resilience;
- contribute to closing gaps, and using opportunities, by using existing and upcoming regional policy responses, such as in strategies, frameworks, work programs, and Action Plans.

Further objectives are to

- generate synergies and co-benefits, and at the same time avoid and reduce negative trade-offs (hereafter: trade-offs) and fragmentation, between policies, strategies, plans, and initiatives.<sup>2</sup> An example: use synergies to better link health with Disaster Risk Reduction (DRR), CCA, and Climate Change Mitigation (CCM).<sup>3</sup> But at the same time, it is key to ensure that trade-offs with CCM are avoided, and reduced as much as possible, from the outset, such as between types of cooling for public spaces and buildings with CCM;

<sup>2</sup> For the sake of simplicity, synergies and co-benefits are used synonymously. They are positive. Trade-offs are negative. Synergies and co-benefits (trade-offs) occur when implementing a measure results in benefits (negative effects) elsewhere, or additional benefits (negative effects) when two or more measures are simultaneously implemented.

<sup>3</sup> Mitigation (of climate change), short definition: A human intervention to reduce emissions or enhance the sinks of greenhouse gases. From : IPCC, 2022: Annex II: Glossary [Möller, V., R. van Diemen, J.B.R. Matthews, C. Méndez, S. Semenov, J.S. Fuglestvedt, A. Reisinger (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2897–2930, doi:10.1017/9781009325844.029.

- promote the consideration of vulnerable groups and gender aspects in resilience action, with a focus on participatory approaches and sustainable urban planning and development;
- increase capacity among AMS, relevant ASEAN Working Groups (AWGs) and ASEAN institutions.

The Guidelines directly relate to the AWGESC Action Plan 2016-2025 objectives,<sup>4</sup> and further aim to support the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program's mission.<sup>5</sup> The Guidelines also aim to support and further strengthen CCA and its integration into urban resilience measures in alignment with the work of AWG-CC. Certain Activities also address relevant topics for the ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB) and the ASEAN Working Group on Environmental Education (AWGEE).

## Project background

The Guidelines were developed under the project “Cooperation for Resilience in Urban Centres” (2021-2023) within the ASEAN-Germany Development Partnership. The project aimed to help further establish urban resilience as an integrative, holistic concept within ASEAN through cooperation, using the intersection of CCA, disaster risk reduction (DRR) and sustainable urban development as an entry point. It brought together ASEAN sectoral bodies, focusing on the ASEAN Working Group Environmentally Sustainable Cities (AWGESC) and ASEAN Working Group Climate Change (AWG-CC), as well as the ASEAN Committee on Disaster Management Working Group on Prevention and Mitigation (ACDM WG P&M), in various dialogue formats. Therefore, the project focused on some aspects within the intersection of these Working Groups.

<sup>4</sup> These objective are 1) to ensure that cities and urban areas in ASEAN are environmentally sustainable, while meeting the social and economic needs of the people, and 2) to promote sustainable urbanisation and climate resilient cities in ASEAN towards a clean and green ASEAN.

<sup>5</sup> The Guidelines aim to enhance and support ASEAN's DRR and disaster management capabilities, focusing on the aspects of inter-sectoral cooperation, capacity building, and stronger coordination among AMS, and thereby contributing to selected aims of AADMER Work Program.

## How are the Guidelines structured?

The twelve implementation-focused Action Areas are presented in detail in Section 2. They are the centrepiece of the Guidelines, and grouped into four clusters (see Figure 1 for Action Area titles). The Action Area titles are already formulated as recommendations.

- Thematic Cluster A: Supporting integration across sectors and governance levels
- Thematic Cluster B: Promoting and mainstreaming responses to selected climate-related key risks
- Thematic Cluster C: Addressing vulnerable groups and gender aspects
- Thematic Cluster D: Capacity building and implementation

Each Action area consists of actionable, concrete Activities (See Table 1 in the Annex for a detailed overview of Clusters A – D with all corresponding Action Areas and Activities): Each Activity is made as actionable as possible - systematically structured by a title, ideas for cooperation and implementation, potential concrete bodies to lead, synergies with ASEAN Working Group (AWG) Action Plans, work programs and projects, indicators for monitoring, and important synergies with other Activities in these Guidelines.

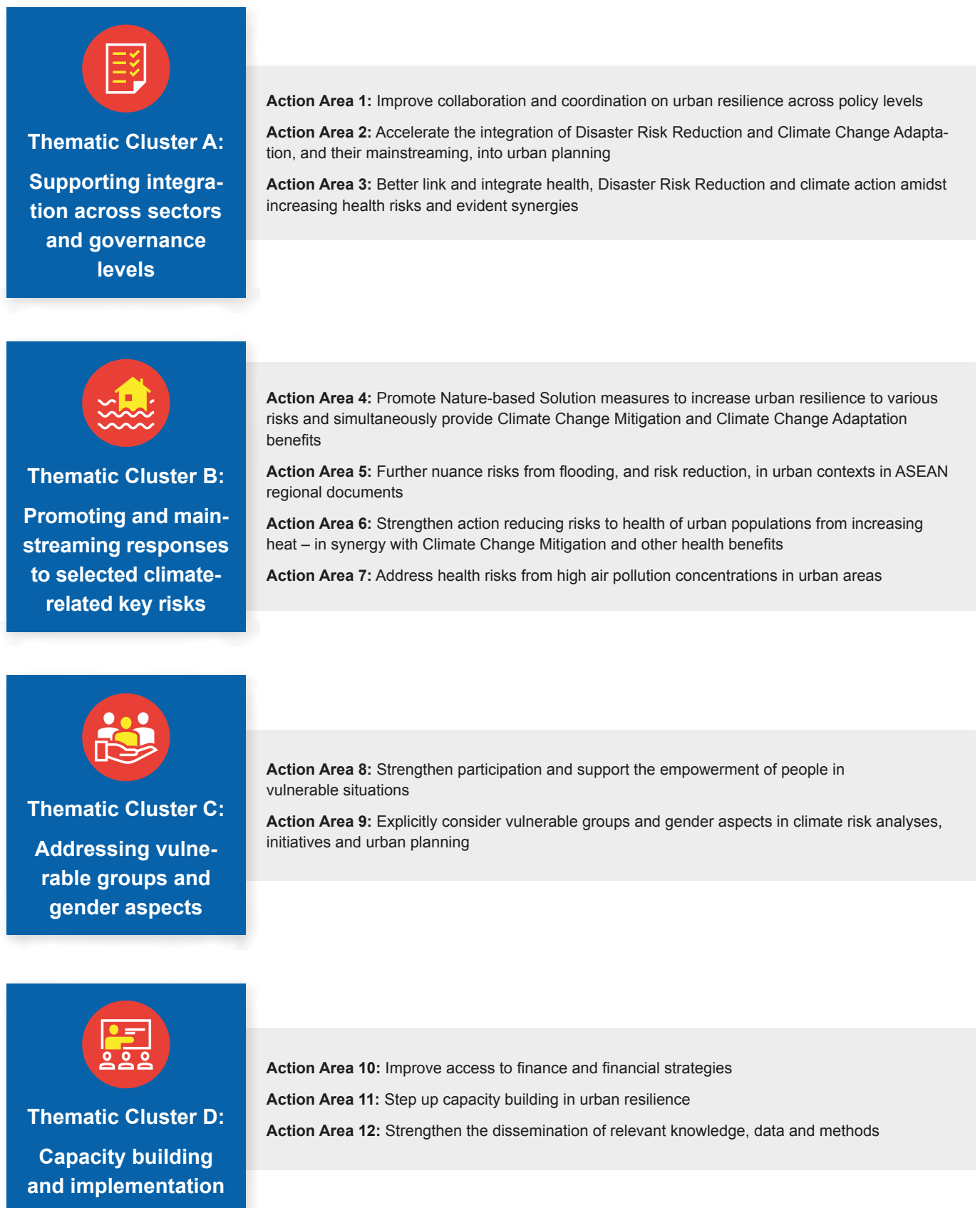


Figure 1: Thematic clusters and overview of the Action Areas.



## Why is this document necessary?

In ASEAN, urban resilience has gained traction in the past decade, for example in prominent strategic publications addressing urbanization, disaster risks, and climate change. The direct linkages of the concepts are evident in multiple cases. One example is the ASEAN Socio-Cultural Community (ASCC) Blueprint 2025, which integrates a disaster resilient and climate adaptive ASEAN in its vision of resilience.<sup>6</sup> Similarly, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and subsequent AADMER Work Programs highlight the relevance of resilience in the context of disasters. The current Action Plans of AWGESC and AWGCC also target various important aspects of resilience from the respective AWG's perspective. Further examples exist. Overall, however, a coordinated regional approach to urban resilience has yet to be established. There are gaps in collaboration and integrated action across sectors and the related AWGs.<sup>7</sup> Furthermore, the current ASEAN policy landscape focuses on certain climate and disaster risks, while still bearing some gaps in addressing others. The Guidelines and Action Areas, are a contributing piece to an overall regional approach to strengthening urban resilience - an approach which is still needed.

Therefore, it is important to make full use of synergies across relevant AWGs, sectors, strategies, and initiatives, and enhance collaboration between them and other key actors in the region, to effectively strengthen urban resilience. At the same time, it is important to identify and avoid trade-offs as much as possible from the outset.

Southeast Asia is one of the most hazard-prone regions in Asia and the Pacific and suffers severe financial losses from the impacts of typhoons, storm surges, floods, droughts and earthquakes every year.<sup>8</sup> At the same time, the ASEAN region is facing rapid levels of urbanization.<sup>9</sup> Combined and increasing risks in many ASEAN cities call for integrated approaches and strengthened regional collaboration. For example, coming from a climate change impacts, adaptation and vulnerability perspective, the Working Group II (WGII) Contribution to the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (AR6) in 2022 identifies climate-related "key risks". These are defined as "potentially severe risks [...] meriting society's full attention globally and regionally across sectors, in order to inform judgements about dangerous anthropogenic interference with the climate system".<sup>10</sup> They can already be severe now, or become so over time due to changes in climate-related hazards, exposure, and/or vulnerability of societies. Some of these

<sup>6</sup> ASEAN Secretariat (2016): ASEAN Socio-cultural Community (ASCC) Blueprint 2025. Association of Southeast Asian Nations (ASEAN). Available online at <https://aseandse.org/wp-content/uploads/2021/02/8.-March-2016-ASCC-Blueprint-2025.pdf>, checked on 03/07/2022.

<sup>7</sup> ASEAN Secretariat (2024): Towards Strengthening Cooperation for Urban Resilience in ASEAN. Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development.

<sup>8</sup> ASEAN Secretariat (2021): ASEAN State of Climate Change Report 2021. Association of Southeast Asian Nations (ASEAN). Available online at <https://asean.org/wp-content/uploads/2021/10/ASCCR-e-publication-Final-12-Oct-2021.pdf>, checked on 03/13/2022.

<sup>9</sup> ASEAN Secretariat (2018): ASEAN Sustainable Urbanisation Strategy. Association of Southeast Asian Nations (ASEAN). Available online at <https://connectivity.asean.org/wp-content/uploads/2018/11/ASEAN-Sustainable-Urbanisation-Strategy-ASUS-1.pdf>, checked on 03/07/2022.

<sup>10</sup> Ara Begum, R.; Lempert, R.; Ali, E. et al. (2022): Point of Departure and Key Concepts. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. With assistance [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

key risks are particularly relevant for urban areas in Southeast Asia,<sup>11</sup> and are therefore particularly relevant for strengthening urban resilience in the region.

The five key risks investigated are:

1. Risks to population from increased heat
2. Heat stress, mortality and morbidity from exposure to extreme heat and heatwaves
3. Urban infrastructure at risk of damage from flooding and severe storms
4. Risk to life and property due to sea level rise and coastal flooding
5. Health risks from air pollution exposure in cities.

## What is the basis for the Guidelines?

The Guidelines strongly build on the results of the publication “Towards Strengthening Cooperation for Urban Resilience in ASEAN: Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development” (referred to as Scoping Paper in the following). Both Guidelines and Scoping Paper<sup>12</sup> were developed within the framework of the project “Cooperation for Resilience in Urban Centres”.

The main purpose of the Scoping Paper is to provide an overview of the regional policy landscape with regard to certain aspects of urban resilience, to identify current gaps and opportunities for action therein, as well as to provide recommendations on how to strengthen

urban resilience in ASEAN within the project focus. The results of the analysis highlight a lack of precision in the conceptualization and measurement of urban resilience and respective strategies; currently insufficient attention to and mainstreaming of selected climate-related key risks and corresponding risk reduction; the potential to further promote nature-based solutions and strengthen the co-beneficial integration of Disaster Risk Reduction (DRR) and climate change adaptation (CCA) into urban planning; the need to better link and integrate health with DRR, CCA, and Climate Change Mitigation (CCM); as well as improvable capacities for cross-sectoral collaboration and coordination on climate-related risk reduction, data and knowledge management and funding strategies. On this basis, the analysis produced a range of recommendations for strengthening urban resilience in ASEAN to contribute to filling the identified gaps and using identified opportunities.

The Action Areas of the Guidelines strongly build on the Scoping Paper recommendations. Results of discussions and workshops with representatives of ASEAN Working Groups (AWGs), 2<sup>nd</sup> and 3<sup>rd</sup> tier cities, city networks, development partners and academic institutions, as well as input from the ASEAN Secretariat (ASEC), further shaped the Guidelines to become a strategic document, contributing to guiding and supporting action to help strengthen urban resilience in ASEAN. The Action Areas on addressing vulnerable groups and gender aspects and promoting them in resilience action (Thematic Cluster D) were added during a second, subsequent project. These Action Areas therefore did not undergo the same process, and could not benefit from the exchanges with ASEAN stakeholders to the same extent.

<sup>11</sup> Dodman, D.; Hayward, B.; Pelling, M. et al. (2022): Cities, Settlements and Key Infrastructure; Shaw, R.; Luo, Y.; Cheong, T.S. et al. (2022): Asia; Pörtner, H.-O.; Roberts, D.C.; Adams, H. et al. (2022): Technical Summary Supplementary Material. All these three chapters are in: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al. (eds.)].

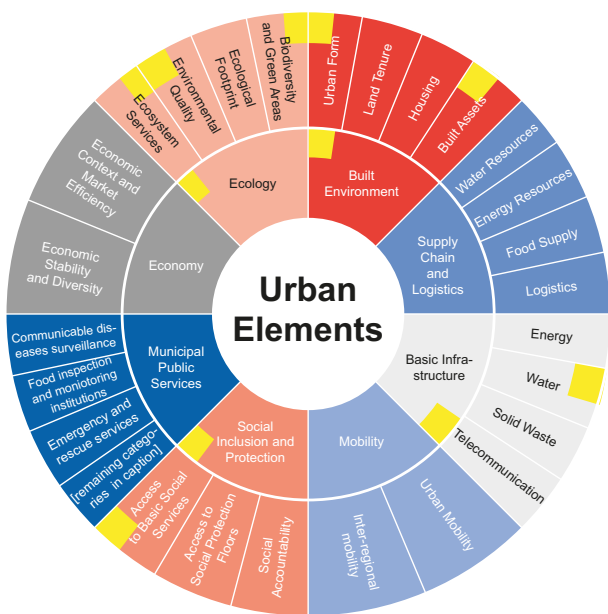
<sup>12</sup> ASEAN Secretariat (2024): Towards Strengthening Cooperation for Urban Resilience in ASEAN. Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development.

## What is the scope – in more detail and context?

The scope is a result of the project and its developments, and its focus on increasing cooperation. Urban resilience is a vast topic spanning a wide range of fields. These Guidelines and Action Areas focus on selected aspects in three of these fields – the fields of CCA, DRM and sustainable urban development – especially where they intersect, and on strengthening regional cooperation across these fields. The Guidelines focus on the work of three corresponding AWGs, AWGESC, AWGCC, and the ACDM WG P&M, addressing selected aspects of their work – not all. The focus is on more the regional (ASEAN) level of cooperation. So, within the huge range of fields in urban resilience and the urban system, the Guidelines and Action Areas obviously only address some (very important) parts of what is required to strengthen urban resilience in ASEAN overall. And within this frame, the Guidelines make a concrete and clear contribution.

