



ASEAN SUSTAINABLE URBANISATION FORUM

6 - 8 October 2021

DECEMBER 2021



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UN HABITAT
FOR A BETTER URBAN FUTURE



**Australian
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CONTENTS

1. INTRODUCTION

1.1.	Context	7
1.2.	Objectives	8
1.3.	Thematic Focus	8
1.4.	ASUF Session Descriptions	9

2. ASUF OPENING

2.1.	Opening Session	13
2.2.	Policy Roundtable: Progress Towards the Implementation of the MPAC 2025 and ASUS	14

3. SPECIAL SESSIONS

3.1.	SDGs Localisation and Voluntary Local Review in ASEAN	19
3.2.	Promoting Gender Equality, Disability and Social Inclusion in Cities	22
3.3.	Financing Opportunities for Urban Development	24
3.4.	COVID-19 Recovery in ASEAN	26

4. THEMATIC DIALOGUES

4.1.	Inclusive and Equitable Growth: Digital Payment Solutions to Enhance Financial Inclusion	29
4.2.	Sustainable Urban Mobility	31
4.3.	Housing and Home	33
4.4.	Education: Support Digital Skills Development	35
4.5.	Enhancing Urban Safety and Security	38
4.6.	Water, Waste & Sanitation: Enhance Solid Waste Management Systems	40
4.7.	Urban Resilience: Develop Flood Management Systems	42

5. TRAINING SESSIONS

5.1.	Implement Public Transport Plans	45
5.2.	Introduce Digital Solutions for Urban Safety	48
5.3.	Enhance Solid Waste Management Systems	52

6. CLOSING SESSION

List of Acronyms

AADCP II	ASEAN-Australia Development Cooperation Program II
ACRF	ASEAN Comprehensive Recovery Framework
ADB	Asian Development Bank
AGGI	Advisory Group on Gender Issues
AIT	Asian Institute of Technology
AMS	ASEAN Member States
APEKSI	The Association of Indonesian Municipalities
APOAMF	Alliance of Peoples Organization Along Manggahan Floodway in the Philippines
ASEAN	Association of Southeast Asian Nations
ASUF	ASEAN Sustainable Urbanisation Forum
ASUS	ASEAN Sustainable Urbanisation Strategy
BLGUs and LGUs	Barangay Local Government Units and Local Government Units
BRT	Bus Rapid Transit
BTS	Base Transceiver Station
CCTV	Close-Circuit Television
DEPA	Digital Economy Promotion Agency
DRD	Disability Research and Capacity Development
EGM	Expert Group Meeting
EWS	Early Warning System
GDP	Gross Domestic Product
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
HPFPI	Homeless People's Federation of the Philippines
IGES	Institute for Global Environmental Strategies
IoT	Internet of Things
JICA	Japan International Cooperation Agency
LIB-SI	Lead Implementing Body for Sustainable Infrastructure
M&E	Monitoring and Evaluation
MCR2030	Making Cities Resilient 2030
MGCY	Major Group for Children and Youth
MPAC 2025	Master Plan on ASEAN Connectivity 2025
MSME	Micro-Small-Medium Enterprises

NDRF	National Disaster Response Framework
NGO	Non-Governmental Organization
NUA	New Urban Agenda
P4I	Partnerships for Infrastructure
PPP	Public–Private Partnership
SDG	Sustainable Development Goals
UCLG ASPAC	United Cities and Local Governments Asia-Pacific
UNDRR	United Nations Office for Disaster Risk Reduction
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UN-Habitat	United Nations Human Settlement Programme
VLR	Voluntary Local Review
WHO	World Health Organization
WMAM	Waste Management Association of Malaysia
WUF-10	World Urban Forum Tenth Session

INTRODUCTION

1. INTRODUCTION

1.1. Context

Today, more than half of ASEAN people live in urban areas and an additional 70 million people are forecast to live in ASEAN cities by 2025, making sustainable and inclusive urbanisation a key priority to achieve the objectives of the ASEAN Community Vision 2025 and to raise the living standards of local communities. In all ASEAN Member States (AMS), economic growth is occurring at a rapid pace not only in mega-cities, but increasingly in secondary and middleweight cities, with populations between 500,000 and five million. These cities urgently need to provide citizens with sustainable urban infrastructures to narrow existing developmental gaps, strengthen resilience, promote innovation and improve well-being.

AMS have recognised the crucial role of urbanisation for sustainable development and enacted a pro-active approach to support cities' endeavours. As a result, in 2018 the ASEAN Sustainable Urbanisation Strategy (ASUS) was launched as a key initiative under the Master Plan on ASEAN Connectivity 2025 (MPAC 2025), under the guidance of the Lead Implementing Body for Sustainable Infrastructure (LIB-SI).

Building on the experiences and initiatives of various ASEAN city networks, ASUS aims to empower cities to seize opportunities and address current and future challenges, provide guidance on identifying the most crucial areas to focus on, and develop practical actions for their unique contexts.

As part of efforts undertaken by ASEAN in contributing to sustainable urban development and accelerating the implementation of the ASUS framework, the first ASEAN Sustainable

Urbanisation Forum (ASUF) was held virtually on 6-8 October 2021. This event established a multi-stakeholder eco-system and platform for knowledge sharing and policy development. The Forum was a three-day event engaging with ASEAN cities, city and provincial officials, relevant ministries and government agencies across AMS, ASEAN Dialogue Partners and Other External Partners, international organisations, private sector, NGOs, associations and experts, and other selected stakeholder organisations from relevant networks.

The Forum also served as a platform to review and discuss the development of the ASEAN Sustainable Urbanisation Report, which is being developed with the technical support of the United Nations Human Settlements Programme (UN-Habitat). The Report assesses trends, emerging issues, and opportunities as a knowledge base for ASEAN decision-makers.

Finally, taking into account the broader socio-economic impacts of the Coronavirus (COVID-19) pandemic on all cities and ASEAN as a whole, the Forum was also situated at a unique point in time to pause and take stock of the effects of the pandemic on ASEAN cities. The event brought stakeholders and AMS cities together to share actions and policies adopted to address COVID-19 towards a sustainable and resilient recovery.

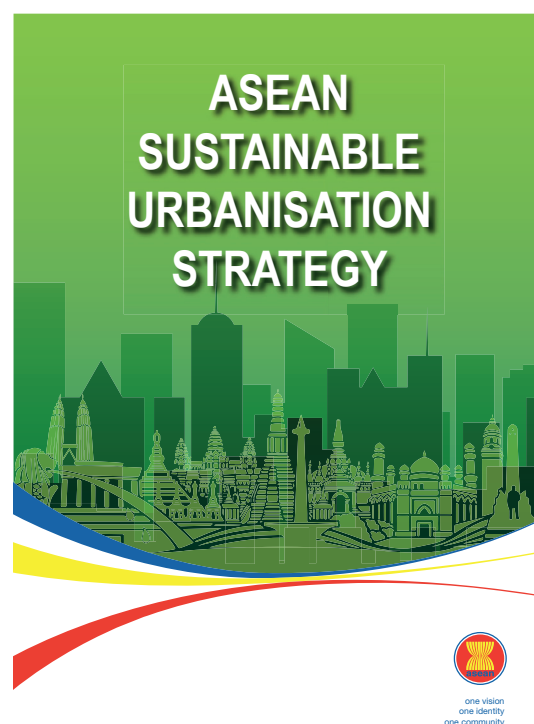


Fig.1 *The ASEAN Sustainable Urbanisation Strategy*

1.2. Objectives

- **Connect:** ASUF enhanced connectivity and increased engagement and partnerships between AMS, cities, and relevant stakeholders to advance the implementation of sustainable urbanisation and foster collaborative and constructive approaches across ASEAN;
- **Share:** The Forum provided a platform to disseminate knowledge and share best practices and lessons learned on urban development in ASEAN to support the development of sustainable and inclusive policies and programmes in ASEAN;
- **Learn:** It provided guidance to ASEAN cities and interested urban practitioners to implement the ASUS framework (Figure 1) and build capacity in developing viable, sustainable and inclusive urban projects.