It is important to be clear about what is within and out of scope in the Guidelines. Hence, here are two illustrative examples of what is not in scope. First, with regard to climate action, the Guidelines and the project that shaped

them focused on certain CCA aspects. It is important to note that Climate change mitigation (CCM) is not in focus in these Guidelines, due to the project’s focus. Some Action Areas and subordinate Activities highlight a few links and synergies with CCM (such as between health, DRR, CCA and CCM), and some selected major needs to avoid trade-offs (such as between types of cooling and CCM). Urgent, deep CCM action is, however, absolutely crucial for sustainable, resilient development, including strengthening urban resilience, and for averting catastrophic climate change. It must be an integral and comprehensive part of an approach to strengthening urban resilience and to sustainable, resilient development. This is also self-evident through the fields in Figure 4, which shows that urban resilience must also include resilient infrastructures, basic services, urban economy and society. Second, a holistic approach to urban resilience must also consider how a just and equitable transition towards resilience can be achieved, advancing sustainable development for all. A detailed investigation of possible social and economic frameworks to support a just transition, however, was beyond the scope of the Guidelines. The scope of the Guidelines is schematically depicted in Figure 2 in view of one conceptualization of urban resilience, and in Figure 3 in view of the urban system: Elements partly addressed by the Action Areas are schematically marked in yellow.



**Figure 2:** Urban elements (elements that frame the urban area, adapted from UN-Habitat). Some categories of “Municipal Public Services” are not included in the graphic.<sup>10</sup> Elements partly addressed by the Action Areas are schematically marked in yellow.



**Figure 3:** One concept of urban resilience and its fields (adapted from UN-Habitat). Within these fields, the scope of both the Guidelines and Action Areas is schematically outlined in yellow. The Action Areas in these Guidelines partly address this outlined scope.

## What is resilience?

In recent years, resilience has become increasingly important to sustainability and international development discourses on global to local levels. On the global level, the United Nations (UN) highlights urban resilience as “one of the core principles of sustainable urban development in the global development frameworks and targets”,<sup>13</sup> including the New Urban Agenda, the Paris Agreement, the Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction from 2015–2030. In ASEAN, urban resilience has gained traction in prominent strategic publications on urbanization, disaster risks and climate change. Examples include the ASCC Blueprint 2025, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and subsequent ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programs.

Academic literature reveals a wealth of definitions of the term urban resilience from different disciplines. UN-HABITAT’s current definition covers many relevant aspects and integrates both a scientific and practitioner’s perspective: Urban resilience is the “measurable ability of any urban system, with its inhabitants, to maintain continuity through all shocks and stresses, while positively adapting and transforming toward sustainability. Resilience is a catalyst for sustainable urban development. It ensures development gains are not lost when cities face shocks and urban residents can flourish in a safe environment while addressing major challenges such as climate change and rapid urbanization”.<sup>14</sup> Many more resilience definitions exist, some

focusing more strongly on aspects of climate change, the urban context or disaster management. Across definitions, some of the recurring aspects of resilience can be highlighted:

- Resilience is understood as an ability or capacity of a system and/or inhabitants to absorb and withstand all kinds of disturbances.
- At the same time, Resilience is about thriving – sustainably and long term – despite these disturbances.
- Resilience is about mitigating known risks, and being able to respond to and recover from those risks we cannot predict or avoid.

## Addressing vulnerable groups in ASEAN cities

People are at the center of urban resilience, and strengthening it. Due to high rates of urbanization, combined with climate-related risk increases in the ASEAN region, the number of people in urban areas considered highly exposed to the impacts of climate change are projected to further increase.<sup>15</sup> However, the population’s vulnerability within and between urban areas is not distributed homogeneously.<sup>16</sup> According to recent contributions of the IPCC WG II, the varying vulnerability to climate hazards is explained as a result of social, political, economic, and historical factors and their interlinkages.<sup>17</sup> Thus, drivers of vulnerability can include poverty, migration, inequalities, lack of access to basic services, education, institutions, and governance capacities.<sup>18</sup> Reports by ASEAN, the Intergovernmental

<sup>14</sup> UN-Habitat (2022): Resilience and Risk Reduction. Available online at <https://unhabitat.org/topic/resilience-and-risk-reduction>, checked on 07/12/2022.

<sup>15</sup> Dodman, D.; Hayward, B.; Pelling, M. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

<sup>16</sup> Ibid.

<sup>17</sup> Shaw, R.; Luo, Y.; Cheong, T.S. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

<sup>18</sup> Birkmann, J.; Liwenga, E.; Pandey R., et al. (2022): Poverty, Livelihoods and Sustainable Development. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

Panel on Climate Change (IPCC), and UN-Habitat identify the most vulnerable groups to be women, children, the elderly, indigenous people, low-income households, socially marginalized ethnic minorities, disabled people, migrants, and refugees.<sup>19</sup> Occupants of (over-)crowded and unplanned informal settlements with low housing quality are particularly vulnerable to climate impacts.<sup>20</sup> Thus, on the one hand, groups considered most vulnerable are often highly exposed to climate hazards.<sup>21</sup> On the other hand, most vulnerable groups and individuals lack sufficient capacity to “withstand, cope, adapt, and recover” from climate impacts.<sup>22</sup>

It is therefore crucial to identify and engage people in vulnerable situations in the context of resilient urban development<sup>23</sup> and explicitly include their needs in urban planning, as they tend to be underrepresented in policy making.<sup>24</sup> Access for the most vulnerable groups to basic urban services (infrastructure for water, sanitation, electricity etc.) is often limited due to existing structural inequalities among city inhabitants. Addition-

ally, existing infrastructure in more vulnerable areas is often inadequately adapted to the increasing climate risks. Cities should therefore proactively develop strategies for an inclusive urban planning process where equitable access to basic services and resources is integrated, with climate resilience as a priority.<sup>25</sup> Here, inclusive approaches to adaptation planning and implementation have proven to lead to more effective and sustainable solutions by engaging with particularly vulnerable groups and including them in the design and implementation process of climate actions.<sup>26</sup>

To promote resilient and equitable urban development, it is therefore key to assess urban resilience measures for their effects on people in vulnerable situations, how they can contribute to empower them, facilitate participation and strengthen their position in society. These Guidelines aim at supporting a cross-sectoral approach, thereby also contributing to integrate the consideration of vulnerable groups and gender aspects across sectors and topics on the regional level.

<sup>19</sup> ASEAN Secretariat (2021): ASEAN State of Climate Change Report 2021. Association of Southeast Asian Nations (ASEAN). Available at <https://asean.org/wp-content/uploads/2021/10/ASCCR-e-publication-Final-12-Oct-2021.pdf>, checked on 13/03/2022.; UN Habitat (2022): World Cities Report. Envisaging the Future of Cities. Available at [https://unhabitat.org/sites/default/files/2022/06/wcr\\_2022.pdf](https://unhabitat.org/sites/default/files/2022/06/wcr_2022.pdf), checked on 27/01/2023.; Shaw, R.; Luo, Y.; Cheong, T.S. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

<sup>20</sup> Dodman, D.; Hayward, B.; Pelling, M. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

<sup>21</sup> Birkmann, J.; Liwenga, E.; Pandey R., et al. (2022): Poverty, Livelihoods and Sustainable Development. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al (eds.)].

<sup>22</sup> UN-Habitat (2022): World Cities Report. Envisaging the Future of Cities. (p. 84). Available at [https://unhabitat.org/sites/default/files/2022/06/wcr\\_2022.pdf](https://unhabitat.org/sites/default/files/2022/06/wcr_2022.pdf), checked on 27/01/2023.

<sup>23</sup> Ibid.

<sup>24</sup> C40 Cities, WRI Ross Center for Sustainable Cities (2019): Inclusive Planning. How to tackle climate change and inequality jointly: practical resources and guidance for cities. Available online at [https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en\\_US](https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en_US), checked on 29/08/2023.

<sup>25</sup> Mahendra, A. et al. (2021): Towards a more equal city. Seven Transformations for More Equitable and Sustainable Cities. World Resources Institute. Available online at <https://www.wri.org/research/7-transformations-more-equitable-sustainable-cities>, checked on 29/08/2023.

<sup>26</sup> C40 Cities, WRI Ross Center for Sustainable Cities (2019): Inclusive Planning. How to tackle climate change and inequality jointly: practical resources and guidance for cities. Available online at [https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en\\_US](https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en_US), checked on 29/08/2023.



To this end, synergies with evident potential for benefiting vulnerable groups, e.g. by reducing exposure or increasing adaptive capacity, are highlighted in selected Activities across Action Areas. Additionally, explicit measures to strengthen participation opportunities and to integrate the needs of vulnerable groups in urban development are highlighted in two dedicated Action Areas (Thematic Cluster D). This approach was chosen to demonstrate that although targeted measures to empower and capacitate vulnerable groups are necessary, integrating the needs and perspectives of vulnerable groups and communities should be approached as a cross-cutting topic.

## Regional focus, and localization

This document focuses on the regional level and does not provide local detail. Strengthening urban resilience locally needs to be considered from the city's perspective. This includes, for example, taking socio-economical, geographical and environmental factors into account. Cities' priorities regarding strengthening urban resilience vary. They depend on a city's exposure and vulnerability to different climate change impacts, available financial resources, and already existing strategies and measures, for example. Therefore, it is important for a city to determine its priorities. Due to the Guideline's topical focus, the Action Areas cover but a few of all possible priorities a city may have with regard to strengthening urban resilience overall (see Figure 1). In addition to identifying actions in the multitude of

fields of urban resilience not addressed in these Guidelines and Action Areas, municipal-level policy makers in ASEAN are encouraged to select Action Areas and Activities according to individual cities' situations.

## What are some limitations?<sup>27</sup>

As with all analysis, the Guidelines have some limitations within their scope. Action Areas and Activities do not fully cover the aspects in the scope and in focus of the Guidelines, as illustrated in Figure 2 and Figure 3. Therefore, further actions are also required to strengthen urban resilience in ASEAN within the Guidelines' scope. Here are four examples of limitations in these regards. First, in terms of disaster risks, the focus is on a few selected climate-related disaster risks, not all disaster-related risks. Second, within these climate-related risks, the Scoping Paper underpinning the Guidelines investigated five climate-related "key risks" to urban areas in Southeast Asia from the IPCC's WG II Contribution to AR6 to focus on, after a systematic prioritization.<sup>28</sup> Although the Scoping Paper is far more comprehensive than originally planned, four other key risks were left out. Therefore, the Scoping Paper and Guidelines do not give recommendations within their scope on all such key risks to urban areas in Southeast Asia. The main four key risks which were not addressed are: Risk to water security due to urban droughts; Risk of loss of life, infrastructure, and income due to floods, with cascading risks to food security and health; Risk

<sup>27</sup> Elements not included in Fig 3: Cemeteries and crematoriums; Civil registration; Criminal justice and law enforcement; Cultural heritage and cultural activities; Municipal taxes and fines; Public lighting.

<sup>28</sup> Dodman, D.; Hayward, B.; Pelling, M. et al. (2022): Cities, Settlements and Key Infrastructure (especially Table 6.4); Shaw, R.; Luo, Y.; Cheong, T.S. et al. (2022): Asia (especially FAQ 10.1); Pörtner, H.-O.; Roberts, D.C.; Adams, H. et al. (2022): Technical Summary Supplementary Material (especially Table SMTS.4). All these three chapters are in: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Pörtner, H.-O.; Roberts, D.C.; Tignor, M. et al. (eds.)].

of increasing chronic poverty due to climate change hazards on climate sensitive livelihoods; and Health risks from water pollution exposure and sanitation in cities. It is recommended to conduct a complementary study and gap analysis on, at the minimum, these four further climate-related key risks which are also highly relevant for the ASEAN region and to derive integrated Action Areas for reducing these key risks (see Scoping Paper<sup>29</sup> for details). Third, despite great care, further relevant ASEAN literature and initiatives on urban resilience exist beyond the literature review basis for the Scoping Paper and Guidelines. This is due to the cross-sectoral nature and large scope of urban resilience. Fourth, vulnerable groups and gender aspects were included and consolidated after the completion of the project's Scoping Paper and dialogue process. They were integrated into the Guidelines' foci later and

through a shorter approach. It is further important to note that the Action Areas explicitly addressing vulnerable groups suggest possible Activities only within strengthening urban resilience by increasing collaboration and cross-sectoral cooperation within selected topics within CCA, DRM and sustainable urban development. Fifth, there are obviously further synergies and trade-offs than those outlined in the Action Areas.

Due to restrictions caused by the COVID-19 pandemic, most of the project's exchange formats were conducted online. This led to a remote development of the Guidelines and Scoping Paper. Despite substantive efforts to incorporate the perspectives of AWGs, select city officials, and city networks through multiple workshops and interviews, this needs to be taken into account in a study addressing urban resilience, with people at the center.

<sup>29</sup> ASEAN Secretariat (2024): Towards Strengthening Cooperation for Urban Resilience in ASEAN. Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development.

## 2 Action Areas



### Thematic Cluster A: Supporting integration across sectors and governance levels



#### Action Area 1

Improve collaboration and coordination on urban resilience across policy levels

**Main Objective:** Help national and sub-national level actors to integrate urban resilience into their work and ensure their contribution to regional level strategic planning.

##### Activity 1

**Establish a collaboration platform, including regular exchange formats, that enable cross-sectoral collaboration on urban resilience (a) between Working Groups and (b) with the private sector and academia.**

##### Ideas for Implementation

Build on existing efforts to enhance cross-sectoral collaboration through a multi-sectoral platform (either online, or offline, or a combination of both). Utilize, for example, synergies with the current ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan, which aims to provide a multi-sectoral platform to mainstream environmental considerations to other relevant sectors. The establishment of such a platform should enable cross-sectoral exchange on issues related to urban resilience. Promote the mainstreaming of the topic across sectors and enable the co-creation of activities on urban resilience.

##### Important synergies exist with

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience. If applicable, include funding options for participation in capacity building programs.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• ASEAN Mayor's Forum (AMF)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  <b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• East Asia Summit (EAS) High Level Seminar on Sustainable Cities (HLS-SC)</li> </ul>	Agreement on a uniform exchange mechanism or collaboration platform for AMS, national governments, cities, the private sector and academia is reached (answering the questions What? How? Where? When? Who?)

**Activity 2**

**Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.**

**Ideas for Implementation**

Further review and refine the Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land to account for urban resilience aspects not yet reflected by the current indicator sets.<sup>30</sup> This could include, inter alia, developing additional indicator categories, or revising the existing categories. An interesting entry point is the City Resilience Index, developed by Arup and supported by The Rockefeller Foundation.<sup>31</sup> It provides a framework for carrying out a resilience assessment at city-level, based on 52 indicators, grouped into the categories “health and well-being”, “economy and society”, “infrastructure and environment” and “leadership and strategy”. It includes a web-based tool, as well as research and knowledge products to help cities establish a resilience baseline and measure future progress. The City Resilience Index could be adopted as overarching index for urban resilience by ASEAN, instead of developing own indicators. The decision should depend on the priorities AMS want to set when measuring urban resilience.

If own indicators are to be developed, the ASEAN Sustainable Urbanisation Strategy (ASUS) (Appendix A) includes a collection of possible indicators for cities to evaluate their performance across the 18 sub-areas of sustainable urbanization, which can be considered for indicator development. Further entry points for the development of own indicators can be found in the UN-Habitat Global Urban Monitoring Framework.<sup>32</sup>

The process of developing and adopting additional indicators for urban resilience could build on the process that was used to develop existing ESC key indicators for clean air, clean water and clean land. Currently, a review process of the existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land is ongoing (part of the current ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan). Insights from the review can be used to further inform the process of developing new indicators.

**Important synergies exist with**

**Action Area 1, Activity 3:** Building on the development of new indicators for urban resilience, set up exchange and support mechanisms for ASEAN cities to encourage dissemination, adoption and use of the indicators.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	Additional indicators for urban resilience have been developed and adopted by AMS, and have been added to the existing key indicators for clean air, clean water and clean land.
<b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>ASEAN Smart Cities Network (ASCN)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan	
	ASEAN Work Program on Urban Biodiversity and Greenery	
	Synergies with ongoing projects	
	<ul style="list-style-type: none"> <li>Smart Green ASEAN Cities (SGAC)</li> </ul>	

<sup>30</sup> The review of these indicators, and their adoption, is part of the current AWGESC Action Plan.

<sup>31</sup> Arup (2018): City Resilience Index. Available online at <https://www.cityresilienceindex.org/#/>, checked on 2/2/2024.

<sup>32</sup> UN-HABITAT (2022): The Global Urban Monitoring Framework. Available online at <https://unhabitat.org/the-global-urban-monitoring-framework>, checked on 2/2/2024.

**Activity 3**

**Building on the development of new indicators for urban resilience, set up exchange and support mechanisms for ASEAN cities to encourage dissemination, adoption and use of the indicators.**

**Ideas for Implementation**

Set up dialogue formats for ASEAN cities aiming at introducing the indicators for urban resilience, explaining their use in monitoring changes in urban resilience, and enabling exchanges between cities on how to implement and utilize these new indicators. Additionally, provide capacity building for ASEAN cities to support them in various aspects of implementing and utilizing the urban resilience indicators, including: 1) gathering and processing data needed to quantify the indicators, 2) setting up monitoring and evaluation mechanisms to track changes in urban resilience, and 3) how these results can be used to steer local policies and climate action. Use synergies with existing city networks and initiatives such as the ASEAN Smart Cities Network (ASCN), SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2) and the Smart Green ASEAN Cities (SGAC), as well as with the East Asia Summit (EAS) High Level Seminar on Sustainable Cities (HLS-SC).

To increase awareness and encourage cities to utilize these indicators for Monitoring and Evaluation activities on urban resilience, include the new indicators for urban resilience in the ASEAN Environmentally Sustainable Cities (ESC) Award Program and extend the Certificates of Recognition on Clean Air, Clean Water and Clean Land to cover other urban resilience indicator categories.

**Important synergies exist with**

**Action Area 1, Activity 2:** Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Smart Cities Network (ASCN)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Work Program on Urban Biodiversity and Greenery  Synergies with ongoing projects  <ul style="list-style-type: none"> <li>• Smart Green ASEAN Cities (SGAC) Program</li> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> <li>• East Asia Summit (EAS) High Level Seminar on Sustainable Cities (HLS-SC)</li> </ul>	Formats have been developed and implemented to enable exchange between ASEAN cities on the urban resilience indicators.  Capacity building programs have been set up to support cities in implementing and utilizing the urban resilience indicators



**Activity 4**

**On and between different policy levels, scale up cross-sectoral awareness, collaboration and coordination in support of health risk reduction from increasing heat – in accordance to the size of current and projected increases of risks, and in synergy with deep climate change mitigation and other health benefits.**

**Ideas for Implementation**

As one of the numerous contributions necessary to help establish cross-sectoral and multi-policy-level heat risk awareness and reduction action, prominently integrate this topic into the ADRP, supporting its “all-of-ASEAN” approach. Focusing on synergies and coordination on and between regional to municipal levels, and sectors, include each of these sub-topics (and others considered important): a) scaling up awareness of risks to health of urban populations – including annual mortality - from increasing heat, extreme heat, and heatwaves; b) supporting scaling up risk-reducing action in urban areas in accordance to these current and projected risks, and their increases, and also sharing good, effective, scalable practices; c) strengthening and informing regional and multi-sectoral approaches with differentiated key heat risk concerns for respective AMS and their cities. d) In any case, for this activity it is crucial to simultaneously and synergistically maximize heat risk reduction, steep GHG emissions reduction, and other health benefits through e.g. appropriate available measures that are win-wins for both health and climate.<sup>33</sup> Thus, it is also crucial to ensure that trade-offs are avoided, and reduced as much as possible, from the outset, especially with Climate Change Mitigation (e.g. trade-offs through unsustainable, energy-inefficient air conditioning methods), and those related to air pollution and waste heat. e) Most vulnerable groups, for example the elderly, should receive special attention in this activity.

Also include the ASEAN Working Group on Climate Change (AWGCC), ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Committee on Disaster Management (ACDM), the Health Sector and relevant Health Clusters.

Ensure close coordination between this Activity and Action Area 6, Activities 4 and 1. This is important for maximizing synergies and avoiding trade-offs between them, and also for linking developments from this activity to upcoming and current ASEAN policy responses, strategies, and initiatives. Numerous synergies between this Activity and AWG Action Plans exist and should be used.

Use connections with current or upcoming ASEAN initiatives. Include representatives from ASEAN Working Group Climate Change (AWGCC), ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Committee on Disaster Management (ACDM), the Health Sector and relevant Health Clusters. Numerous synergies between this Activity and various AWG Action Plans exist and should be used.

**Important synergies exist with**

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 3, Activity 2 (short title):** Through cooperation and action, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction.

**Action Area 6 (all Activities):** Strengthen action reducing risks to health of urban populations from increasing heat – in synergy with climate change mitigation and other health benefits.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>ASEAN Working Group Climate Change (AWGCC)</li> <li>Health Sector/ASEAN Health Cluster 2</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  ASEAN Health Cluster 2 on Responding to All Hazards and Emerging Threats  Synergies with ongoing projects <ul style="list-style-type: none"> <li>East Asia Summit (EAS) High Level Seminar on Sustainable Cities (HLS-SC)</li> </ul>	As one of the contributions for strengthening health risk and reduction from increasing heat, this topic, each sub-topic a) to e), as well as other sub-topic considered important are integrated into the ASEAN Disaster Resilience Platform (ADRP) – focusing on synergies and coordination between and on regional to municipal levels, between sectors, and in synergy with deep climate change mitigation and other health benefits.  Outcomes of the ADRP in this regard are utilized, connected and fed into appropriate ongoing and especially upcoming policy responses, strategies and initiatives, and fed into relevant high- to low-level processes on the different policy levels.

<sup>33</sup> For example, leverage and employ the wealth of passive and nature-based cooling measures. Further examples of many include expanding NbS and green infrastructure for cooling of public spaces and buildings, or heat sensitive urban planning. These are some of many examples which can lead to co-benefits in the form of reduced or avoided GHG emissions



## Action Area 2

### Accelerate the integration of Disaster Risk Reduction and Climate Change Adaptation and their mainstreaming into urban planning

**Main Objective:** Accelerate co-beneficial integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA), and their mainstreaming, into urban planning in ASEAN Member States (AMS) – with the aid of upcoming and current initiatives, pilot projects, as well as improving enabling conditions, knowledge and good practice dissemination.

Factor in relevant current and projected dynamics, e.g. climate change and urbanization. Make use of evident synergies with Climate Change Mitigation (CCM) - especially for reducing and avoiding greenhouse gas (GHG) emissions – and biodiversity conservation. It is key to ensure that trade-offs with CCM and biodiversity conservation are avoided, and reduced as much as possible, from the outset.

#### Activity 1

**Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives relating to cities, DRR, and CCA.**

#### Ideas for Implementation

Integrate and mainstream Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into upcoming strategies and frameworks, such as in the potential successor strategies of the Master Plan on ASEAN Connectivity 2025 and the ASEAN Sustainable Urbanisation Strategy (ASUS), upcoming AWG Action Plans and work programs (especially those for ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC) and ASEAN Agreement on Disaster Management and Emergency Response (AADMER) when they are renewed), as well as other such novel documents. Also integrate and mainstream it into the climate change cooperation plan for the region (as suggested by the ASEAN State of Climate Change Report (ASCCR)), if this plan is developed. In the relevant documents, expand and strengthen DRR and CCA within the legal framework of urban planning; consider the topic of health for framing and an entry point; secure financial and human resources for long-term planning at subnational level especially; and aim to implement and monitor such integrated urban planning.

Make use of synergies with CCM strategies – especially for reducing and avoiding greenhouse gas (GHG) emissions – and with biodiversity conservation strategies. Implementation should not result in trade-offs with such strategies.

Promote integration and coordination across relevant working groups (including, but not limited to ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC) and ASEAN Committee on Disaster Management (ACDM) and sectors, and administrative levels. As such, for example, link to the output and indicator “Enhanced cross-sectoral coordination on sustainable urban planning and development” across relevant sectors and ASEAN Working Groups (AWGs) in the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Program 1 – Sustainable Urban Planning, Development, and Implementation. In addition, already use the many further existing entry points and opportunities in current Action Plans, strategies, and work programs (e.g., ongoing or upcoming outputs and activities).<sup>34,35</sup>

<sup>34</sup> For example, outputs in Program 1 and Program 2 of the AWGESC’s Action Plan provide opportunities for integration into existing plans, e.g. ASEAN Guidelines on Sustainable Urban Planning and Development, Enhanced coordination with ACDM, and Demonstration of climate change mitigation and adaptation at selected ASEAN cities.

<sup>35</sup> Further examples can be found in areas of the ASEAN Sustainable Urbanisation Strategy, the most evident area being the sub-area “Urban resilience” in the area “Built infrastructure”, or in the Priority Program “Prevention and Mitigation” through which the ACDM Work Program 2021-2025 is carried out.

**Important synergies exist with**

**Action Area 2, Activity 2:** Strengthen dissemination of proven best practices for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Promote such exchanges from the municipal to national government level.

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 3, Activity 2 (short title):** Through cooperation and action, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 5, Activity 1 (short title):** More prominently factor in the actual assessment, assessment results, and corresponding risk reduction for these two risks into upcoming regional strategies, frameworks, work programs, and Action Plans.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives - to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management Working Group</li> <li>• Prevention and Mitigation (ACDM WG P&amp;M)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	Integration and mainstreaming of DRR and CCA into urban planning is one of the focus topics of relevant regional strategies, frameworks, work programs, strategies or similar documents covering time periods that also go beyond 2025, and corresponding measures have been added to them.
	ASEAN Working Group Climate Change (AWGCC) Action Plan	
	ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program	Integration and mainstreaming of DRR and CCA into urban planning is one focus of activities or outputs in upcoming ASEAN Working Group (AWG) Action Plans.
	Synergies with ongoing projects	Outputs and activities in existing Action Plans, strategies, and work programs, which can already synergistically accelerate joint integration of DRR and CCA into urban planning, are utilized.
Community-based Climate Action		

**Activity 2**

**Strengthen dissemination of proven best practices for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Promote such exchanges from the municipal to national government level.**

**Ideas for Implementation**

Identify proven best practices. These can originate from cities and countries with similar contexts within and beyond ASEAN. Make them visible for relevant actors. Strengthen the transfer of best practices and necessary scientific and practical knowledge through targeted knowledge exchanges between such cities or countries and at all levels, from municipal to national.

Demonstrate best practices for addressing the needs of vulnerable residents and communities through integrating Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) in urban planning; for expanding and strengthening DRR and CCA in the legal framework of urban planning; for the topic of health as a possible framing and entry point; for securing financial and human resources for long-term planning; and for implementing and monitoring such integrated urban planning.

Incorporate the best practices into the online platform envisioned as an output in ASEAN strategy documents, for example, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program 2021 – 2025 for “sharing of best practices and innovation on resilient cities and human settlements exposed to climate and disaster resilience”.<sup>36</sup> Use synergies with the output in Sub-Priority 2.2: Resilient Cities and Human Settlements for targeted dissemination of good practices.<sup>37</sup>

**Important synergies exist with**

**Action Area 2, Activity 1:** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives.

**Action Area 2, Activity 3:** Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

**Action Area 4, Activity 3:** Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 6, Activity 2:** Promote and support the development and implementation of city heat action plans throughout the region.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> </ul>	ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program	A number of proven best practices for accelerating the integration of DRR and CCA, and their mainstreaming, into urban planning are uploaded and widely visible and accessible to relevant actors.
	Synergies with ongoing projects	A regular knowledge exchange format on best practices is established (potentially linking it to an appropriate existing exchange format).

<sup>36</sup> Sub-Priority 2.2: Resilient Cities and Human Settlements, Outcome “Capacity building and knowledge sharing initiatives on cities and human settlements are expanded”.

<sup>37</sup> One important output, for example, is “Sister cities program established among strategic cities of the AMS with similar risks and characteristics to identify champions, strengthen collaboration, and improve the sharing of best practices on DRR”.

**Activity 3**

**Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Increase the number of pilot projects reducing risks from increasing heat to human health, and from flooding. For these risks, focus on risk reduction for most vulnerable groups.**

**Ideas for Implementation**

Create a project or program which selects cities, and jointly implements measures which integrate and mainstream Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. This requires a sufficient duration for cities to implement measures. Support the implementation of measures, their evaluation, and documentation and dissemination for follow-up cities.

Some aspects to include are: expanding and strengthening DRR and CCA in the legal framework of urban planning; considering the topic of health for framing and as an entry point; securing financial and human resources for long-term planning at subnational level in particular, and for implementing and monitoring such integrated urban planning; enabling the engagement of vulnerable communities in urban planning through participatory approaches to aid in vulnerability reduction. Make use of synergies with Climate Change Mitigation (CCM) strategies – especially for reducing and avoiding greenhouse gas (GHG) emissions – and with biodiversity conservation. From the outset, implementation should not result in trade-offs with such strategies.

To use synergies, link the ASEAN Smart Cities Network (ASCN) and other networks engaged to promote resilient cities in the region to this Activity; also link to activities in existing ASEAN regional strategies and frameworks, work programs, Action Plans, e.g. to the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan and ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program 2021–2025,<sup>38</sup> and to learnings from best practice examples in Activity 2.

**Important synergies exist with**

**Action Area 2, Activity 2:** Strengthen dissemination of proven best practices for integrating and mainstreaming DRR and CCA into urban planning. Promote such exchanges from the municipal to national government level.

**Action Area 3, Activity 1 (short title):** Activity 1: Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 3, Activity 2 (short title):** Through cooperation and action, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction.

**Action Area 4, Activity 3:** Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	Pilot cities, preferably one in each ASEAN Member State (AMS), are nominated based on degree of risk – indicated by hazard, exposure, sensitivity and adaptive capacity.  Cities have designed and implemented pilot projects integrating DRR and CCA into urban planning. Success factors, lessons learnt, and barriers from the project, are published, disseminated, and accessible online. Within the focus of this activity in terms of risks and the target group, pilot projects could focus, for example, on integrated green and blue infrastructure development; integrated risk reduction from flooding and/or heat in vulnerable communities; sponge city concept integration into urban planning; reducing the urban heat island effect.  The pilot cities receive support in implementing multiple effective, integrated measures.

<sup>38</sup> Links to the AWGESC Action Plan include, e.g. the activities “Demonstration of climate change mitigation and adaptation at selected ASEAN cities” and “Develop joint initiatives on climate resilient cities with focus on resilient vital infrastructure, early warning systems, coastal management, urban run-off, and urban health (climate induced)” in the output and indicator “Enhanced coordination with ASEAN Committee on Disaster Management”, and the Output “ASEAN Guidelines on Sustainable Urban Planning and Development”. A link to the AADMER Work Program 2021-2025 is the outputs in the outcome “Capacity building and knowledge sharing initiatives on cities and human settlements are expanded” in the Sub-Priority Resilient Cities and Human Settlements.



### Action Area 3

## Better link and integrate health, Disaster Risk Reduction and climate action amidst increasing health risks and evident synergies

**Main Objective:** Synergistically strengthen exchange and coordination between health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) communities – amidst increasing health risks to urban populations, e.g. through climate change impacts and air pollution. Strengthen exchange and coordination between these ASEAN Working Groups (AWGs), as well as other actors of these communities, e.g., government from city to regional level, the science community, civil society, and the private sector.

#### Activity 1

**Strengthen collaboration and knowledge exchange both**

- a) between the ASEAN bodies ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&M), Health Sector and Health Clusters; and respectively
- b) between ASEAN bodies and other actors in the health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) and sustainable urbanization communities. Examples include governments from city to regional levels, the science community, civil society, and the private sector.

#### Ideas for Implementation

Establish a high-level, interdisciplinary knowledge exchange and collaboration format between and ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ACDM (ASEAN Committee on Disaster Management) and Health Sector and Health Clusters. Include further Working Groups (WGs) which are considered relevant to the issue. In addition, establish high-level knowledge exchange and collaboration between ASEAN bodies and these additional actors;<sup>39</sup> also Strengthen collaboration and exchange between these additional actors.

For both a) and b), use these collaborations to help

- better link and integrate health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming ASEAN strategies, work programs and Action Plans. This can support Activity 2;
- identify key areas of collaboration and action between the health sector, DRR and CCA and CCM based on needs, opportunities, and gaps in existing regional strategies and frameworks, work programs, Action Plans, and initiatives; use synergies identified in the process.<sup>40</sup>
- collaborate on ways forward for using identified synergies as well as for avoiding trade-offs in view of health risk reduction.
- pay particular attention to vulnerable groups and to measures to reduce their vulnerability.

Factor in the relevant current and projected future dynamics, e.g. of climate-related risks, disaster risks, population, and ambient air pollution. Use synergies with ASEAN Working Group Climate Change (AWGCC) activities, such as the activities “Mutual learning at the impact of climate and health” and “Advancing ASEAN Initiatives on Clean Air, Health and Climate Change” from the current ASEAN Working Group Climate Change (AWGCC) Action Plan.<sup>41</sup>

<sup>39</sup> For strengthening such exchange, and for better integration with ASEAN processes and the health community, include the relevant actors from national governments, municipal levels and the science community in the implementation of the activity “Develop joint initiatives on climate resilient cities with focus on resilient vital infrastructure, early warning systems, coastal management, urban run-off, and urban health (climate induced)” in the output and indicator “Enhanced coordination with ASEAN Committee on Disaster Management” in the AWGESC Action Plan.