1.3. Thematic Focus

Building on experiences from the World Urban Forum, regional and sub-regional urban forums, and

national urban forums that are growing in number in Southeast Asia, ASUF aimed to contribute to the achievements of regional and global development agendas. In this context, ASUS represents the key means to ground the discussion on the Sustainable Development Goals and the New Urban Agenda in practical action towards a sustainable future.

In developing ASUS, a comprehensive analysis of the major urban trends, relevant lessons learnt, and best practices was conducted. This analysis was complemented with an extensive consultative process inclusive of several key urban development actors across all AMS. Based on this background, ASUS prioritised the most crucial areas for ASEAN cities to focus on and developed practical action guidelines which cities could customise to their unique contexts.

ASUS identified 6 areas and 18 sub-areas of sustainable urbanisation, and further refined the focus to the seven most relevant priority sub-areas that apply across ASEAN cities. For each priority sub-area, ASUS identified one or two key priority action/s that are key to scaling up implementation of the priorities in the region.

The strategy employs a framework of sustainable urbanisation centred around 6 areas and 18 sub-areas

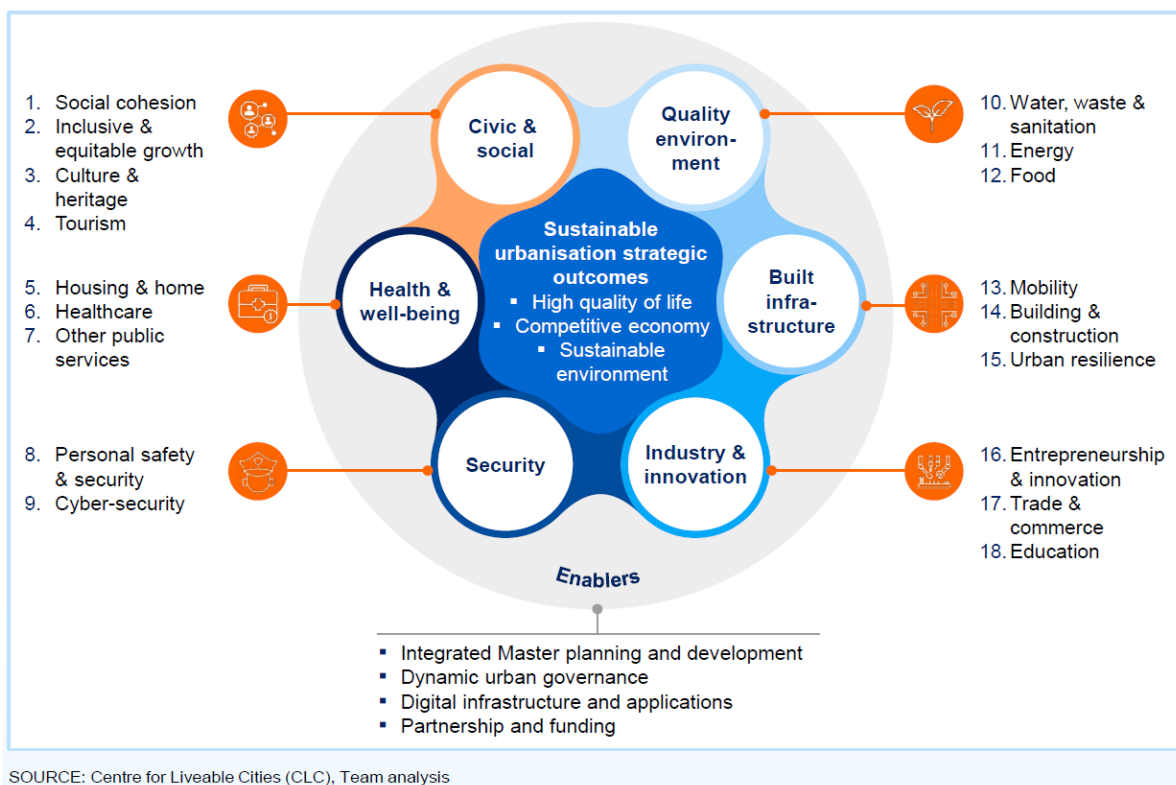


Fig.2 The ASEAN Sustainable Urbanisation Strategy - A Framework of 6 areas and 18 sub-areas

Priority Sub-Area	Priority Actions
Inclusive and equitable growth	1. Introduce and improve access to digital payment solutions to enhance financial inclusion
Housing and home	2. Develop and expand affordable housing solutions
Personal safety and security	3. Introduce digital solutions to enhance safety and security in cities
Water, waste, and sanitation	4. Enhance solid waste management systems
Mobility	5. Introduce and improve Bus Rapid Transit (BRT) systems
Urban resilience	6. Develop and enhance traffic management systems
Education	7. Develop flood management systems
	8. Develop digital skills through industry bootcamps

Table.1 Priority sub-areas and their respective priority actions

The Forum aimed to build on ASUS's findings and expand the discussion on the identified priorities for ASEAN cities. Therefore, the Forum's thematic focus were on the following (Table 2) 7 priority sub-areas and their 8 respective priority actions:

1.4. ASUF Session Descriptions

ASUF was envisaged as a three-day event designed to provide multiple virtual platforms to manage the risks of the COVID-19 pandemic, in respect of national regulations and UN recommendations. From these limitations arises the opportunity for a broad range of stakeholders to share their experiences and participate in diverse debates, group discussions, and initiatives. To ensure an inclusive approach and to promote multi-level discussions on the several thematic proposed, the Forum hosted a diverse range of events:

- **Opening Session:** A vibrant 30-minute inauguration where speakers from ASEAN and key partners shared visions, expectations, and keynotes relevant to the Forum.
- **Policy Roundtable:** This session hosted key stakeholders and partners to present and discuss initiatives and progresses in implementing regional and national agendas, starting from the MPAC 2025, ASUS, and the local progress made in achieving the global development agendas.
- **Special Sessions:** These sessions complemented the ASUS Thematic Dialogues,

providing the opportunity to address key themes of crucial relevance for AMS and stakeholders. Speakers from a wide variety of backgrounds built a dialogue around thematic as, but not limited to, the COVID-19 response, national and local reporting on the SDGs, and progress on the implementation of initiatives under the various ASEAN city networks.