<sup>40</sup> As examples, link to activities in the AWGESC Action Plan: use potential synergies with the activity “Continue to organise regional forum on ESC, such as High-level Seminars on ESC”; furthermore, include AWGCC and the Health Sector and Health Clusters in the corresponding activity “Develop joint initiatives on climate resilient cities with focus on resilient vital infrastructure, early warning systems, coastal management, urban run-off, and urban health (climate induced)”; in addition, establish and solidify health as a topic in the output and indicator “Enhanced coordination with ASEAN Committee on Disaster Management”. Additionally, make use of links with the AWGCC Action Plan, such as to the activity “Mutual learning at the impact of climate and health” in the core theme Climate Change Adaptation.

<sup>41</sup> This activity can additionally strengthen collaboration between the Area “Health and wellbeing” and the Area “Built infrastructure” (in particular the sub-area “Urban resilience”) of the ASUS framework to further contribute to the sustainable urbanization strategic outcomes “High quality of life”, “Competitive economy”, and “Sustainable environment”.



**Important synergies exist with**

**Action Area 2, Activity 1 (short title):** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives.

**Action Area 2, Activity 3 (short title):** Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

**Action Area 3, Activity 2 (short title):** Through cooperation and action, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium – to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents.

**Action Area 6, Activity 4 (short title):** Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• Health Sector / ASEAN Health Cluster 2</li> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  Health Cluster 2 Work Program  Synergies with ongoing projects <ul style="list-style-type: none"> <li>• ASEAN-German Climate Action Program</li> <li>• MRV Information Platform for ASEAN Region</li> </ul>	A regular high-level knowledge exchange and collaboration format between and ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ASEAN Committee on Disaster Management (ACDM), Health Sector and Health Clusters is established. Documents and reports for the exchange are shared beforehand.  Regular high-level knowledge exchange and collaboration initiatives between ASEAN bodies and actors in government, the science community, cities, national and municipal levels are established.

**Activity 2**

**Through cooperation, action and using evident synergies, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction. Ensure trade-offs which lead to exacerbating greenhouse gas (GHG) emissions, air pollution, and heating in urban areas are avoided.**

**Ideas for Implementation**

Target this integration, operationalize key areas of collaboration and action, in upcoming regional strategies and frameworks, work programs, and Action Plans when they are renewed, as well as in novel such documents. Examples are successors of the ASEAN Comprehensive Framework on Care Economy, as well as the ASEAN Post-2015 Health Development Agenda (2021-2025), as well as the Health Cluster Work Programs, the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan and the ASEAN Working Group Climate Change (AWGCC) Action plan, and the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program, which will all need to be renewed for the time period after 2025.

Use implementation and findings from Activity 1 to better inform integration and linkage. Fully utilize synergies, e.g. between Climate Change Mitigation (CCM) and health risk reduction. The factors influencing current and projected changes of risks to health in urban areas need to be comprehensively taken into account, e.g. climate change, urbanization, and ambient air pollution. Integrate steps recommended by the United Nations Office for Disaster Risk Reduction (UNDRR)<sup>42</sup> – two of five steps directly link Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), and health: “Develop capacities for national policy development and implementation that promote coherence and synergy between CCA, DRR, and Health”; and “Prioritize support to co-efficient disaster and health risk management and adaptation measures”.

**Important synergies exist with**

**Action Area 2, Activity 1 (short title):** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives.

**Action Area 2, Activity 3:** Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents and initiatives.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	The development of upcoming regional strategies and frameworks, work programs, and Action Plans includes comprehensive actions to reduce climate change related health risks.
<b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• Health Sector / ASEAN Health Cluster 2</li> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan	ASEAN Working Group (AWG) Action Plans, frameworks, or programs include concrete actions for integrated health risk reduction through DRR, CCA and CCM.
	Health Cluster 2 Work Program	
	Synergies with ongoing projects	

<sup>42</sup> UNDRR (2020): Integrating Disaster Risk Reduction and Climate Change Adaptation in the UN Sustainable Development Cooperation Framework. Guidance Note on Using Climate and Disaster Risk Management to Help Build Resilient Societies. Geneva. Available at: <https://www.undrr.org/media/47679/download>, checked on 04/11/2022.



## Thematic Cluster B: Promoting and mainstreaming responses to selected climate-related key risks



### Action Area 4

Promote Nature-based Solution measures to increase urban resilience to various risks and simultaneously provide Climate Change Mitigation and Climate Change Adaptation benefits

**Main Objective:** Ensure that cities and urban areas can access and implement Nature-based Solutions (NbS) options that have the potential to increase urban resilience in ASEAN. Help create conditions for stepping up and scaling up NbS in ASEAN Member States (AMS) and simultaneously provide Climate Change Mitigation and Climate Change Adaptation benefits.

Target specific risks to operationalize some of the activities. For example, NbS have among the highest potential for risk reduction out of all options for the climate-related key risk<sup>43</sup> “urban infrastructure at risk of damage from flooding and severe storms”. For this risk, NbS should extend and complement predominant physical infrastructure approaches, and social interventions. A second key risk example for urban areas in Southeast Asia for which NbS have some of the highest potential of adaptation options, is “risk to population from increased heat”. Both are particularly relevant “key risks” for urban areas in Southeast Asia.

#### Activity 1

**Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits. Highlight the potential of NbS in ASEAN to reduce urban infrastructure at risk of damage from flooding and severe storms, and health risks to population from increasing heat.**

#### Ideas for Implementation

Promote awareness on Nature-based Solutions (NbS) benefits, challenges, application, standards, approaches, and financing mechanisms among the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ASEAN Committee on Disaster Management (ACDM), ASEAN Working Group on Nature Conservation and Biodiversity (AWGNBCB) and other relevant ASEAN Working Groups (AWGs) and cities. Offer and promote a targeted webinar series, for example through the ASEAN Centre for Biodiversity (ACB) and ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre).

Cooperate with universities and research institutes in ASEAN, and include ongoing urban ecosystem-based adaptation initiatives.

Use synergies with ASEAN Heritage Parks (AHP), which is promoting urban wetlands, with regards to NbS, e.g. sponge city concepts.

<sup>43</sup> See the Scoping Paper underpinning the Guidelines (ASEAN Secretariat 2024): “Towards Strengthening Cooperation for Urban Resilience in ASEAN: Scoping Paper focusing on climate change adaptation, disaster risk management and sustainable urban development”. Additionally, for the scientific basis, see the following IPCC AR 6 chapters: Dodman, D. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) [Pörtner, H.-O. et al (eds.)]; Pörtner, H.-O. et al. (2022): Technical Summary Supplementary Material. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)]; Shaw, R. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)].

**Important synergies exist with**

**Action Area 2, Activity 1 (short title):** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives.

**Action Area 4, Activity 3:** Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents and initiatives.

**Action Area 6, Activity 4 (short title):** Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas.

**Action Area 11, Activity 2:** Build capacities of ASEAN urban authorities, city leaders and local actors for planning, implementing and maintaining NbS, including its integration in urban planning.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)</li> <li>• ASEAN Centre for Biodiversity (ACB)</li> <li>• ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Heritage Parks (AHP)</li> </ul>	Work Program on Biodiversity and Urban Greenery  ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  Synergies with ongoing projects <ul style="list-style-type: none"> <li>• ASEAN Heritage Parks (AHP)</li> <li>• Ongoing projects of the ASEAN Clearing House Mechanism (under ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)/ACB) include e.g.                             <ul style="list-style-type: none"> <li>- Improving Biodiversity Conservation of Wetlands and Migratory Waterbirds in the ASEAN Region</li> <li>- Improving Effectiveness in the ASEAN Heritage Parks (AHP) through Capacity Development and Biodiversity Information Management</li> </ul> </li> </ul>	Exchange has been established between AWGs and actors researching on or promoting NbS, such as ASEAN Heritage Parks (AHP), universities and research institutes, with the goal to share experiences and information and increase awareness for the topic of NbS

**Activity 2**

**Develop common standards for ASEAN Member States (AMS) and cities to implement Nature-based Solutions (NbS) and ensure effective compliance.**

**Ideas for Implementation**

Based on the International Union for Conservation of Nature (International Union for Conservation of Nature (IUCN)) Guidelines, develop standards for ASEAN Member States (AMS) and cities to implement Nature-based Solutions (NbS). Encourage the development and use of the ASEAN indicators on urban biodiversity and greenery. The ASEAN Joint Statement to the 15th Meeting of the Conference of the Parties to the Convention on Biological Diversity<sup>44</sup> can serve as a reference point for regional commitment to halt biodiversity loss and promote the sustainable use of ecosystems through NbS.

**Important synergies exist with**

**Action Area 1, Activity 2:** Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.

**Action Area 4, Activity 3:** Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 10:** Improve access to finance and financial strategies.

**Action Area 11, Activity 2:** Build capacities of ASEAN urban authorities, city leaders and local actors for planning, implementing and maintaining NbS, including its integration in urban planning.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)</li> <li>• ASEAN Centre for Biodiversity (ACB)</li> <li>• International Union for Conservation of Nature (IUCN)</li> <li>• UN-Habitat</li> <li>• UN Environment Program (UNEP)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> </ul>	Work Program on Biodiversity and Urban Greenery  ASEAN Working Group Climate Change (AWGCC) Action Plan  <b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• UN-Habitat resolution on “Biodiverse and Resilient Cities – Mainstreaming biodiversity and ecosystem services into urban and territorial planning”</li> <li>• Ongoing projects of the ASEAN Clearing House Mechanism (under ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)/ACB) include e.g.                             <ul style="list-style-type: none"> <li>- Improving Biodiversity Conservation of Wetlands and Migratory Waterbirds in the ASEAN Region</li> <li>- Improving Effectiveness in the ASEAN Heritage Parks through Capacity Development and Biodiversity Information Management</li> </ul> </li> </ul>	Common standards (e.g. for what constitutes NbS, how they are mainstreamed, governed, financed and monitored) are jointly developed, approved and their use among cities is promoted.  Monitor and evaluate naturebased solutions indicators in green infrastructure, wetland restoration, and agroforestry.

<sup>44</sup> ASEAN (2021): ASEAN Joint Statement to the 15<sup>th</sup> Meeting of the Conference of the Parties to the Convention on Biological Diversity. Available online at <https://asean.org/wp-content/uploads/2021/11/ASEAN-Joint-Statement-to-CBD-COP15.pdf>, checked on 2/24/2023.

**Activity 3**

**Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.**

**Ideas for Implementation**

Strengthen the transfer of and access to the scientific and practical knowledge on Nature-based Solutions (NbS) by disseminating proven good NbS practices. Examples include sponge city concepts, green infrastructure, urban greenery at multiple scales. Promote knowledge exchange between cities, connecting cities with similar contexts and their respective implementing actors.

Learning from these good practice examples, increase the number of ASEAN cities with demonstration projects of NbS in resilient city planning. Examples include demonstration projects for mangrove restoration, sponge city concepts, green infrastructure, urban greenery at multiple scales, and green roofs – which have the potential to reduce risks from flooding, severe storms, and heat and to simultaneously provide Climate Change Mitigation benefits. Put emphasis on 1) NbS to reduce urban infrastructure at risk of damage from flooding and severe storms. Thereby, NbS should extend and complement predominant physical infrastructure approaches, and social interventions; 2) on NbS to reduce health risks from heat. Use synergies with ASEAN Heritage Parks (AHP), and ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB), which are promoting urban wetlands, in regards to NbS, e.g. to sponge city concepts. Use synergies with activities from the Work Program on Biodiversity and Urban Greenery and ASEAN Working Group Climate Change (AWGCC) Action Plan.<sup>45</sup>

**Important synergies exist with**

**Action Area 2, Activity 2:** Strengthen dissemination of proven best practices for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Promote such exchanges from the municipal to national government level.

**Action Area 2, Activity 3 (short title):** Support a greater number of cities with demonstration projects for integrating and mainstreaming DRR and CCA into urban planning.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 6, Activity 2:** Promote and support the development and implementation of city heat action plans throughout the region.

**Action Area 11, Activity 2:** Build capacities of ASEAN urban authorities, city leaders and local actors for planning, implementing and maintaining NbS, including its integration in urban planning.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience. If applicable, include funding options for participation in capacity building programs

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)</li> <li>• ASEAN Centre for Biodiversity (ACB)</li> <li>• International Union for Conservation of Nature (IUCN)</li> <li>• UN-Habitat</li> <li>• UN Environment Program (UNEP)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> </ul>	Work Program on Biodiversity and Urban Greenery  ASEAN Working Group Climate Change (AWGCC) Action Plan  <b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• Smart Green ASEAN Cities (SGAC)</li> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> </ul>	Municipal and local communities have successfully implemented new nature-based solutions, such as sponge city concepts, green infrastructure, urban green roofs, rain gardens, floodplains, and urban farms, which have been widely shared as good practices.  Cities have been partnered with one or more replicator cities to share learnings and support the implementation of further NbS.

<sup>45</sup> One example is the activity “Exchange experience and lessons learned on local community-based climate action” from AWGCC Action Plan.





## Action Area 5

### Further nuance risks from flooding, and risk reduction, in urban contexts in ASEAN regional documents

**Main Objective:** Integrate more differentiated assessments and risk reduction in such documents. Make full use of future projections, and distinguish between risks from what (i.e. flooding types), to whom (e.g. citizens in informal settlements), to what (e.g. to infrastructure), and where. This would contribute to a more contextualized basis for adaptation to these risks in urban areas in such documents. Particularly focus on two flooding-related “key risks” in ASEAN from the Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report (AR6) 2022.<sup>46</sup>

- Urban infrastructure at risk of damage from flooding and severe storms
- Risk to life and property due to Sea-Level Rise (SLR) and coastal flooding

#### Activity 1

**More prominently factor in the actual assessment, assessment results, and corresponding risk reduction for these two risks into upcoming regional strategies, frameworks, work programs, and Action Plans. Projected future changes in risk, e.g. due to climate change and urbanization, need to be taken into full account. Ensure coordination of Activity 1 and Activity 2.**

#### Ideas for Implementation

Target such upcoming documents - those to be renewed as well as novel documents. Future Action Plans, strategies, and work programs include, for example, the potential successors of the current ASEAN Working Group Climate Change (AWGCC) Action Plan, ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan and ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program 2021-2025). If a climate change cooperation plan for the region is developed (as suggested by the ASCCR), also integrate and mainstream reduction of the above-mentioned key risks into this plan. Also, make use of synergies in existing regional strategies and frameworks, work programs, Action Plans and initiatives for already informing such future documents (see Activity 2). This Activity can be linked to ongoing or upcoming initiatives in existing documents.<sup>47</sup>

#### Important synergies exist with

**Action Area 2, Activity 1 (short title):** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives

**Action Area 5, Activity 2:** Establish more differentiated and contextualized assessments, and adaptation, for these two risks to urban areas. Ensure the coordination of Activity 1 and Activity 2.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Water Resources Management (AWGWRM)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Heritage Parks (AHP)</li> </ul>	ASEAN Working Group on Water Resources Management (AWGWRM) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	Initiatives factoring in these two risks to urban areas (including risk projections) have been added to relevant upcoming regional strategies, frameworks, work programs, Action Plans or similar. These documents cover time periods that also go beyond 2025.  Actions for reducing these key risks in urban areas are integrated into the climate change cooperation plan for the region (as suggested by the ASCCR).

<sup>46</sup> See the Scoping Paper underpinning the Guidelines (ASEAN Secretariat 2024): “Towards Strengthening Cooperation for Urban Resilience in ASEAN: Scoping Paper focusing on climate change adaptation, disaster risk management and sustainable urban development”. Additionally, for the scientific basis, see the following IPCC AR 6 chapters: Dodman, D. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) [Pörtner, H.-O. et al (eds.)]; Pörtner, H.-O. et al. (2022): Technical Summary Supplementary Material. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. (eds.)]; Shaw, R. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)].

<sup>47</sup> Examples: Priority Program 1: Risk Assessment and Monitoring. Sub Priority Risk Assessment: Forecasting and monitoring capacity for climate-related hazards, especially slow-onset disasters such as drought, strengthened, Risk modelling capacity for sudden onset climate hazards such as floods and landslides developed and improved (all AADMER Work Program 2021-2025); the AWGESC Action Plan; “Built infrastructure” (sub area “Urban resilience”) and “Health and well-being” in the ASUS framework of sustainable urbanization and the ASCN framework; “climate adaptive ASEAN” in the key characteristic “Resilient”, as well as D.1 “Disaster-resilient ASEAN” of the ASCC Blueprint 2025 (ASEAN Secretariat 2016); “developing joint initiatives on climate resilient cities with focus on (inter alia) resilient vital infrastructure, coastal management, urban run-off” in the AWGESC Work Plan.

**Activity 2**

**Establish more differentiated and contextualized assessments, and adaptation, for these two risks to urban areas. Ensure coordination of Activity 1 and Activity 2.**

**Ideas for Implementation**

Differentiate between risks from flooding types (e.g. coastal flooding caused by severe storms), risks to what (e.g. loss of life, income), risks to whom (e.g. specific vulnerable groups, such as residents in informal settlements), and where (e.g. in low-lying urban coastal zones). Appropriately account for projected changes in risk, e.g. through climate change and urbanization.

Therefore, also strengthen access to, and transfer, the scientific and practical knowledge and data base for these key risks. This Activity can be linked to the output “sharing of training tools and courses in disaster risk management for urban planning practitioners developed” under Sub-Priority 2.2: Resilient Cities and Human Settlements of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program 2021-2025 (for consultation with ASEAN Committee on Disaster Management (ACDM)).

The activity would help strengthen the decision basis for reducing these risks on local and regional levels. An example is by informing upcoming regional strategies and frameworks, work programs, and Action Plans in support of Activity 1.

**Important synergies exist with**

**Action Area 5, Activity 1 (short title):** More prominently factor in the actual assessment, assessment results, and corresponding risk reduction for these two risks into upcoming regional strategies, frameworks, work programs, and Action Plans.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

**Action Area 11, Activity 3:** Strengthen capacities to assess the four climate-related “key risks” from flooding and increasing heat in urban areas from Action Areas 5 and 6. This, overall, should contribute to mainstreaming their assessment for strengthening the basis for informed local adaptation decision-making.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Water Resources Management (AWGWRM)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)</li> <li>• ASEAN Heritage Parks (AHP)</li> </ul>	ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) Work Plan 2025  ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group on Water Resources Management (AWGWRM) Action Plan  Synergies with ongoing projects	Differentiated risk assessments with appropriate adaptation responses, focusing on these key risks, are conducted by ASEAN Member States (AMS).  Differentiated risk assessments with appropriate adaptation responses, focusing on these key risks, are conducted for a subnational region (with an appropriate and feasible spatial extent) by AMS.



## Action Area 6

### Strengthen action reducing risks to health of urban populations from increasing heat – in synergy with climate change mitigation and other health benefits

**Main Objective:** Contribute to the reduction of two heat-related “key risks” to urban areas in ASEAN through collaboration, further establishing the topic, awareness raising, and action. The two heat-related key risks (from the Intergovernmental Panel on Climate Change (IPCC) 6<sup>th</sup> Assessment Report (AR6) 2022<sup>48</sup>) are:

- Risks to population from increased heat
- Heat stress, mortality, and morbidity from exposure to extreme heat and heatwaves

In view of climate change and state-of-the-art science, contribute to risk reduction in accordance with the size of current, increasing, and projected health risks. Take dynamics governing current and future risk changes into full account. Pay particular attention to, for example, land use and urban planning and regulations, and vulnerable groups (such as the elderly).

It is crucial to simultaneously maximize a) heat risk reduction, b) GHG emissions reduction, and c) other health benefits through e.g. appropriate available technical and policy response measures that are win-wins for both health and climate. For example, leverage and employ the wealth of passive and nature-based cooling measures.<sup>49</sup> Thus it is also crucial to ensure that trade-offs are avoided, and reduced as much as possible, from the outset, especially with CCM (e.g. trade-offs through unsustainable, energy inefficient air conditioning methods),<sup>50</sup> and those related to air pollution and waste heat. Wisdom and discretion are required in dealing with trade-offs – for example when they are absolutely unavoidable.

#### Activity 1

**Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents and initiatives. Make use of the many synergies and co-benefits with CCM strategies to simultaneously maximize benefits for both health and urgent GHG emissions reduction. Care should be taken to avoid trade-offs, especially with CCM, as much as possible from the outset.**

#### Ideas for Implementation

Target such upcoming documents and initiatives - those to be renewed as well as new documents. For example, target significant reduction of such risks from heat in upcoming Working Group Action Plans (especially Action Plans of ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) and ASEAN Working Group Climate Change (AWGCC), and health clusters) when they are renewed, as well as in the ASEAN Post-2015 Health Development Agenda, which will need to be renewed for the time period after 2025. If a climate change cooperation plan for the region is developed (as suggested by the ASEAN State of Climate Change Report (ASCCR)), integrate and mainstream heat risk prevention into this plan.

Explicitly include awareness raising measures.

Explicitly reducing risk to most vulnerable groups, for example the elderly, must also be included.

<sup>48</sup> See the Scoping Paper underpinning the Guidelines (ASEAN Secretariat 2024): “Towards Strengthening Cooperation for Urban Resilience in ASEAN: Scoping Paper focusing on climate change adaptation, disaster risk management and sustainable urban development”. Additionally, for the scientific basis, see the following IPCC AR 6 chapters: Dodman, D. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) [Pörtner, H.-O. et al (eds.)]; Pörtner, H.-O. et al. (2022): Technical Summary Supplementary Material. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)]; Shaw, R. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)].

<sup>49</sup> Further examples of many include expanding NbS and green infrastructure for cooling of public spaces and buildings, or heat sensitive urban planning. These are some of many examples which can lead to co-benefits in the form of reduced or avoided GHG emissions.

<sup>50</sup> Such as air conditioning and fans that are energy inefficient, do not meet ambitious energy performance standards, and use typically fossil-fuel based grid electricity.

Inform and use ongoing or upcoming outputs and activities in current documents and initiatives to further establish the topic of reducing risks from increasing heat to human health in urban areas. To this end, identify and use the many entry points and synergistic opportunities in current Action Plans, strategies, and work programs and initiatives related to ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASUS, ASEAN Committee on Disaster Management (ACDM), ASEAN Working Group Climate Change (AWGCC), and the Health Sector and Health Clusters. Examples include the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan, ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program, and ASEAN Working Group Climate Change (AWGCC) Action Plan.<sup>51, 52</sup> Ensure coordination between this Activity and Action Area 1, Activity 4 for maximizing synergies and avoiding trade-offs.

**Important synergies exist with**

**Action Area 1, Activity 4:** On and between different policy levels, scale up cross-sectoral awareness, collaboration and coordination in support of reducing health risks from increasing heat – in synergy with deep climate change mitigation and other health benefits.

**Action Area 2, Activity 1 (short title):** Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 3, Activity 2 (short title):** Through cooperation and action, improve linkage and integration of health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-off to avoid, and knowledge gaps.

**Action Area 6, Activity 4 (short title):** Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• Health Sector/ASEAN Health Cluster 2</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Health Cluster 2 Work Program  Synergies with ongoing projects <ul style="list-style-type: none"> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> <li>• Smart Green ASEAN Cities (SGAC)</li> </ul>	Comprehensive measures for risk reduction regarding the two indicated heat-related key risks have been added to upcoming regional strategies, frameworks, work programs, or similar, inter alia covering time periods that also go beyond 2025.  Comprehensive measures for risk reduction regarding the two indicated heat-related key risks are included in each relevant ASEAN Working Group (AWG) Action Plan when they are renewed.  Outputs and activities in existing Action Plans, strategies, and work programs were selected, into which to factor in risk reduction and sensitize for its need. What concretely to factor in for reduction of risks is agreed on.

<sup>51</sup> Entry points exist in the Outputs in Program 1 and Program 2 of the AWGESC’s Action Plan - in the planned ASEAN Guidelines on Sustainable Urban Planning and Development (output in Program 1), and in enhanced coordination with ACDM (output in Program 2), e.g. through the activity “Develop joint initiatives on climate resilient cities with focus on resilient vital infrastructure, early warning systems, coastal management, urban run-off, and urban health [climate induced]”. Link to the activity “Mutual learning at the impact of climate and health” in the core theme Climate Change Adaptation in the AWGCC Action Plan. Link to the output “Regional capacity building program to enhance knowledge and capabilities of disaster management professionals in the region to use multiple EWS tools is available/conducted” in the Sub-Priority 1.2. Early Warning in the AADMER Work Program.

<sup>52</sup> Further options for synergistic linkages exist, e.g. identify synergies between these recommendations and the ASEAN Regional Plan of Action on Adaptation to Drought 2021-2025, and integrate heat risk prevention into the Area “Health and well-being”, linked with the sub-area “Urban resilience” in the area “Built infrastructure”, the most evident area in the ASUS framework of sustainable urbanization.

## Activity 2

**Promote and support the development and implementation of city heat action plans throughout the region.**

### Ideas for Implementation

Promote and support the development and implementation of heat action plans in ASEAN cities. Heat action plans are key for anticipatory action with regard to heat risks, which are increasing. Use synergies with the ASEAN Framework on Anticipatory Action in Disaster Management (AFAADM) and its Plan of Action for 2021–2025.<sup>53</sup> The Framework recognises heat as one of the fast onset hazards that need to be addressed, and aims to streamline anticipatory action at the regional level. Help complement and extend those efforts with regard to heat to the sub-national level.

Raise awareness for the necessity of city heat action plans, and provide guidance and consultations to cities to develop and implement heat action plans. For example, this could include starting a new city initiative of front-runner cities with heat action plans, and upscaling successes over time.

Key steps for cities towards comprehensive heat action should include, but are not limited to:<sup>54</sup>

- Developing a heat action plan
- Developing and issuing heat early warnings
- Leading emergency response
- Liaising with the media
- Liaising with the residents
- Strengthening health systems
- Mainstreaming heat risk reduction into city planning
- Learning and evaluation

Explicitly reducing risk to most vulnerable groups, for example the elderly, must also be included. Projected future changes in risk from heat, e.g. due to climate change and urbanization, need to be taken into full account. Encourage the use of existing systems and link heat risk responses to existing emergency response mechanisms. Simultaneously maximize both health benefits and greenhouse gas (GHG) emissions reduction.<sup>55</sup> It is key to ensure that trade-offs are avoided, and reduced as much as possible, from the outset, especially with CCM and with those related to exacerbating GHG emissions, air pollution, and waste heat in urban areas.<sup>56</sup> Wisdom and discretion are required in dealing with trade-offs – for example when they are absolutely unavoidable. Furthermore, ensure that the approach can be upheld in the long-term, including financing options.<sup>57</sup> Make use of synergies with other Activities in this Action Area provided in the Guidelines as well as with initiatives in ASEAN documents.<sup>58</sup>

<sup>53</sup> ASEAN Secretariat (2022): ASEAN Framework on Anticipatory Action in Disaster Management. Available online at <https://asean.org/wp-content/uploads/2022/06/ASEAN-Framework-on-Anticipatory-Action-in-Disaster-Management.pdf>, checked on 3/2/2023.

<sup>54</sup> Based on: Red Cross Red Crescent Climate Centre (2019): Heatwave Guide for Cities. Available online at <https://www.climatecentre.org/downloads/files/IFRCGeneva/RCCC%20Heatwave%20Guide%202019%20A4%20RR%20ONLINE%20copy.pdf>, checked on 3/2/2023.

<sup>55</sup> For example, expanding NbS and green infrastructure for cooling of public spaces and buildings can also lead to 'co-benefits' in the form of reduced GHG emissions.

<sup>56</sup> An important example is by continuing reliance on use of the air conditioning and fans that are energy inefficient, do not meet ambitious energy performance standards, and use typically fossil-fuel based grid electricity.

<sup>57</sup> WHO (2008): Heat–health action plans: guidance. Available online at <https://www.who.int/publications/i/item/9789289071918>, checked on 3/2/2023.

<sup>58</sup> For example, link to the activity “developing joint initiatives on climate resilient cities with focus on (inter alia) early warning systems, and urban health (climate induced)” in the AWGESC Work Plan; to activity “Advancing ASEAN Initiatives on Clean Air, Health and Climate Change” in the AWGCC Action Plan; and to the goal “prepare and respond to environmental health threats and other hazards, including the health impacts of climate change in the region” of the ASEAN Health Cluster 2 Work Program.

**Important synergies exist with**

**Action Area 2, Activity 2:** Strengthen dissemination of proven best practices for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Promote such exchanges from the municipal to national government level.

**Action Area 2, Activity 3 (short title):** Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

**Action Area 4, Activity 3 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 4, Activity 3:** Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 11, Activity 3 (short title):** Strengthen capacities to assess the four climate-related “key risks” from flooding and increasing heat in urban areas from Action Areas 5 and 6.

**Action Area 11, 5 (short title):** Build capacities of municipal to national level planning authorities for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• AHA-Centre</li> <li>• Health Sector/ASEAN Health Cluster 2</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  Health Cluster 2 Work Program  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	Development of city heat action plans are promoted and supported through integration with ongoing and/or upcoming ASEAN Cooperation Projects.



**Activity 3**

**Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-offs to be avoided, and knowledge gaps.<sup>59</sup> This would further strengthen the basis for heat risk reduction policy in urban areas in ASEAN in view of future climate change and urbanization.**

**Ideas for Implementation**

Commission a comprehensive scientific report for policy and practice for reducing health risks from heat in urban areas in ASEAN. Focus topics should include a) risks to population from heat, extreme heat and heatwaves and their increases; explicitly include mortality; lend particular focus to vulnerable groups; b) proportionate reduction of risks to human health in urban areas ASEAN; c) using synergies and avoiding trade-offs - including, but not limited to, Climate Change Mitigation (CCM) - to simultaneously maximize both health benefits and steep greenhouse gas emissions reduction; d) identifying knowledge gaps and ways forward for filling them, e) recommendations for policy, and practice, and science.

Take future projections determining changes in risks into full account, e.g. though climate change and urbanization. Use links to initiatives in current Action Plans, strategies, and work programs.<sup>60</sup>

Deliver a regional ASEAN conference for policy and practice to disseminate the report and strengthen the scientific decision basis for risk reduction, focusing on urban areas. Among other topics identified as key, include a) to d) from above.

**Important synergies exist with**

**Action Area 1, Activity 4:** On and between different policy levels, scale up cross-sectoral awareness, collaboration and coordination in support of reducing health risks from increasing heat – in synergy with deep climate change mitigation and other health benefits.

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents and initiatives.

**Action Area 6, Activity 4 (short title):** Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas.

**Action Area 8, Activity 1:** Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• Health Sector / ASEAN Health Cluster 2</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program ASEAN Working Group Climate Change (AWGCC) Action Plan Health Cluster 2 Work Program Synergies with ongoing projects	A comprehensive scientific report is published and appropriately highlighted and disseminated to inform policy, practice and science.  A regional conference focusing on the report and on recommendations for policy and practice is held on a) to e), and other identified key topics. Recommendations are given for policy, practice, and science to reduce risks strengthen the decision basis, covering identified needs and gaps, and a way forward after the conference.

<sup>59</sup> Among the required features for these assessments are a basis of climate model projections, taking into consideration urban and rural differentiation, appropriately high spatial resolutions and consideration of different risks to population groups, and how to reach and sensitize these groups to the problems and adaptive measures.

<sup>60</sup> For example, “Mutual learning at the impact of climate and health” in the AWGCC Action Plan, and activities targeting the outcome “Capacity building and knowledge sharing initiatives on cities and human settlements are expanded” in the Sub-Priority Resilient Cities and Human Settlements in the AADMER Work Program 2021–2025.

**Activity 4**

**Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas – complementing national and municipal level efforts, and in collaboration with ASEAN Member States (AMS).**

**Ideas for Implementation**

Conduct needs assessment for coordinated regional action targeting heat risk reduction in urban areas in view of the size of current, increasing, and projected risks, and state-of-the-art science. Joint regional action could take various forms, e.g. loose coordination formats, developing an overarching regional strategy, or implementing a more comprehensive regional framework. At the same time, strengthen anticipatory action for heat risk reduction by supporting making the ASEAN Framework on Anticipatory Action in Disaster Management (AFAADM) and its plan for Action 2021-2025 extensible and actionable with respect to heat risks in urban areas. Also include strengthening awareness-raising action. Ensure close coordination between this Activity and Action Area 1, Activity 4, for maximizing synergies and avoiding trade-offs.

Focus particularly on the most vulnerable groups. Cooperation among ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ASEAN Committee on Disaster Management (ACDM), and Health Clusters is important. Use the many existing synergies to other strategies, in particular with avoiding and steeply reducing GHG emissions. Simultaneously maximize both health benefits and GHG emissions reduction, using synergies and avoiding trade-offs as much as possible from the outset, especially in regards to Climate Change Mitigation (CCM). Links to initiatives in existing ASEAN documents exist to create synergies.<sup>61</sup>

**Important synergies exist with**

**Action Area 1, Activity 4:** On and between different policy levels, scale up cross-sectoral awareness, collaboration and coordination in support of reducing health risks from increasing heat – in synergy with deep climate change mitigation and other health benefits.