- **ASUS Thematic Dialogues:** Each session was moderated to guide a dialogue with a pool of experts from the ASUS priority sub-areas, sharing best practices and lessons learned on past and ongoing initiatives. Selected ASEAN cities presented challenges, opportunities and initiatives aligned to the ASUS sub-priority areas to provide a practical background for the dialogue.
- **Training Sessions:** The Training Sessions were delivered by selected experts on the different ASUS Priority Actions, with the objective to strengthen further the knowledge and capacity of participants in developing viable urban projects. Selected ASEAN cities presented progress made in advancing technical proposals aligned with the ASUS Priority Actions. These sessions involved smaller groups of participants to promote active participation and effective communication.
- **Closing Session:** A 15-minute final session on the last day summarized the main outcomes of the Forum and acknowledged the support and contribution of AMS, partners, and all participants.

ASEAN SUSTAINABLE URBANISATION FORUM PROGRAMME

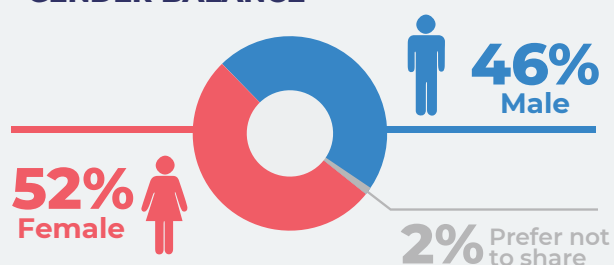
6 October 2021	7 October 2021	8 October 2021
Participants registration and access to the platform	Participants registration and access to the platform	Participants registration and access to the platform
OPENING SESSION OF ASUF 2021	<i>ASUS THEMATIC DIALOGUE</i> Housing & Home	<i>ASUS THEMATIC DIALOGUE</i> Water, Waste & Sanitation: Enhance Solid Waste Management Systems
<i>POLICY ROUNDTABLE</i> Progress Toward the Implementation of the MPAC 2025 and ASUS	BREAK	BREAK
BREAK	<i>ASUS THEMATIC DIALOGUE</i> Education: Support Digital Skills Development	BREAK
<i>ASUS THEMATIC DIALOGUE</i> Inclusive & Equitable Growth: Digital Payment Solutions to Enhance Financial Inclusion	BREAK	<i>TRAINING SESSION</i> Enhance Solid Waste Management Systems
BREAK	<i>SPECIAL SESSION</i> Promoting Gender Equality, Disability and Social Inclusion in Cities	BREAK
<i>SPECIAL SESSION</i> SDGs Localisation and Voluntary Local Review in ASEAN	LUNCH BREAK	<i>SPECIAL SESSION</i> Financing Opportunities for Urban Development
LUNCH BREAK		LUNCH BREAK
<i>ASUS THEMATIC DIALOGUE</i> Sustainable Urban Mobility	<i>ASUS THEMATIC DIALOGUE</i> Enhancing Urban Safety and Security	<i>ASUS THEMATIC DIALOGUE</i> Urban Resilience: Develop Flood Management Systems
BREAK	BREAK	BREAK
<i>TRAINING SESSION</i> Implement Public Transport Plans	<i>TRAINING SESSION</i> Introduce Digital Solutions for Urban Safety	<i>SPECIAL SESSION</i> COVID-19 Recovery in ASEAN
	BREAK	BREAK
	<i>SPECIAL SESSION</i> Advancing the Report on Sustainable Urbanisation in ASEAN (ACCESS ON INVITATION)	CLOSING SESSION OF ASUF 2021

ASEAN SUSTAINBLE URBANISATION FORUM IN NUMBERS

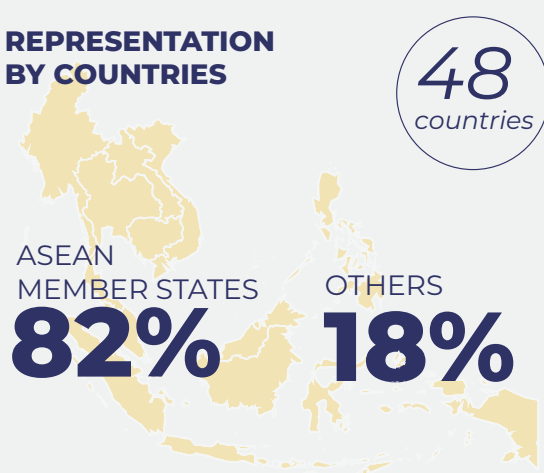
REGISTERED PARTICIPANTS



GENDER BALANCE



REPRESENTATION BY COUNTRIES



SPEAKERS & EXPERTS



TYPE OF ORGANISATIONS



ASUF OPENING

2.1 Opening Session

2.2 Policy Roundtable

2. ASUF OPENING

2.1. Opening Session

MC

Mr. Dicky Wallad: Project Officer for ASEAN Connectivity, ASEAN Secretariat

SPEAKERS

Ir. Awang Haji Amer Hishamuddin Zakaria: Chair of LIB-SI, Permanent Secretary (Infrastructure, Housing and Professional), Ministry of Development of Brunei Darussalam

Dato Lim Jock Hoi: Secretary-General of ASEAN

Mr. Will Nankervis: Ambassador of Australia to ASEAN

Ms. Maimunah Mohd Sharif: Executive Director, UN-Habitat

Language Interpretations: *International Sign Language, Filipino, Indonesian, Khmer, Lao, Malay, Myanmar, Thai and Vietnamese*

SUMMARY

A vibrant 30-minute inauguration hosted speakers from ASEAN Secretariat, LIB-SI, UN-Habitat, and Australia: sharing visions, expectations, and keynotes relevant to the Forum. ASUF was commenced by Ir. Awang Haji Amer Hishamuddin Zakaria, who announced that ASUF is one of the deliverables under the project on Accelerating the Implementation of ASUS. He was pleased to note that this project is on track, albeit setbacks and challenges due to the COVID-19 pandemic in the global and regional scale. For cities to recover and build back better, a framework such as that offered by ASUS is essential.

The Forum helped to present the connectivity and opportunities for better sustainable urban solutions as it was designed to attract

participation from a variety of stakeholders and create better connections and strategies.

Dato Lim Jock Hoi stated in his opening remarks that various cities and networks in ASEAN would be sharing their experiences with different toolkits and projects - the ASEAN Smart Cities Network, ASEAN Mayors Forum, and other sub-regional urban initiatives would offer insights and their perspectives to help bring greater impact to the region. He expressed his hopes that the Forum would offer an opportunity to explore different themes in the areas of urban resilience, water and sanitation, and sustainable cities through climate change and strengthen regional partnerships to emerge multi-issues. In addition, the discussion from this event would create more long-term programmatic systems and structure approaches that aim to improve communication and collaboration. ASUF provided an important platform for ASEAN cities to connect with each other and learn from the success and challenges in the past.

Mr. Will Nankervis drew attention to current issues in cities, such as climate change, pollution, informal settlements, and damage to the environment. He described how the Australian government has been supporting ASUS in creating more opportunities to improve cities as income levels, human resources, and economic activities have been transforming more rapidly than ever before. Under the ASEAN-Australia Development Cooperation Program Phase II (AADCP II), Australia funded the study to Advance Sustainable Urbanisation in ASEAN, resulting in ASUS. The Australian government balances support to ASEAN partners with implementation needs for infrastructure and priorities.

Last but not least, Ms. Maimunah Mohd Sharif highlighted the planning and management strategies that should be developed to shape development trajectories and the lives of millions. To meet the needs of the environment and people, cities must be supported and governed to be resilient, green, healthy, inclusive, and safe. ASEAN's great efforts could help support cities in achieving sustainable urbanisation and harnessing their collective potential. ASEAN's support for sustainable urbanisation could help its Member States to achieve the SDGs by 2030, fulfil the contributions to the Paris Agreement, and implement the New Urban Agenda.

2.2. Policy Roundtable: Progress Towards the Implementation of the MPAC 2025 and ASUS

Moderator:

Mr. Tham Borg Tsien: Deputy Permanent Representative, Permanent Mission of the Republic of Singapore to ASEAN

Speakers:

Mr. Lim Chze Cheen: Director, ASEAN Connectivity Division, Office of the Secretary-General, ASEAN Secretariat

Dr. Fraser Thompson: Founder and Managing Director, AlphaBeta

Mr. Haji Hairul Mohd Daud bin Haji Abdul Karim: Deputy Permanent Secretary (Infocommunications), Ministry of Transport and Infocommunications of Brunei Darussalam

Mr. Emani Kumar: Deputy Secretary General and Regional Director for South Asia, ICLEI

Mr. Atsushi Koresawa: Regional Representative, UN-Habitat Regional Office for Asia and the Pacific

Language Interpretations: *International Sign Language, Filipino, Indonesian, Khmer, Lao, Malay, Myanmar, Thai and Vietnamese*

INTRODUCTION

The Policy Roundtable hosted key stakeholders and partners to present and discuss initiatives and progress in implementing regional and national agendas. The session began with a presentation by Mr. Lim Chze Cheen on MPAC 2025 and Sustainable Urbanisation: Progress and Challenges.

This project's purposes are to support social-economic recovery by building resilience toward promoting competitiveness, sustainability, inclusiveness, and a greater sense of community.

The Impact of 2025 is designed as a cross-sector and multi-year strategy across several areas.

The two main critical challenges encountered are: (1) Sectoral alignment in working with different sectoral bodies and implementing bodies at different levels, and (2) National implementation on how to translate the regional level into national implementation.

In addition to MPAC 2025 (3), Mr. Cheen offered an overview of ASUS, which acts as "Toolkits" to support local governments in ASEAN in advancing sustainable urbanisation.



Fig.3 MPAC 2025

Following this, Dr. Fraser Thompson underscored how the COVID-19 pandemic has affected a new urbanisation model, which shows signs of starting to slow down. He described how urbanisation is the single biggest factor that drives economic growth, as it allows cities to grow and has massive associated economies of scale. In the ASEAN Sustainable Urbanisation Strategy, there are two main parts which are: the main report about assessing the trends impacting urbanisation, taking stock of the existing actions, and identifying priority opportunities, and an appendix which has a series of toolkits that helps ASUS member cities

develop their strategic action plans. The strategy can be developed with input from a range of stakeholders to engage with city networks and multilateral institutions, with experts from various fields in the private sector.

Mr. Haji Hairul Mohd Daud bin Haji Abdul Karim presented on the ASEAN Smart Cities Network (ASCN). Rapid urbanisation has increased challenges of congestion, pollution, crime, and poverty - these can be addressed through innovative recent technologies and also non-technological solutions. The ASCN acts as a platform for ASEAN cities to work together towards the common goal of smart and sustainable urban development with 3 main objectives: (1) To promote cooperation on smart city development among ASEAN cities, (2) Develop commercially viable projects together with solution providers, and (3) Facilitate partnership with external partners, for funding and support.

PANEL DISCUSSION

Sustainable urbanisation and ASEAN Connectivity: Promoting sustainable urbanisation in ASEAN through connectivity will allow ASEAN cities to realize how cities can respond effectively to the challenges of urbanisation and connect with other urban areas, strengthen regional production networks, and promote inclusive growth. The ASUF Forum, along with other platforms provided by ASEAN, enable cities to enhance their effort to coordinate and develop their own customised organisational strategy.

ASUS and its support towards a diverse network: The idea behind ASUS was not meant to be an end-to-end solution, since there are a diversity of players in the city value chain that play an important role. ASUS provides content and closely engages with different city networks, including the ASEAN Smart Cities Network, to make sure that cities can take advantage of sources.

Challenges and progress made in the implementation of initiatives and urbanisation development frameworks: Challenges encountered in the implementation of some initiatives and urbanisation development frameworks are: (1) Communication with cities about their expectations of the project; and (2) Financial issues that require assistance from the city government budget in order to implement the priority action in question. ICLEI's work

with various ASEAN cities demonstrated the importance for local and provincial government to present in the early stage of a project their needs, priorities and proposals, to strategize on where help and support is necessary. The importance of an active role of local government has been recognised also in financing urban projects. If cities would partially fund urban projects, external investors would be more prone to support through co-financing mechanisms. This approach would also increase the sense of ownership of the city toward the project itself.

Aligning regional and national efforts to the Sustainable Development Goals: The collaboration between UN-Habitat and ASEAN represents a timely opportunity to support the Implementation of regional and national agendas while ensuring strong linkages with global agendas as the SDGs. In a period of multiple global crises arising from the COVID-19 pandemic and an increasing socio-economic divide, it is crucial to contribute to a sustainable global recovery. In this context, the efforts of ASEAN countries, cities and institutions to build strong partnerships both local and internationally to contribute to the global agenda and goals, including the SDGs and NUA need to be supported and encouraged. The work of UN-Habitat to support the implementation of ASUS should serve as a best practice on how to link a key framework as ASUS to the SDGs.

Insights on the ASUS implementation process: Several key insights were shared on how to accelerate and thus scale up the implementation of ASUS. It is essential to provide assistance and capacity building opportunities for government representatives and citizens at all levels. The knowledge and experience gained at the city level need to be translated into lessons learned and best practices to bridge at the national and regional level through various networking platforms. ASUF represents a great example of a platform to share knowledge and facilitate a city-to-city exchange.

Moreover, to further promote ASUS it will be necessary to scale up its Implementation at the city level, expanding the number of cities engaged in training or capacity building initiatives. Finally, organisations as UN-Habitat or ICLEI, can provide funding platforms, as the TAP (Transformative Action Programs), which could showcase successful proposals to other ambitious funders and agencies, building upon the capacities and potentials of the ASUS proposals.

KEY TAKEAWAYS

Cooperative and connected cities: Connecting with cities to leverage on each other's advantages and learning experiences to overcome the challenges of urbanisation is an opportunity to co-link learning on urban themes, strengthen regional production networks, and promote inclusive growth.

Financial assistance: Financial issues are challenging for project implementation in cities. From a survey conducted, the main challenge found is accessing finance, with a secondary challenge being developing a robust strategy to support implementation.

Recommendation to accelerate the implementation of ASUS towards advancing sustainable urbanisation development: It is crucial to build a shared understanding of the benefit of the ASUS framework. The more cities will adopt it and showcase examples of their success, the more successful ASUS will be. Regional events, such as ASUF, and other initiatives, represent key platforms to share best practices, knowledge and information.