**Action Area 3, Activity 1 (short title):** Strengthen collaboration and knowledge exchange between ASEAN Working Groups, Health Sector and Health Clusters and between ASEAN bodies and other actors in health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), Climate Change Mitigation (CCM) and sustainable urbanization communities.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. Identify and use already existing opportunities in current such documents and initiatives.

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-off to avoid, and knowledge gaps.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• Senior Officials Meeting for Health Development (SOMHD)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  Health Cluster 2 Work Program  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	A needs assessment for coordinated regional action to raise awareness and significantly reduce risks from increasing heat in urban areas has been conducted.  An agreement on the format and extent of coordinated regional level action has been reached.

<sup>61</sup> For example, link to the activity “developing joint initiatives on climate resilient cities with focus on (inter alia) early warning systems, and urban health (climate induced)” in the AWGESC Work Plan; to activity “Advancing ASEAN Initiatives on Clean Air, Health and Climate Change” in the AWGCC Action Plan; to the goal “prepare and respond to environmental health threats and other hazards, including the health impacts of climate change in the region” of the ASEAN Health Cluster 2 Work Program.



## Action Area 7

### Address health risks from high air pollution concentrations in urban areas

**Main Objective:** Increase air quality through collaboration and action to reduce health risks, including mortality risk, from high air pollution concentrations in urban areas. Thereby increase resilience to the following pollution- and climate-related “key risk” (from the Intergovernmental Panel on Climate Change (IPCC) 6<sup>th</sup> Assessment Report (AR6) 2022):<sup>62</sup>

- Health risks from air pollution exposure in cities

#### Activity 1

**Integrate air pollution monitoring and improvement in upcoming regional strategies and frameworks, work programs, action plans, and initiatives. Use synergies between strategies aiming at reducing and avoiding greenhouse gas (GHG) emissions and reducing air pollution concentrations.**

#### Ideas for Implementation

Target health risks from air pollution in health-related policy strategies and frameworks, such as the ASEAN Comprehensive Framework on Care Economy, the ASEAN Post-2015 Health Development Agenda (2021-2025), when they are renewed, as well as in novel such strategies and frameworks. Explicitly address and prioritize the needs of vulnerable residents and communities. Additionally, target air pollution more prominently in upcoming Action Plans and work programs, such as the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan and the Health Cluster 2 Work Program, for the time period beyond 2025. Measures could, for example, include (but are not restricted to): strengthening air-quality and health co-benefits of climate policies; improvement of air quality monitoring; supporting the development of emission inventories in ASEAN cities and the establishment of a centralised data management system.

Use opportunities for cooperation with city-level initiatives targeting urban sustainability, such as Smart Green ASEAN Cities (SGAC), SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2), Clean Air for Sustainable ASEAN Project (CASA), and Air Quality Improvement Program (AQIP).

#### Important synergies exist with

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross-sectoral collaboration on urban resilience.

**Action Area 4, Activity 1:** Increase cooperation and promote awareness for NbS as examples of integrating CCA and CCM measures and creating co-benefits.

**Action Area 8, Activity 1:** Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	Measures targeting urban air pollution and related health risks have been added to new action plans, work programs and regional strategies.
<b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• Health Sector/Health Cluster 2</li> <li>• ASEAN Smart Cities Network (ASCN)</li> </ul>	<b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• Clean Air for Sustainable ASEAN Program (CASA)</li> <li>• Air Quality Improvement Program (AQIP)</li> <li>• Smart Green ASEAN Cities (SGAC)</li> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> </ul>	

<sup>62</sup> See ASEAN Secretariat (2024): Towards Strengthening Cooperation for Urban Resilience in ASEAN. Scoping Paper focusing on aspects in climate change adaptation, disaster risk management and sustainable urban development. Additionally, for the scientific basis, see the following IPCC AR6 chapters: Dodman, D. et al. (2022): Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) [Pörtner, H.-O. et al (eds.)]; Pörtner, H.-O. et al. (2022): Technical Summary Supplementary Material. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)]; Shaw, R. et al. (2022): Asia. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the AR6 of the IPCC [Pörtner, H.-O. et al (eds.)].

**Activity 2**

**Conduct needs assessment for coordinated regional action targeting air pollution in urban areas. Develop a structured, regional approach to increase air quality in urban areas based on the results in collaboration with ASEAN Member States (AMS).**

**Ideas for Implementation**

Conduct a needs assessment for coordinated regional measures, assessing national ASEAN Member States (AMS) policies, gaps therein and key needs for action on a regional level. For developing a regional approach to improve air quality in cities, a similar approach could be used as for tackling regional haze pollution, which led to the ASEAN Agreement on Transboundary Haze Pollution (AATHP) and the Roadmap on ASEAN Cooperation towards Transboundary Haze Pollution Control. A regional approach should be based on collaboration between the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), the Health Sector and Health Clusters and relevant initiatives, such as the ASEAN Initiative on Environmentally Sustainable Cities, and the consideration of already existing national policies and measures to improve air quality. It should ideally set common goals and standards for air quality in ASEAN cities, and address the needs of vulnerable residents and communities particularly affected by low air quality.

To develop effective regional measures, consider the results of the extensive report “Air Pollution in Asia and the Pacific: Science-based solutions” by the UN Environment Program (UNEP), which proposes 25 clean air measures for Asia and the Pacific, addressing various sectors. A regional agreement on post-combustion controls, industrial process emissions standards, emissions standards for road vehicles, mandatory vehicle inspection and maintenance and road dust control could be envisaged. This would target the five clean air measures identified by UN Environment Program (UNEP) as key starting points for air quality improvements in the region.

An online platform similar to the ASEAN Haze Portal, or expansion of the ASEAN Haze Portal to also encompass urban air quality, should further be considered. This platform should provide an overview of programs and initiatives targeting air quality and, if available, display air quality PM2.5 levels across ASEAN.

**Important synergies exist with**

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross-sectoral collaboration on urban resilience.

**Action Area 1, Activity 2:** Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.

**Action Area 1, Activity 3:** Building on the development of new indicators for urban resilience, set up exchange and support mechanisms for ASEAN cities to encourage dissemination, adoption and use of the indicators.

**Action Area 4, Activity 1:** Increase cooperation and promote awareness for NbS as examples of integrating CCA and CCM measures and creating co-benefits.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	A needs assessment for coordinated regional action targeting air pollution in urban areas has been conducted
<p><b>Potential collaborators:</b></p> <ul style="list-style-type: none"> <li>ASEAN Coordinating Centre for Transboundary Haze Pollution Control (ACC THPC)</li> </ul>	<p>Synergies with ongoing projects</p> <ul style="list-style-type: none"> <li>Clean Air for Sustainable ASEAN Project (CASA)</li> <li>Air Quality Improvement Program (AQIP)</li> <li>ASEAN Haze and Peatland Programs<sup>63</sup></li> </ul>	

<sup>63</sup> An overview is available online at: <https://hazeportal.asean.org/programmes/>, checked on 05/01/23.



## Thematic Cluster C: Addressing vulnerable groups and gender aspects



### Action Area 8

Strengthen participation and support the empowerment of people in vulnerable situations

**Main Objective:** Increase opportunities for the participation of people in vulnerable situations, including women and girls, in local processes and decision making. Empower vulnerable groups and communities to be an integral part of and take ownership for measures and activities strengthening urban resilience.

#### Activity 1

**Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities.**

#### Ideas for Implementation

Support cities and local governments in identifying urban populations that are highly exposed to climate change impacts and have limited coping capacity, as well as in understanding their needs. This includes spatially identifying areas of importance for specific vulnerable groups (e.g. children, elderly, women, people with disabilities), but also identifying vulnerable groups using a more holistic approach. This involves understanding how access to services and infrastructure differs amongst parts of the urban population, how services and infrastructure are distributed spatially and whether spatial inequalities exist.<sup>64</sup> Support the collection of gender-disaggregated data. Different formats can be considered to support cities therein, such as a) providing technical support in how to identify vulnerable groups and communities, e.g. by conducting workshops during which city profiles are created,<sup>65</sup> and b) developing guidelines on how to assess spatial inequalities in a city.

Use synergies with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program output: “A study and/or assessment on vulnerability of women and other vulnerable groups is developed to support the implementation of the ASEAN Guidelines on Disaster Responsive Social Protection to Increase Resilience”

<sup>64</sup> C40 Cities, WRI Ross Center for Sustainable Cities (2019): Inclusive Planning. How to tackle climate change and inequality jointly: practical resources and guidance for cities. Available online at [https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en\\_US](https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en_US), checked on 29/08/2023.

<sup>65</sup> Asian Development Bank; Urban Climate Change Resilience Trust Fund (2021): Community-Led Urban Resilience Planning. A practical guide to inclusive, community-led risk and vulnerability assessment and project identification. Available online at <https://www.adb.org/sites/default/files/project-documents/48317/48317-004-dpta-en.pdf>, checked on 29/08/2023.

**Important synergies exist with**

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk measures, synergies, trade-offs to be avoid

**Action Area 7, Activity 1:** Integrate air pollution monitoring and improvement in upcoming regional strategies and frameworks, work programs, action plans, and initiatives. Use synergies between strategies aiming at reducing and avoiding greenhouse gas (GHG) emissions and reducing air pollution concentrations

**Action Area 7, Activity 2:** Conduct needs assessment for coordinated regional action targeting air pollution in urban areas. Develop a structured, regional approach to increase air quality in urban areas based on the results in collaboration with ASEAN Member States (AMS).

**Action Area 8, Activity 3:** Promote the empowerment of people in vulnerable situations, including women and girls, through climate resilience projects.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>• Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• Global Covenant of Mayors Southeast Asia (GCoM SEA)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan  Synergies with ongoing projects	Technical assistance programs to help cities and local governments identify vulnerable groups have been created and implemented.



**Activity 2**

**Promote the involvement of vulnerable groups and marginalised communities in local governance processes, including women and girls.**

**Ideas for Implementation**

Strengthen the involvement of city residents in local governance processes, including consultation processes and participation opportunities for representatives of vulnerable groups and vulnerable communities. Examples of participation processes which could be considered by the cities include multi-stakeholder consultations, targeted focus group discussions, and making use of co-creation approaches. These processes should aim at better understanding the needs of different population groups, strengthening collaborative governance and gathering local knowledge. Design these processes in a gender-sensitive way, to ensure the participation of women and girls. Existing community initiatives contributing to strengthening climate resilience should also be identified and supported – where possible – by local structures.<sup>66, 67</sup> Special attention should also be paid to identifying societal drivers of vulnerability, such as formal or informal structures impacting economic and social participation possibilities of women, migrant workers, or other potentially marginalized groups.<sup>68</sup>

Promote and disseminate participatory governance practices through existing city networks, such as the ASEAN Smart Cities Network (ASCN). Learnings and best practice examples could then be compiled and shared with relevant local actors throughout the ASEAN Member States (AMS). Make use of synergies with the activity “Promote public participation and youth engagement towards climate resilient and sustainable urbanization” from the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan.

**Important synergies exist with**

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross-sectoral collaboration on urban resilience.

**Action Area 1, Activity 2:** Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.

**Action Area 12, Activity 1 (short title):** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

**Action Area 12, Activity 3:** Strengthen the understanding of urban resilience and increase awareness for key risks, solution options and available resources, especially at sub-national levels.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> <li>ASEAN Smart Cities Network (ASCN)</li> <li>Global Covenant of Mayors Southeast Asia (GCoM SEA)</li> </ul>	ASEAN Working Group on Environmental-ly Sustainable Cities (AWGESC)  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects <ul style="list-style-type: none"> <li>Smart Green ASEAN Cities (SGAC)</li> <li>SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> </ul>	Gender-sensitive participatory governance practices have been promoted in a city network or cityrelated regional program.  A number of cities have piloted participatory governance approaches and have documented learnings and best practices.

<sup>66</sup> Guénard, M. et al. (2022): Equitable Transitions Guidebook. Local tools for fair and inclusive sustainability programs. ICLEI Local Governments for Sustainability e.V. Available online at <https://circulars.iclei.org/resource/equitable-transitions-guidebook/>, checked on 29/08/2023.

<sup>67</sup> C40 Cities, WRI Ross Center for Sustainable Cities (2019): Inclusive Planning. How to tackle climate change and inequality jointly: practical resources and guidance for cities. Available online at [https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en\\_US](https://www.c40knowledgehub.org/s/article/Inclusive-Planning-Executive-Guide?language=en_US), checked on 29/08/2023.

<sup>68</sup> ASEAN (2022): Sustainable Urbanisation Report. Sustainable Cities towards 2025 and beyond. Available online at <https://asean.org/book/asean-sustainable-urbanisation-report/>, checked on 29/08/2023.

**Activity 3**

**Promote the empowerment of people in vulnerable situations, including women and girls, through climate resilience projects.**

**Ideas for Implementation**

In urban resilience projects, promote the integration of aspects necessary to ensure inclusive urban development and the empowerment of people in vulnerable situation, also specifically considering women and girls. For this purpose, create and disseminate a checklist for transformative urban resilience projects. Promote the use of this checklist in the attribution of funds; projects which integrate many aspects of the checklist should be prioritized.

Important aspects to be considered include, amongst others: ensuring accessibility of buildings, infrastructure and other areas (especially considering people with physical mobility challenges), addressing safety concerns (especially for women and girls), selecting an appropriate location for new public spaces and infrastructure (accessibility for low-income households, ensuring a just distribution across the city), and utilizing areas in ways that benefit the local community (e.g. multi-purpose use of public spaces, such as for water retention, cultural activities and sports). Additionally, promote the integration of income-generating activities and capacity building in urban resilience projects, especially targeting women, girls, and other marginalized groups. To release the gender-transformative potential of projects, however, it is important to go one step further and to understand and address the reasons why women (or other marginalized groups) might not make use of created opportunities.

**Important synergies exist with**

**Action Area 2, Activity 3:** Support a greater number of cities with pilot projects for integrating and mainstreaming DRR and CCA in urban planning.

**Action Area 4, Activity 3:** Support the dissemination of NbS good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 8, Activity 1:** Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities.

**Action Area 8, Activity 4:** Support community-based adaptation (CBA) to promote local, community-led projects strengthening the resilience of vulnerable urban communities.

**Action Area 9, Activity 2:** Address the equitable access to resources, services and infrastructure in urban planning.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Committee on Women (ACW)</li> <li>• ASEAN Commission on the Promotion and Protection of the Rights of Women and Children (ACWC)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	A checklist for transformative urban resilience projects has been created and disseminated among ASEAN Member States (AMS), relevant sub-national actors and international partners.

**Activity 4**

**Support community-based adaptation(CBA) to promote local, community-led projects strengthening the resilience of vulnerable urban communities.**

**Ideas for Implementation**

Support the implementation of Community-based Adaptation (CBA) to strengthen the resilience of vulnerable communities and address climate-risks. Community-based or community-led approaches in adaptation are driven by the affected communities. Therefore, the role of governmental institutions is facilitative and supportive rather than directive, giving ownership of the adaptation measures to the local community.

Conduct a study to a) identify existing urban CBAs in ASEAN which contribute to reduce the climate-related risks to the community, and b) identifies potentials to replicate these approaches in other locations. Additionally, aim at setting up Collaborative Funding Mechanisms. Establish a joint funding mechanism through which cities can apply for grants or low-interest loans to support CBA projects. This fund can be managed by a consortium of the ASEAN Regional actors, ensuring transparency and effectiveness.

Use synergies with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program outputs “Socially inclusive community-based disaster risk management promoted within the ASEAN, particularly for the communities located in geographically isolated areas” and “Good practices on community-based disaster risk management, especially those that highlight the leadership of women and other vulnerable groups, are documented / compiled”.

**Important synergies exist with**

**Action Area 4, Activity 3:** Support the dissemination of NbS good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.

**Action Area 8, Activity 3:** Promote the empowerment of people in vulnerable situations, including women and girls, through climate resilience projects.

**Action Area 9, Activity 2:** Improve access to finance and financial strategies.

**Action Area 12, Activity 1 (short title):** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management (ACDM) Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• Global Covenant of Mayors Southeast Asia (GCoM SEA)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	A study has been conducted to identify existing urban CBAs as well as potentials for replication.  A feasibility study for Collaborative Funding Mechanisms in the ASEAN context has been conducted, with recommendations on how to support this at a regional level.



### Action Area 9

Explicitly consider vulnerable groups and gender aspects in climate risk analyses, initiatives and urban planning

**Main Objective:** Mainstream the consideration of vulnerable groups into climate risk analyses, as vulnerable groups are often disproportionately affected by climate change impacts. Integrate vulnerable groups into urban planning processes and projects to strengthen urban climate resilience.