SPECIAL SESSIONS

**3.1. SDGs Localisation and
Voluntary Local Review in
ASEAN**

**3.2. Promoting Gender
Equality, Disability and Social
Inclusion in Cities**

**3.3. Financing Opportunities
for Urban Development**

**3.4. COVID-19 Recovery in
ASEAN**

3. SPECIAL SESSIONS

3.1. SDGs Localisation and Voluntary Local Review in ASEAN

MODERATOR

Mr. Martino Miraglia: Human Settlements WOfficer, SDG Localization and Local Governments SDG Localization Team, Urban Practices Branch, UN-Habitat

SPEAKERS

Mr. Samiuddin Ahmed: Regional Sustainable Development Consultant, Sustainable Urban Development Section, UNESCAP

Mdm. Aniza Osman: Director, Department of Planning of Shah Alam Shah Alam City Council

PANELIST

Ms. Annie Syazrin Ismail: Senior Assistant Director, Sustainable Development Unit, Department of Planning, Shah Alam City Council

Dr. Vivi Yulaswati: Senior Advisor to the Minister of National Development Planning for Social Affairs and Poverty Reduction

Ms. Anniesa Delima Sari: Regional Project Manager, United Cities and Local Governments Asia Pacific (UCLG ASPAC)

INTRODUCTION

This special session built an open dialogue on cities' efforts to localise SDGs and accelerate their progress in achieving the goals. With a specific focus on the Voluntary Local Review process (VLR), panellists provided insights on how their cities are using VLRs, a very powerful tool that touches on multiple dimensions of development: as accelerators of localization, and more specifically, as contributing towards cities' sustainable development and local cross-sector partnerships and cooperation.

The session commenced with a presentation by Mr. Samiuddin Ahmed that set the stage by providing an overview on SDG Localization and VLRs in Asia and the Pacific – highlighting that Southeast Asia has achieved significant progress in Goals 1,2,3,4,5,6 and 9, but is behind track for Goals 7,11,12 and 15, and is regressing in meeting the targets for Goal 13, 14 and 16. Local governments have made significant progress in raising awareness on the SDGs, and in aligning local plans with the SDGs.

To further support local governments, ESCAP has been active in delivering several concrete programmes, which include the Asia-Pacific Mayors Academy, the Sustainable Urban Resource Management among others, working closely with UN-Habitat, United Cities and Local Governments Asia Pacific (UCLG ASPAC), and United Nations University among others. ESCAP started developing the Asia Pacific Regional Guidelines on VLR, piloting it in four cities in Southeast Asia: Shah Alam and Subang Jaya in Malaysia, Surabaya in Indonesia, Nakhon Si Thammarat in Thailand, and Naga City in the Philippines.

The second presentation, delivered by Mdm. Aniza Osman, provided a key practical case on how the City of Shah Alam uses VLRs in helping the city accelerate its SDG progress. The city's VLR is guided by five principles – people, place, prosperity, peace, and partnership – and is driven through 10 key initiatives, of which the ASUS is one of them. Shah Alam is also the first city in Malaysia that produced its own SDG Roadmap, launched at the Tenth Session of the World Urban Forum (WUF10).

Enriched added value: *"The Voluntary Sub-national and Local Reviews (VSR and VLR) bring new added value through collective perspectives from sub-national and local governments who deal the most with citizens. They enrich information and inputs for a country's SDG progress, allowing it to be accelerated."* - **Anniesa Sari**

PANEL DISCUSSION

Aligning SDG process with national and local sustainable development agendas:

The journey of achieving sustainability in city development started long before the Agenda for

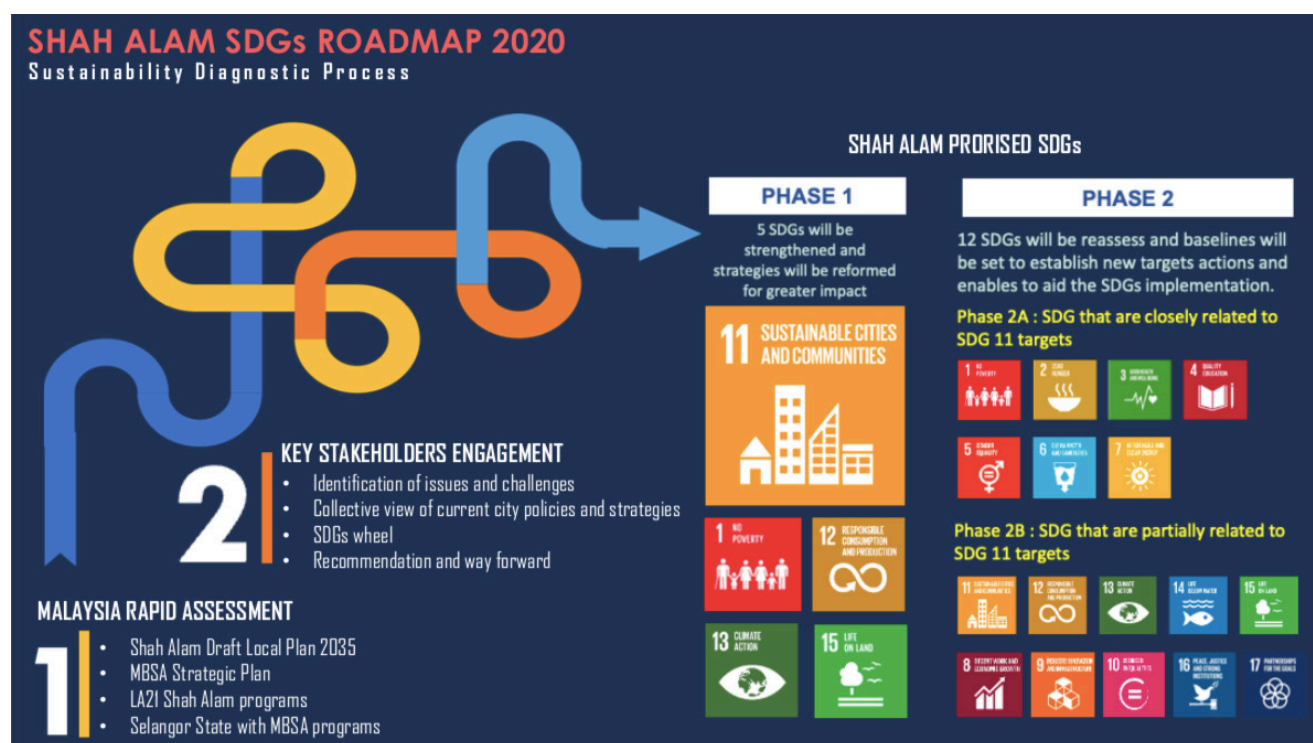


Fig.4 Shah Alam's SDG Roadmap 2020, presented during this special session

Sustainable Development was set up as a global blueprint. In the case of Shah Alam, it started when Local Agenda 21, which was a voluntary process of local community consultation with the aim to create local policies and programs that work towards achieving sustainable development, was implemented in 1998 by the city council. Programs implemented (see Figure 4) covered awareness raising, capacity building, community participation, and forging partnerships.