#### Activity 1

**Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.**

#### Ideas for Implementation

Promote the explicit consideration of vulnerable groups and gender aspects in analyses related to climate risks, such as Climate Risk Assessments. Differentiating between different population groups and explicitly taking into account their vulnerability can make risk assessments more informative and increase their usefulness for further planning steps. This might often entail combining both quantitative and qualitative methods, as available quantitative data often does not sufficiently capture women and marginalized groups' perspectives and their experiences with urban climate change issues. Methods to obtain qualitative data include, for example, interviews and focus group discussions. Using such methods can further contribute to increasing community engagement and can give women and vulnerable groups a voice in planning policies.<sup>69</sup>

Use synergies by incorporating these aspects in the development of new methodologies to assess climate risks. Also consider these aspects when applying a more differentiated approach to risks from flooding and when taking measures to strengthen the scientific decision basis for heat risk reduction policy.

#### Important synergies exist with

**Action Area 2, Activity 3:** Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

**Action Area 5, Activity 2 (short title):** Establish more differentiated and contextualized assessments, and adaptation, for these two risks from flooding to urban areas.

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-offs to be avoided, and knowledge gaps.

**Action Area 6, Activity 4 (short title):** Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

**Action Area 12, Activity 2:** Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M)</li> <li>ASEAN Working Group Climate Change (AWGCC)</li> </ul>	ASEAN Working Group Climate Change (AWGCC)  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	Vulnerable groups and gender aspects have been considered in several analyses related to climate risks performed to influence the design of an ASEAN project, program or initiative.

<sup>69</sup> Dougherty, S.; Taylor, J.; Hidayani, R.; Fatimah, D.: Climate change vulnerability assessments in Indonesia. Where are the women's perspectives? IIED. Available online at <https://www.iied.org/sites/default/files/pdfs/migrate/10782IIED.pdf>, checked on 30/08/2023.

**Activity 2**

**Address the equitable access to resources, services and infrastructure through urban planning.**

**Ideas for Implementation**

Support ASEAN Member States (AMS) and local governments in addressing equitable access to resources, services and infrastructure in urban planning. Compile a checklist with key aspects to consider for equitable and inclusive urban planning. Promote and disseminate this checklist, so that these points are integrated in upcoming strategies, Action Plans and programs touching on urban planning, and are considered projects which relate to sustainable urban development. Integrate this checklist in the implementation of Action Area 2.

Important aspects to consider include:

- Access gaps need to be identified (see Action Area 8, Activity 1: “Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities”), and local governments should aim at implementing targeted support measures to address these gaps.
- Improvements in under-served and vulnerable communities should be prioritized.
- Key entry points for action include improving access to basic resources (water, food, energy), services (health and wellbeing, education) and infrastructure (roads, public transport) while considering safety, housing, mobility, community resilience and social participation.<sup>70</sup>
- When considering informal settlements in urban planning, cities should prioritize upgrading the infrastructure in place instead of displacing residents to the urban periphery, as long as the locations are safe from climate-related risks and natural hazards, are generally suitable for housing, and housing can be kept affordable using flexible planning standards.<sup>71</sup>
- Inclusive urban planning should further ensure that physical infrastructures and core services are available to all users, also considering accessibility for people with disabilities.<sup>72</sup>
- Further include aspects of Climate Change Adaptation (CCA) when expanding and fortifying core infrastructure, such as water, sanitation, and drainage, making sure that infrastructure can withstand and help mitigate climate hazards – also under consideration of future climate scenarios.
- Utilize, where possible, synergies with emission reduction strategies. For example, making public and non-motorized transport more attractive and accessible can significantly reduce a city’s greenhouse gas (GHG) emission and contribute to improvements in air quality.

**Important synergies exist with**

**Action Area 2 (all Activities):** Accelerate the co-beneficial integration of Disaster Risk Reduction and Climate Change Adaptation, and their mainstreaming into urban planning.

**Action Area 8, Activity 3:** Promote the empowerment of people in vulnerable situations, including women and girls, through climate resilience projects.

**Action Area 11, Activity 5:** Build capacities of municipal to national level planning authorities for integrating and mainstreaming DRR and CCA into urban planning.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	A checklist for equitable and inclusive urban planning has been created and disseminated among ASEAN Member States (AMS) and relevant sub-national actors.
<b>Potential collaborators:</b>	Synergies with ongoing projects	The checklist has been integrated in upcoming ASEAN policy and planning documents touching on urban planning.
<ul style="list-style-type: none"> <li>• Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• Global Covenant of Mayors Southeast Asia (GCoM SEA)</li> </ul>		

<sup>70</sup> Guénard, M. et al. (2022): Equitable Transitions Guidebook. Local tools for fair and inclusive sustainability programs. ICLEI Local Governments for Sustainability e.V. Available online at <https://circulars.iclei.org/resource/equitable-transitions-guidebook/>, checked on 29/08/2023.

<sup>71</sup> Mahendra, A. et al. (2021): Towards a more equal city. Seven Transformations for More Equitable and Sustainable Cities. World Resources Institute. Available online at <https://www.wri.org/research/7-transformations-more-equitable-sustainable-cities>, checked on 29/08/2023.

<sup>72</sup> OHCHR (2020): Sustainable Cities and Communes. Policy Guidelines for Inclusive Sustainable Development Goals. United Nations. Available online at <https://www.ohchr.org/sites/default/files/Documents/Issues/Disability/SDG-CRPD-Resource/policy-guideline-sustainable-cities.pdf>, checked on 29/08/2023.

**Activity 3**

**Promote the development and adoption of affordable housing strategies by ASEAN cities.**

**Ideas for Implementation**

The lack of affordable housing for a considerable part of the urban population has significantly contributed to the emergence of slums throughout the ASEAN region,<sup>73</sup> which are often disproportionately vulnerable to the impacts of climate change. Therefore, support the creation of regulatory frameworks for affordable housing and the mainstreaming of affordable housing strategies in urban planning. To that end, set up an Affordable Housing Strategy Blueprint, which can serve as a guideline for cities aiming to set up a social housing strategy.

The Blueprint should pay special attention to the location of social housing projects. Location is key in developing social housing, and has to consider affordability, livable density, access to services, and exposure to climatic and natural hazards. Further aspects to be considered are the prioritization of rental units, utilizing unused urban land, and improving public transport for housing-employment connections.<sup>74</sup> Additionally, enhancing tenure security in informal settlements can be an important aspect of a social housing strategy in order to facilitate improvements in these communities.<sup>75</sup>

**Important synergies exist with**

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross-sectoral collaboration on urban resilience.

**Action Area 2 (all Activities):** Accelerate the co-beneficial integration of Disaster Risk Reduction and Climate Change Adaptation, and their mainstreaming, into urban planning.

**Action Area 6, Activity 1 (short title):** Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• Global Covenant of Mayors Southeast Asia (GCoM SEA)</li> <li>• Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  Synergies with ongoing projects	An Affordable Housing Strategy Blueprint has been developed, serving as a guiding document for cities aiming to expand their affordable housing initiatives.

<sup>73</sup> ASEAN (2022): Sustainable Urbanisation Report. Sustainable Cities towards 2025 and beyond. Available online at <https://asean.org/book/asean-sustainable-urbanisation-report/>, checked on 29/08/2023.

<sup>74</sup> Mahendra, A. et al. (2021): Towards a more equal city. Seven Transformations for More Equitable and Sustainable Cities. World Resources Institute. Available online at <https://www.wri.org/research/7-transformations-more-equitable-sustainable-cities>, checked on 29/08/2023.

<sup>75</sup> ASEAN (2022): Sustainable Urbanisation Report. Sustainable Cities towards 2025 and beyond. Available online at <https://asean.org/book/asean-sustainable-urbanisation-report/>, checked on 29/08/2023.





## Thematic Cluster D: Capacity building and implementation



### Action Area 10

#### Improve access to finance and financial strategies

**Main Objective:** To promote innovative financing mechanisms with higher private sector problem of scarce financial resources.

##### Activity 1

**Explore and promote alternative financing sources with a higher contribution from private sector stakeholders.**

##### Ideas for Implementation

Increase regional, national and local actors' awareness of innovative financing mechanisms with private sector involvement, such as blended finance, public-private partnerships (PPP), venture capital, private equity and investment trusts.

Identify approaches and implement steps to make private sector investments more attractive in different sectors.

Examples include, but are not limited to:

- Enhancing incentives for the private sector, such as subsidies and guarantees
- Establishing autonomous institutions in collaboration with Development Finance Institutions (DFIs) to act as an interface with the private sector and to support governments in implementing global best practices in project structuring, financing and procurement.
- Setting up a green investment platform to support the collaboration required for green investments by bringing together a broader range of stakeholders (commercial entities, academia and non-governmental organizations) to harness leverage points like trainings, labelling, technical support, and also to share risks.
- Enhancing collaboration with DFIs to employ the blended finance approach and generate a bankable project pipeline.
- Advancing environmental, social and governance (ESG) taxonomies to bring more clarity into investments' contribution to climate or environmental goals

Furthermore, exploit recent and future financing sources and initiatives, such as the Adaptation Fund, as well as International Monetary Fund (IMF) Resilience and Sustainability Trust, which may provide further opportunity for ASEAN countries to respond to the unavoidable risks of climate change, as well as enhance sustainability and resilience.

##### Important synergies exist with

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross sectoral collaboration on urban resilience.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• United Nations Capital Development Fund (UNCDF)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan	Study/overview of innovative financing mechanisms with private sector involvement has been created.  A green investment strategy with concrete steps to scale up innovative financing mechanisms has been developed.
	<b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• ASEAN Climate Finance Strategy</li> <li>• ASEAN Capital Markets Forum</li> <li>• Smart Green ASEAN Cities (SGAC)</li> </ul>	The number of bankable projects relating to urban resilience has been increased.

**Activity 2**

**Develop new green finance tools and financial products to incentivize the financing of urban resilience measures.**

**Ideas for Implementation**

Research international best practices on green finance tools and financial products used in Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) finance. Examples include:

- Green definitions and taxonomies for green assets and financial products, including CCA and DRR aspects: to access diversified pools of capital, scale up green finance and improve policymakers’ ability to create effective policy. Based on that, a system for green asset tagging could be developed to help measure the green asset quality.
- Aggregation of a variety of assets: allows the development of a green investment pipeline and increase investment into these products that would otherwise be too small for institutional investors to invest in directly.
- New tools to improve environmental risk management (to be calculated into investment), including environmental, climate and disaster insurance to help improve the bankability of projects.

Investigate the feasibility and required concrete steps for implementing identified tools and products in ASEAN. Based on results, set up an Action Plan for the development of new financial tools and products.

**Important synergies exist with**

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables cross-sectoral collaboration on urban resilience.

**Action Area 11, Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Smart Cities Network (ASCN)</li> <li>• United Nations Capital Development Fund (UNCDF)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan	A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of innovative financing tools and products has been conducted.
	Synergies with ongoing projects	A cost-benefits-analysis for development and advancement of innovative financing tools and products has been performed.
	<ul style="list-style-type: none"> <li>• ASEAN Capital Markets Forum</li> <li>• ASEAN Climate Finance Strategy</li> <li>• Smart Green ASEAN Cities (SGAC)</li> </ul>	An Action Plan (including concrete steps, required resources and capacities) for the development of new tools and products has been developed.



## Action Area 11 Step up capacity building in urban resilience

**Main Objective:** Increase capacity of relevant actors and agencies in the field of urban resilience, targeting

- technical skills and expertise
- implementation and maintenance of Nature-based Solutions (NbS)
- assessment of flood-related risks
- access to finance and financing strategies
- integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning

### Activity 1

**Set up training programs to strengthen data management, data processing as well as quantitative analysis and modelling skills, especially targeting employees of sub-national governments, city authorities and relevant local agencies working on data-driven analyses and planning.**

#### Ideas for Implementation

Develop a curriculum and set up one or several new training programs to strengthen data management, data processing as well as quantitative analysis and modelling skills in fields important for urban resilience. Specifically target local government employees and relevant local agencies. Consider partnerships with ASEAN universities and research institutes. If the development of new training programs is not feasible, setting up bursary schemes to finance further training of high-potential local government employees can alternatively be considered.

#### Important synergies exist with

**Action Area 5, Activity 2 (short title):** Establish more differentiated and contextualized assessments, and adaptation, for these two key risks from flooding to urban areas.

**Action Area 6, Activity 3:** Further assess and synthesize the risks from increasing heat, proportionate risk synergies, trade-offs to avoid, and knowledge gaps.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

**Action Area 12, Activity 2:** Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan	Training program targeting data management, data processing and/or quantitative analysis and modelling skills in the field of urban resilience has been developed and set up.
<b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ASEAN Committee on Disaster Management (ACDM) WG P&amp;M)</li> <li>• ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)</li> </ul>	ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB) Action Plan	
	ASEAN Working Group Climate Change (AWGCC) Action Plan	
	ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program	
	Synergies with ongoing projects	

**Activity 2**

**Build capacities of ASEAN urban authorities, city leaders and local actors for planning, implementing and maintaining Nature-based Solutions (NbS), including its integration in urban planning.**

**Ideas for Implementation**

Use existing networks and initiatives such as the ASEAN Smart Cities Network (ASCN) and SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2) to train and build capacities of local governments for planning, implementing and maintaining Nature-based Solutions (NbS).

To create synergies, link to Program 1 (sustainable urban planning, development, and implementation) and/or Program 2 (climate resilient and low carbon cities) of the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan. Additionally, link to outputs in the outcome “Capacity building and knowledge sharing initiatives on cities and human settlements are expanded” in the Sub-Priority “Resilient Cities and Human Settlements” in the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program 2021–2025.

**Important synergies exist with**

**Action Area 4 (all Activities):** Promote Nature-based Solution measures to increase urban resilience to various risks and simultaneously provide mitigation and adaptation benefits.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

**Action Area 12, Activity 2:** Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>ASEAN Working Group on Nature Conservation and Biodiversity (AWGNBCB)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects <ul style="list-style-type: none"> <li>Smart Green ASEAN Cities (SGAC)</li> <li>SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> <li>ASEAN Smart Cities Network (ASCN)</li> </ul>	Capacity building program on planning, implementing and maintaining NbS in urban planning has been set up at national and city levels

**Activity 3**

**Strengthen capacities to assess the four climate-related “key risks” from flooding and increasing heat in urban areas from Action Areas 5 and 6. This, overall, should contribute to mainstreaming their assessment for strengthening the basis for informed local adaptation decision-making.**

**Ideas for Implementation**

To strengthen such capacities, develop and regularly conduct training programs on subnational- and municipal-level climate risk assessment, and appropriate adaptation on the selected key risks. Thereby, also strengthen access to and transfer of the scientific and practical knowledge and data basis, for these key risks. Overall, focus on the appropriate spatial levels of analysis. To create synergies, link this activity to ongoing or completed capacity building measures that are already part of ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan 2021–2025.

**Important synergies exist with**

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating cobenefits.

**Action Area 5, Activity 2 (short title):** Establish more differentiated and contextualized assessments, and adaptation, for these two risks to flooding in urban areas.

**Action Area 6, Activity 2:** Promote and support the development and implementation of city heat action plans throughout the region.

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-offs to be avoided, and knowledge gaps.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

**Action Area 12, Activity 2:** Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)</li> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  <b>Synergies with ongoing projects</b> <ul style="list-style-type: none"> <li>• Smart Green ASEAN Cities (SGAC)</li> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> <li>• East Asia Summit (EAS) High Level Seminar on Sustainable Cities (HLS-SC)</li> </ul>	Training programs for the key risks have been developed and are regularly conducted and updated with the aim of mainstreaming the assessments at the appropriate administrative level(s).  Relevant ongoing and upcoming capacity building measures are updated to assess the key risks in the main objectives of Action Areas 5 and 6.

**Activity 4**

**Build capacities, especially for sub-national actors, to understand and access adaptation finance.**

**Ideas for Implementation**

Promote awareness of existing funding mechanisms at national and local levels through conducting trainings on access to finance.

Address access to green finance funds through conducting the Green Climate Fund (GCF) readiness program.

Explore good practices related to resilience and local climate action capacity building in the Adaptation Fund (AF) and Global Environment Facility (GEF) portfolios to adapt and transfer them to the ASEAN context.

**Important synergies exist with**

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

**Action Area 10, Activity 1:** Explore and promote alternative financing sources with a higher contribution from private sector stakeholders.

**Action Area 10, Activity 2:** Develop new green finance tools and financial products to incentivize the financing of urban resilience measures.