Ms. Syazrin highlighted the benefits of conducting VLRs for the city and citizens of Shah Alam, which include better and active initiation of various programs at the local level, which are mostly driven by strategic partnerships between the local authority together with local communities and other stakeholder groups.

Collective Local Action: *"It is important to keep on challenging ourselves and our cities in progressing its sustainable agendas and goals. Collective local actions are important and need to be established and re-established"* - **Annie Syazrin**

Networking: *"A networked approach has allowed cities to accelerate progress in achieving their SDGs targets at the local level – working together with parliamentarians, civil society, philanthropists, academia will allow for an inclusive SDGs local action."* - **Vivi Yulaswati**

A collaborative process:

The VLR process is a collaborative effort (Figure 5). In Indonesia, it is supported by UCLG ASPAC, the Association of Indonesian Municipalities (APEKSI), and the SDGs Center Network which are located in several local universities in the country.

For Shah Alam in Malaysia, the process was supported by Urbanice Malaysia, a Centre of Excellence for Sustainable Cities and Community Wellbeing established under the Ministry of Housing and Local Government. This collaborative process ensures inclusivity and wide engagement with stakeholders, capturing best practices, critical inputs, innovative thoughts, and identification of institutional and local challenges.

Ms. Sari further stressed the importance of this collaborative approach and set examples about how UCLG ASPAC supports the acceleration

of progress for cities and local government in attaining the SDGs, by bridging connections between regional and local governments.

Policy and action planning coherence:

In coordinating policy coherence through connecting and integrating strategies and action plans, Shah Alam utilized a framework from the Malaysia SDGs Cities – a framework that encourages a bottom-up approach in

developing local action plans that will accelerate the SDGs achievements for Malaysia. This framework was later used to establish the SDGs Roadmap, a document that was very instrumental in streamlining and aligning all the different initiatives, programmes and projects of the city.

KEY TAKEAWAYS

Ensuring coherence of policies, strategies and action plans: This is key to integrating the economic, social, environmental and governance dimensions of sustainable development at all stages of local, sub-national and national policy-making that enables accelerated process towards meeting SDGs targets.

Inclusive engagement and communication plans: Inclusivity is essential in spreading the correct message on the agenda towards sustainability in advancing the SDGs progress without leaving no one and no place behind.

Achieving the SDGs is not an act of a single entity: Its cross-cutting goals and targets require concerted efforts across all stakeholders. This multi-stakeholder approach is the way to localize the ambitious global targets and ensure that they are relevant, beneficial and meaningful to the people.

Actions to consider when integrating VLR and VNR

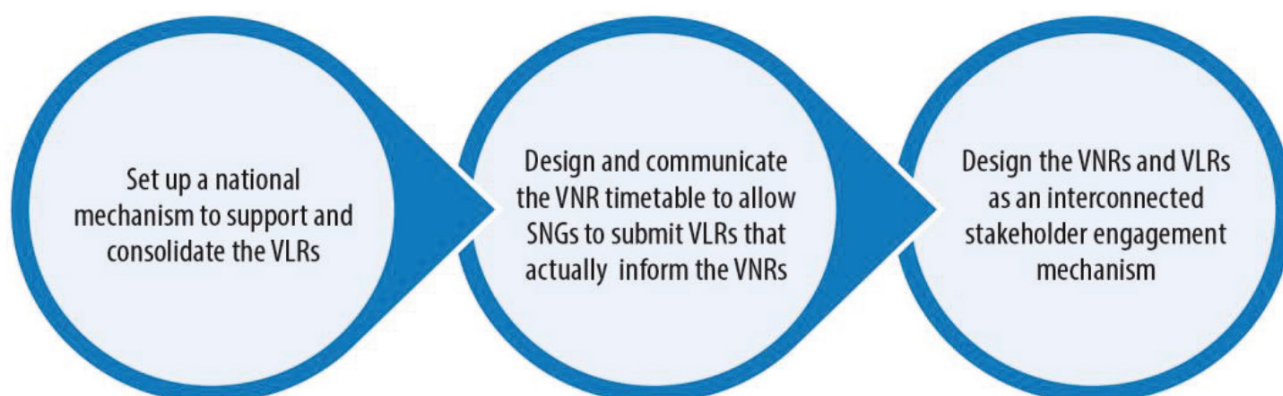


Fig.5 Integrating VLRS and VNRs

3.2. Promoting Gender Equality, Disability and Social Inclusion in Cities

MODERATOR

Ms. Rita Reddy: Gender Technical Lead, Mott MacDonald GFCEP Malaysia

SPEAKERS

Mr. Miguel Musngi: Senior Officer, Poverty Eradication and Gender Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat

Mr. Nguyen Thanh Tung: Project Coordinator, Disability Research and Capacity Development (DRD)

Ms. Sri Husnaini Sofjan: Senior Programme Advisor and Strategist, Huairou Commission

Ms. Madeline A Suarez: President, Alliance of Peoples Organization Along Manggahan Floodway (APOAMF) in Pasig, Philippines

Ms. Antonette Anaban: Assistant City Planning and Development Coordinator and OIC, City Disaster Risk Reduction and Management Office, City Government of Baguio, Philippines

Language Interpretations: *International Sign Language, Filipino, Indonesian, Khmer, Lao, Malay, Myanmar, Thai and Vietnamese*

INTRODUCTION

This session addressed an arising and cross-cutting topic, social and gender inclusion in urban projects in ASEAN cities, which included speakers and discussants from multiple fields of expertise. The session aimed to create a common understanding of the value created by mainstreaming GEDSI plans, and in particular, in the context of COVID-19 recovery, and to share first-hand experiences and best practices among stakeholders to support an inclusive society at the local level.

The first presentation, delivered by Ms. Sri Husnaini Sofjan, was on the elimination of all forms of violence against women and the relevant SDG Goals for Gender Equality as one of the core dimensions of social sustainability. There are useful tools in the intervention mechanism that translate women empowerment and gender equality into action. Gender-responsive budgeting was found to be one such tool that has been implemented by many ASEAN countries, along with other policies such as national urban policies, land policies, and housing and slum upgrading.

An implementation experience presented by Ms. Madeline Suarez prioritized Gender Equality and Women's Empowerment in the efforts for an onsite, near-site, and in-city processes, used to develop and expand housing solutions by the Alliance of People's Organisation along Manggahan Floodway (APOAMFP). It is crucial to advocate for permanent tenure and livelihoods in resettlement activities such as organising, strategizing, leadership training, and reflection. The APOAMFP, World Bank, and the National Housing Authority have worked together to amend 50 years old state-managed manuals, adding an emphasis on cleanliness, gender inclusivity, children's public space, and health issues.

Mr. Miguel Musngi, from the ASEAN Secretariat on GEDSI in Cities, spotlighted how ASEAN had adopted the ASEAN Enabling Masterplan 2025 in order to mainstream the rights of persons with disabilities, and also noted that the plan had a political commitment to gender equality and women empowerment by providing a clear mandate for ASEAN entities to collaborate on clear action by adopting the Declaration on the Gender-Responsive Implementation of the ASEAN Community Vision 2025 and the SDGs and certain civil communities. The findings from the ASEAN Gender Outlook confirmed

Influence of women in the household: "[...] Working with organised grassroots woman groups, who have gone through awareness raising on women empowerment, women leadership, on how central women are actually in term of development processes. They are not only housewives, the partners, they are actually equal partners in the household, they have influence in the household." - **Sri Husnaini Sofjan**

that COVID-19 affected progress across all SDGs by increasing care and domestic workloads, sacrificing women's opportunities of paid employment, and by the decline of working hours for women.