**Action Area 11, Activity 1:** Set up training programs to strengthen data management, data processing as well as quantitative analysis and modelling skills, especially targeting employees of sub-national governments, city authorities and relevant local agencies working on data-driven analyses and planning.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>United Nations Capital Development Fund (UNCDF)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan	A number of training participants (for sub-national actors) on accessing finance for Climate Change Adaptation (CCA), Climate Change Mitigation (CCM), Nature-based Solutions (NbS).
	Synergies with ongoing projects	Increased number of national direct accredited entities in AMS to access climate fund.
	<ul style="list-style-type: none"> <li>ASEAN Climate Finance Strategy</li> </ul>	Good practices are collected, adapted and disseminated.



**Activity 5**

**Build capacities of municipal to national level planning authorities for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.**

**Ideas for Implementation**

Develop and deliver a capacity building program for planning authorities (ideally at national and municipal level), or integrate this into existing programs. Where possible, use existing networks and initiatives such as Smart Green ASEAN Cities (SGAC), SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2) and the ASEAN Smart Cities Network (ASCN) to train and build capacities of local governments. Multiple entry points to create synergies with existing outputs and activities exist.<sup>76</sup>

**Important synergies exist with**

**Action Area 2 (all Activities):** Accelerate the co-beneficial integration of Disaster Risk Reduction and Climate Change Adaptation, and their mainstreaming into urban planning.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>Institute for Global Environmental Strategies (IGES)</li> <li>ASEAN Smart Cities Network (ASCN)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects <ul style="list-style-type: none"> <li>SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> <li>Smart Green ASEAN Cities (SGAC)</li> </ul>	Implementing activities on integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning are conducted with municipal up to national planning authorities, inviting municipal and supra-municipal authorities from each ASEAN Member State (AMS).

<sup>76</sup> For example, link to outputs in the outcome “Capacity building and knowledge sharing initiatives on cities and human settlements are expanded” in the AADMER Work Program 2021–2025, namely: “Strategic knowledge products and/or capacity building program developed (e.g. resilience of urban- rural continuum), especially to address identified gaps based on the results of the impact assessment”; “An online platform (innovation hub) for: (i) sharing of best practices and innovation on resilient cities and human settlements exposed to climate and disaster resilience; and (ii) sharing of training tools and courses in disaster risk management for urban planning practitioners developed “. Additionally, link to Programm 1 and/or 2 of the AWGESC Action Plan.



## Action Area 12

### Strengthen the dissemination of relevant knowledge, data and methods

**Main Objective:** Enable easy access to relevant knowledge resources, data and methods required for analyses in the field of urban resilience, and increase awareness for climate-related risks.

#### Activity 1

**Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience. If applicable, include funding options for participation in capacity building programs.**

#### Ideas for Implementation

Build on the efforts of the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan 2016-2025, which aims at developing a platform providing a comprehensive list of available trainings and capacity building programs in Climate Change Adaptation (CCA). Extend the efforts to providing an online overview of all training and capacity building programs relating to urban resilience in the ASEAN context (including, for example, relevant software trainings, trainings relating to climate change risk and vulnerability assessment, resilient urban planning and finance, urban Nature-based Solutions (NbS), biodiversity conservation, etc.).

Additionally, review existing knowledge resources, methods and data. Consider national, regional and global resources (e.g. from international organisations) addressing topics relevant for urban resilience, including, but not restricted to, CCA, Disaster Risk Reduction (DRR), NbS, urban planning and air quality. Integrate a thematically structured overview into the online platform, clearly distinguishing between knowledge resources, data resources, and methods.

#### Important synergies exist with

**Action Area 11 (all Activities):** Step up capacity building in urban resilience.

**Action Area 12, Activity 2:** Develop and disseminate easy qualitative analyses in the field of urban resilience, adapted to the ASEAN context.

**Action Area 12, Activity 3:** Strengthen the understanding of urban resilience and increase awareness for key risks, solution options and available resources, especially at sub-national levels.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Groups (AWG)CC</li> <li>• ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB)</li> </ul>	ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  ASEAN Working Group Climate Change (AWGCC) Action Plan	An online platform with a comprehensive list of available trainings and capacity building programs relating to urban resilience has been created and is available online.
	Synergies with ongoing projects	An overview of existing knowledge resources, data resources and methods relating to urban resilience has been added to the platform.

**Activity 2**

**Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.**

**Ideas for Implementation**

Conduct a needs assessment for most needed methodological guidelines in the field of urban resilience, and compare the results to existing methodologies (e.g. from the Guidebook for Urban Resilience). Based on the results, develop additional, easy-to-use methodologies for the ASEAN context. These could target some of the following topics (suggestions only):

- Methodology for climate risk and vulnerability assessments at city level in the ASEAN context
- Methodology to evaluate the level of health risks through air pollution and develop effective measures at city level for better air quality in urban areas
- Guidelines for sub-national governments and cities on how to effectively integrate Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) into urban planning

If possible, use synergies with Action Area 11 targeting capacity building, and couple the creation of methodological guidelines with their use in new capacity building measures. Disseminate methodologies to relevant actors, also targeting the sub-national level. Additionally, use synergies with Action Area and incorporate the consideration of vulnerable groups and gender aspects in new methodologies.

To create synergies, use links to existing activities, such as “Enhance the ASEAN Member State (AMS)’ capacities on climate risk management” from the ASEAN Working Group Climate Change (AWGCC) Action Plan and the activity “Assessment of climate change risk and vulnerability in the ASEAN region” from the ASEAN Working Group Climate Change (AWGCC) Action Plan. Further utilise potential synergies with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program, such as with activities contributing to the output “A wider range of data analysis methods are utilised and institutionalised”.

**Important synergies exist with**

**Action Area 2, Activity 2 (short title):** Strengthen dissemination of proven best practices for integrating and mainstreaming DRR and CCA into urban planning.

**Action Area 4, Activity 1 (short title):** Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.

**Action Area 5, Activity 2 (short title):** Establish more differentiated and contextualized assessments, and adaptation, for these two risks to flooding in urban areas.

**Action Area 6, Activity 3 (short title):** Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-offs to be avoided, and knowledge gaps.

**Action Area 9, Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.

**Action Area 11 (all Activities):** Step up capacity building in urban resilience.

**Action Area 12, Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience. If applicable, include funding options for participation in capacity building programs.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group Climate Change (AWGCC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)</li> <li>• ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)</li> </ul>	ASEAN Working Group Climate Change (AWGCC) Action Plan  ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  Synergies with ongoing projects	Production of new methodological guidelines for quantitative or qualitative assessments in the field of urban resilience.

**Activity 3**

**Strengthen the understanding of urban resilience and increase awareness for key risks, solution options and available resources, especially at sub-national levels.**

**Ideas for Implementation**

Set up a communication campaign to raise awareness for urban resilience and key risks in the region, targeting especially sub-national actors (e.g. sub-national governments, city representatives and administrations). Make use of official ASEAN and ASEAN Member States (AMS) websites and channels, social media, as well as regional, national and sub-national conferences and events to promote the topic. Also address the importance of considering vulnerable groups and gender aspects, raising awareness for climate risks and supporting participatory approaches.

Cooperate with city networks and other initiatives to reach sub-national level actors. Use synergies with the first activity of this Action Area (creating an online overview of available capacity building programs, knowledge resources, methods and data): use the communication campaign to promote this platform and highlight available resources and trainings.

**Important synergies exist with**

**Action Area 1, Activity 1 (short title):** Establish a collaboration platform, including regular exchange formats, that enables crosssectoral collaboration on urban resilience

**Action Area 2, Activity 2 (short title):** Strengthen dissemination of proven best practices for integrating and mainstreaming DRR and CCA into urban planning.

**Action Area 4, Activity 1:** Increase cooperation and promote awareness for NbS as examples of integrating CCA and CCM measures and creating co-benefits.

**Action Area 8 (all Activities):** Strengthen participation and support the empowerment of vulnerable groups.

**Action Area 12, Activity 1 (short title):** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience. If applicable, include funding options for participation in capacity building programs.

Potential Lead Implementation Bodies	Synergies with existing AWG Action Plans	Indicators
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)  <b>Potential collaborators:</b> <ul style="list-style-type: none"> <li>• ASEAN Working Group Climate Change (AWGCC)</li> <li>• ASEAN Committee on Disaster Management (ACDM)</li> <li>• Local Governments for Sustainability (former International Council for Local Environmental Initiatives) South-East Asia Secretariat (ICLEI SEAS)</li> <li>• ASEAN Smart Cities Network (ASCN)</li> </ul>	ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Program  ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) Action Plan  Synergies with ongoing projects <ul style="list-style-type: none"> <li>• Smart Green ASEAN Cities (SGAC)</li> <li>• SDGs Frontrunner Cities Program Phase 2 (SDGs-FC2)</li> </ul>	Launched inclusive communication campaign to raise awareness for the importance of urban resilience, key risks, solution options and available resources.

**Table 1: Overview Clusters, Action Areas and Activities (some Activity titles are shortened).**

 <b>Thematic Cluster A</b> Supporting integration across sectors and governance levels	 <b>Thematic Cluster B</b> Promoting and mainstreaming responses to selected climate-related key risks
<p><b>Action Area 1:</b> Improve collaboration and coordination on urban resilience across policy levels</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Establish a collaboration platform, including regular exchange formats, that enable cross-sectoral collaboration on urban resilience (a) between Working Groups (WG) and (b) with the private sector and academia.</li> <li><b>Activity 2:</b> Develop and adopt indicators for urban resilience, complementing the already existing Environmentally Sustainable Cities (ESC) key indicators for clean air, clean water and clean land.</li> <li><b>Activity 3:</b> Building on the development of new indicators for urban resilience, set up exchange and support mechanisms for ASEAN cities to encourage dissemination, adoption and use of the indicators.</li> <li><b>Activity 4:</b> On and between different policy levels, scale up cross-sectoral awareness, collaboration and coordination in support of health risk reduction from increasing heat – in accordance to the size of current and projected increases of risks, and in synergy with deep climate change mitigation and other health benefits.</li> </ul>	<p><b>Action Area 4:</b> Promote Nature-based Solution measures to increase urban resilience to various risks and simultaneously provide mitigation and adaptation benefits</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Increase cooperation and promote awareness for Nature-based Solutions (NbS) as examples of integrating Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) measures and creating co-benefits.</li> <li><b>Activity 2:</b> Develop common standards for ASEAN Member States (AMS) and cities to implement Nature-based Solutions (NbS) and ensure effective compliance.</li> <li><b>Activity 3:</b> Support the dissemination of Nature-based Solutions (NbS) good practices and the implementation of NbS demonstration projects among cities, including scale up and replication.</li> </ul>
<p><b>Action Area 2:</b> Accelerate the co-beneficial integration of Disaster Risk Reduction and Climate Change Adaptation and their mainstreaming into urban planning</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Promote the integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in urban planning by prominently addressing this topic in upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives</li> <li><b>Activity 2:</b> Strengthen dissemination of proven best practices for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning. Promote such exchanges from the municipal to national government level.</li> <li><b>Activity 3:</b> Support a greater number of cities with pilot projects for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.</li> </ul>	<p><b>Action Area 5:</b> Further nuance risks from flooding, and risk reduction, in urban contexts in ASEAN regional documents</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> More prominently factor in the actual assessment, assessment results, and corresponding risk reduction for the two key risks from flooding in focus into upcoming regional strategies, frameworks, work programs, and Action Plans. Ensure coordination of Activity 1 and Activity 2.</li> <li><b>Activity 2:</b> Establish more differentiated and contextualized assessments, and adaptation, for these two key risks from flooding, to urban areas. Ensure coordination of Activity 1 and Activity 2.</li> </ul>
<p><b>Action Area 3:</b> Better link and integrate health, Disaster Risk Reduction and climate action amidst increasing health risks and evident synergies</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Strengthen collaboration and knowledge exchange both                         <ul style="list-style-type: none"> <li>between the ASEAN bodies ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), ASEAN Working Group Climate Change (AWGCC), ASEAN Committee on Disaster Management Working Group Prevention and Mitigation (ACDM WG P&amp;M), Health Sector and Health Clusters; and respectively</li> <li>between ASEAN bodies and other actors in the health, Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Climate Change Mitigation (CCM) and sustainable urbanization communities.</li> </ul> </li> <li><b>Activity 2:</b> Through cooperation, action and using evident synergies, improve linkage and integration of health, DRR, CCA and CCM in upcoming regional strategies and frameworks, work programs, and Action Plans to support health risk reduction. Ensure trade-offs which lead to exacerbating greenhouse gas (GHG) emissions, air pollution, and heating in urban areas are avoided.</li> </ul>	<p><b>Action Area 6:</b> Strengthen action reducing risks to health of urban populations from increasing heat – in synergy with climate change mitigation and other health benefits</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Integrate comprehensive action for reducing health risks from increasing heat across upcoming regional strategies and frameworks, work programs, Action Plans, and initiatives – to contribute to medium- to long-term strategy and impact. In parallel, identify and use already existing opportunities in current such documents and initiatives. Make use of the many synergies and co-benefits with CCM strategies to simultaneously maximize benefits for both health and urgent GHG emissions reduction. Care should be taken to avoid trade-offs, especially with CCM, as much as possible from the outset.</li> <li><b>Activity 2:</b> Promote and support the development and implementation of city heat action plans throughout the region.</li> <li><b>Activity 3:</b> Further assess and synthesize the risks from increasing heat, proportionate risk-reducing measures, synergies, trade-offs to avoid, and knowledge gaps.</li> <li><b>Activity 4:</b> Based on a needs assessment, identify and develop the most appropriate regional-level actions to contribute to raising awareness and significantly reducing health risks from increasing heat in urban areas – complementing national and municipal level efforts, and in collaboration with ASEAN Member States (AMS).</li> </ul>
	<p><b>Action Area 7:</b> Address health risks from high air pollution concentrations in urban areas</p> <ul style="list-style-type: none"> <li><b>Activity 1:</b> Integrate air pollution monitoring and improvement in upcoming regional strategies and frameworks, work programs, action plans, and initiatives.</li> <li><b>Activity 2:</b> Conduct needs assessment for coordinated regional action targeting air pollution in urban areas. Develop a structured, regional approach to increase air quality in urban areas based on the results in collaboration with ASEAN Member States (AMS).</li> </ul>



### Thematic Cluster C

Addressing vulnerable groups and gender aspects

#### Action Area 8: Strengthen participation and support the empowerment of vulnerable groups

- **Activity 1:** Increase the knowledge base on vulnerable groups at the local level, including the identification of vulnerable groups and communities.
- **Activity 2:** Promote the involvement of vulnerable groups and marginalised communities in local governance processes, including women and girls.
- **Activity 3:** Promote the empowerment of people in vulnerable situations, including women and girls, through climate resilience projects.
- **Activity 4:** Support community-based adaptation (CBA) to promote local, community-led projects strengthening the resilience of vulnerable urban communities.

#### Action Area 9: Explicitly consider vulnerable groups and gender aspects in climate risk analyses and urban planning

- **Activity 1:** Explicitly consider vulnerable groups and gender aspects in analyses assessing climate risks.
- **Activity 2:** Address the equitable access to resources, services and infrastructure through urban planning.
- **Activity 3:** Promote the development and adoption of affordable housing strategies by ASEAN cities.



### Thematic Cluster D

Capacity building and implementation

#### Action Area 10: Improve access to finance and financial strategies

- **Activity 1:** Explore and promote alternative financing sources with a higher contribution from private sector stakeholders.
- **Activity 2:** Develop new green finance tools and financial products to incentivize the financing of urban resilience measures

#### Action Area 11: Step up capacity building in urban resilience

- **Activity 1:** Set up training programs to strengthen data management, data processing as well as quantitative analysis and modelling skills, especially targeting employees of sub-national governments, city authorities and relevant local agencies working on data-driven analyses and planning.
- **Activity 2:** Build capacities of ASEAN urban authorities, city leaders and local actors for planning, implementing and maintaining Nature-based Solutions (NbS), including its integration in urban planning.
- **Activity 3:** Strengthen capacities to assess the four climate-related “key risks” from flooding and increasing heat in urban areas from Action Areas 5 and 6.
- **Activity 4:** Build capacities, especially for sub-national actors, to understand and access adaptation finance.
- **Activity 5:** Build capacities of municipal to national level planning authorities for integrating and mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into urban planning.

#### Action Area 12: Strengthen the dissemination of relevant knowledge, data and methods

- **Activity 1:** Create an online overview of available capacity building programs, knowledge resources, methods and data relating to urban resilience.
- **Activity 2:** Develop and disseminate easy-to-use methodologies for important use cases of quantitative or qualitative analyses in the field of urban resilience, adapted to the ASEAN context.
- **Activity 3:** Strengthen the understanding of urban resilience and increase awareness for key risks, solution options and available resources, especially at sub-national levels.



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