PANEL DISCUSSION

The role of community-based organizations:

Mr. Tung shared his thoughts on work division and how community-based organizations helped set up and campaign towards accessibility in Vietnam, especially in big cities by including an array of stakeholders from different sectors from different sectors. Meanwhile, the government and local authorities worked on creating awareness and developing plans. Hence, according to him, the community-based organisation should play a leading role to encourage and help people to identify their needs.

Linking the needs of vulnerable groups to urban planning and local governmental actions:

From Ms. Anaban, flood warning systems were the core mechanism helping Baguio City to be resilient, which delivered real-time, assessed information related to gender, allowing the city to understand vulnerability in a deeper and more meaningful way. The most important action is to prioritise missing voices as well as mainstream voices that would help understand the real scenario, from people in need in the community, and ensure that local governments can reach and empathise with vulnerable groups in a socially acceptable way.

Shaping development initiatives to be cultural and gender-responsive:

Depending on each country's culture, gender equality tends to be either supported or suppressed. Ms. Sofjan also noted that it could start by working with grassroots women who have undergone awareness-raising, women empowerment, and leadership development, to start creating impact from household level to community level.

Engagement on mainstreaming GEDSI:

Mr. Musngi suggested that there are existing consultative platforms within ASEAN for engagement on mainstreaming gender equality and disabilities inclusion that could link national and sub-national initiatives. Ms. Suarez emphasised that the participation of community members is essential to ensure that the issue in concern addresses, measures, and continues the achievement of the SDGs.

Raising awareness: "[...] Awareness training helps them understand accessibility needs for people with disabilities. [...] That is not only important for people with disabilities, but also for people in general. So, when they understand it, they hold the same language and will be involved in the changes." - **Nguyen Thanh Tung**

KEY TAKEAWAYS

Community-based organisations: People in vulnerable groups in cities often prefer and feel more comfortable in reaching out to community-based organisations rather than having direct contact with governmental institutions, these communication mechanisms should be prioritised and given more visibility to encourage participation from the community.

Political commitment: To advocate for women empowerment and gender equality, adequate policies should be in place and government officials with leadership should be encouraged to work on awareness creation and concrete planning and development for those who are vulnerable.

Policies and real scenario gap: The project proposal and implementation phases need more advocacy from people with first-hand experiences in a marginalised community, to hear the missing voices from mainstreamed processes, and to tackle the roots of core problems.

3.3. Financing Opportunities for Urban Development

MODERATOR

Mr. Paul Martin: Senior Technical Advisor / IMIF regional manager for ASEAN and Pacific, UNCDF

SPEAKERS

Mr. Dyfed Aubrey: Inter-Regional Advisor, UN-Habitat

Ms. Natalie Su Wen Oh: Strategy and Policy Analyst, Think City

Ms. Lynn Tho: Project Finance and Infrastructure Advisor, P4I and EY

Dr. Fauziah Zen: Senior Economist, Economic Research Institute for ASEAN and East Asia (ERIA) and a faculty member of the Faculty of Economics and Business, University of Indonesia

Language Interpretations: *International Sign Language, Filipino, Indonesian, Khmer, Lao, Malay, Myanmar, Thai and Vietnamese*

INTRODUCTION

In this session, financing opportunities were discussed in detail, with a special focus on how cities can identify and apply for alternative funding for urban development projects in the ASEAN region. ASUS has found that over 40% of the priority sub-areas under sustainable urbanisation face major barriers to accessing alternative financing, making sustainable funding a critical issue for most projects in the region.

Worldwide, the total infrastructure investment gap is estimated to be 38 trillion USD for the period 2020-2030, and initiatives that can unlock institutional and commercial capital to finance sustainable urban development projects are crucial and necessary to boost sustainable development and address rapid urbanisation.

This session commenced with a presentation by Mr. Dyfed Aubrey on SDG Cities and Financing Sustainable Urban Development, looking at the Cities Investment Facility and how it facilitates an increased role of the private sector in accelerating the Sustainable Development Goals (SDGs). Following this, Ms. Lynn Tho presented on Partnerships for Infrastructure, a group of organizations that work on planning, prioritization, and procurement as implementation and support mechanisms for the ASEAN region.

With the SDG Cities Program, it is evident that cities can be change-making agents for achieving the SDGs, as more than half the world's population live in cities, and two-thirds of the SDGs are relevant to cities. The SDG Cities aims to link cities' data with strategic planning, together with project identification and financing. The program uses tested methodologies to bring together cities' networks, national governments and systems, and private sector actors to strengthen local capacity and maximize impact.

The City Investment Facility is an opportunity for cities and city officials to reach out to global investors – from philanthropic to private to multilateral bank investors – about their projects. Partnerships for Infrastructure, led by the Australian Department of Foreign Affairs and Trade, is delivered by five organizations and works with Southeast Asian partners to provide services and value across the early stages of the infrastructure investment cycle.

When introducing partnerships for infrastructure, Ms. Tho noted how new and disruptive technologies are driving the need for investments to modernize infrastructure and services, forcing cities to consider new solutions and develop innovative financing strategies. Traditional funding sources such as funding from the treasury, government, or multilateral banks are increasingly being complemented by private sector funding such as specialized funding, bonds such as project or green bonds, and vendor financing, to name a few. Increasing competition for funding for infrastructure projects has led to projects being assessed primarily on their risk allocation and business plan. To address these challenges, cities need to analyze the generated value of the project and consider appropriate funding, look into relevant procurement approaches, and analyze the context in terms of regulatory frameworks as well.

PANEL DISCUSSION

Connecting ASEAN cities to a national and global audience of investors: Ms. Oh noted how a lack of supply comes from the lack of capacity to develop bankable projects, and that the Cities Investment Facility is an initiative that supports in the closing of the gap in urban finance to move projects from ideation, design, feasibility to financing which could support the whole project development. As a platform, CIF creates a pipeline for projects' financing opportunities.

Capacity: *"The urban finance gap is growing, and while there is plenty of demand and investment available, evidenced through the [recent] oversubscription of sustainability bonds in Indonesia and the Philippines, this oversubscription is reflective of the lack of supply, which comes from the lack of capacity to develop bankable investable projects"* – **Natalie Su Wen Oh**

Modalities for financing that are adopted in SE Asia: Dr. Zen talked about how there haven't been many breakthroughs in financial modalities in SE Asia over the past years, especially when it comes to urban infrastructure. Traditional modalities such as public-private partnerships are still dominant – however, SE Asian countries are showing promise. Malaysia and its progressive governmental initiatives on green financing are an example of this promise, and ASEAN cities can work on regulations that address the implementation process.

Evaluation criteria against which successful funding proposals can be developed:

Proposals made to the SDG Cities Program and Cities Investment Facility use the SDGs as evaluation and performance criteria. Currently, proposals are measured against the principles behind the SDG in question, but evaluators are moving towards a more robust standard of SDGs in the future.

Capacity building to help accelerate how local governments have access to financial services:

Ms. Tho discussed how capacity needs to cut across various agencies, and how project and contract management, and risk allocation aspects of management need to be better understood in terms of both learning as well as project management.

SDG-based criteria: *"We are finding that there is quite a bit of interest from investors on impact investing, and investors do want to see that projects are delivering on key SDG principles. Investors are increasingly looking for SDG impacts, and the more that we can provide data on this in terms of how projects are contributing towards policy and quality of life, and which of the SDG indicators they are working towards, the better the interest from investors"* – **Dyfed Aubrey**

KEY TAKEAWAYS

SDG Metrics: The SDGs and their associated metrics are key evaluation criteria against which investors measure bankable projects, and proposals should consider and develop detailed proposals keeping performance against the SDGs in mind.

Public-private partnerships: PPP models can be used for both local commercial projects as well as middle-sized projects in ASEAN – Singapore's PPP-based sewage and drainage projects are some of the examples of successful PPP initiatives.

Capacity Building: Capacity building in terms of PPP has two tiers: The first tier has to focus on building a pipeline of technical capacity. The second tier has to focus on developing the fundamentals of good infrastructure and the ability to prioritize needs.

3.4. COVID-19 Recovery in ASEAN

MODERATOR

Mr. Tam Hoang: Sustainable Urbanisation Specialist, UN-Habitat

SPEAKERS

Dr. Ferdinal Fernando: Head of Health Division, ASEAN Secretariat

Mr. Arief Rizky Bakhtiar: Senior Project Officer - ASEAN Comprehensive Recovery Framework Support Unit, ASEAN Secretariat

Dr. Aarti Garg: Health Emergency Officer, Emergency Operations, WHO

Ms. Paula Pennanen-Rebeiro: Human Settlements Officer, UN-Habitat

Ms. Ruby Haddad: Urban Poor Coalition Asia and Homeless People's Federation of the Philippines

INTRODUCTION

COVID-19 recovery is one of three focus areas for the ASEAN Economic Community for 2021, the other two being digitalization and sustainability. In this session, recovery levers and strategies were discussed in-depth by a distinguished group of panellists with both technical expertise as well as on-the-ground knowledge of how communities are attempting to recover from the effects of the COVID-19 pandemic.

This session commenced with a presentation on COVID-19 and Recovery in ASEAN by Dr. Aarti Garg. COVID-19 impacted urban areas in 4 major ways: health infrastructures were overwhelmed, transport systems were adversely affected by social distancing measures, threats to livelihoods and economic activities were experienced by communities, and the education system failed students who depend on it. She talked about multi-sectoral coordination between national and sub-national governments as being key

to responding to transmissions and declining such transmission trends and moving towards recovery. She also discussed essential public health and social measures that can break the chain of transmission, including personal protective measures, environmental and WASH advocacy measures, social and physical distancing measures, and travel advisory measures.

COVID-19 recovery, being an opportunity to rethink and redesign formal-informal economy dynamics, must include the following considerations: A coordinated local plan in preparation for current and future pandemics; risk and crisis communication plans combined with community engagement; contextually appropriate public health plans and measures; and access plans to healthcare service and continuation of service delivery. As interim guidance for local authorities, the WHO has also released a report on 'Strengthening preparedness for COVID-19 in cities and urban settings' which offers cities opportunities to build back better.

Following this, Dr. Ferdinal Fernando from the ASEAN Secretariat presented on the ASEAN Health Sector's cooperation on their COVID-19 response, looking at the ASEAN Health Development Agenda as well as ongoing implementation of health-related initiatives and health sector initiatives with non-health partners. The vision behind the ASEAN Health Development Agenda is to develop a healthy, caring, and sustainable ASEAN community that promotes a healthy lifestyle, responds to all hazards and emerging threats, strengthens the health system and access to care, and ensures food safety.

Several ASEAN initiatives under this agenda are ongoing or complete: an ASEAN Biodiaspora virtual centre; an EOC network for public health emergencies; a central ASEAN portal for public

Priorities for COVID-19 Recovery:

"In many countries or areas that have poorly connected small [2nd or 3rd tier] cities, only new forms of governance approaches that are based on interconnected urban networks, dynamism and support, can respond well to the pandemic in their own territory and therefore protect the larger cities as well as their own society" – Paula Pennanen-Rebeiro

health emergencies, and other key initiatives on response funds, vaccine security and self-reliance, reserves for medical supplies for public health emergencies, among other key initiatives. Dr. Ferdinal concluded by introducing the ASEAN comprehensive recovery framework (ACRF), which aims to enhance health systems, strengthen human security, maximise markets and broader economic integration, accelerate inclusive digital transformation, and advance a sustainable and resilient future.

In his presentation on One Vision, One Community, One Identity, Mr. Arief Rizky Bakhtiar continued to talk about the ACRF in great detail, by covering its implementation plan and how it addresses the short-term and long-term impact of COVID-19, and reopening, recovery, and long-term resilience strategies to sustain support. Within the ACRF, he noted how enabling factors towards recovery include: Policy measures and response; financing and resource mobilization; institution and governance mechanisms; stakeholder engagement and partnerships; and effective monitoring.

A presentation on community initiatives in the time of pandemics by Ms. Ruby Haddad discussed the work of the Homeless People's Federation of the Philippines (HPFPI), an organization that works with the urban poor, low-income and informal settlement communities across the Philippines. HPFPI aims to develop strategies that encourage and facilitate the inclusion and participation of vulnerable communities, COVID-19 highlighted for them how the pandemic exacerbated and magnified poverty and its associated inequalities and widened the gap between those who have access to basic urban services and those who don't. Community-based responses to COVID-19 include community kitchens to address hunger and food security, community campaigns to spread information about WASH-related health protocols, and urban farming to improve food security.

Lessons learned from the pandemic: *"We learned about gender mainstreaming; remote coordination given limited access to normal activities and services; how to establish monitoring systems to continue the monitoring of communities affected by the virus; and coordination with BLGUs and LGUs at the city level – it is very important to partner with these governmental units to sustain the support to communities"* – **Ruby Haddad**

PANEL DISCUSSION

COVID-19 Recovery and evidence-based urban and territorial strategies:

Ms. Rebeiro noted how early research led by UN-Habitat on the impact and response of cities to the pandemic found that in several cases, cities with high densities presented a more efficient response to the pandemic, in part because of their ability to distribute public goods and services, target response to real-time data, and tailor recovery elements to locations in cities on an as-needed basis. The prevalence of COVID-19 and pathogens in general is found to be associated with three main factors: the place where one lives, the availability of mobility and public transportation, and the type of work one has.

COVID-19 and resilient strategies for future pandemics:

Dr. Garg reiterated how a coordinated multi-sectoral response mechanism that considers risk and crisis communication is essential for future response strategies, and noted that digital solutions strengthen emergency preparedness, allowing for more responsive and targeted strategies. Targeted yet flexible initiatives and programs as being the need of the hour were also points discussed by Dr. Fernando and Mr. Bakhtiar.

KEY TAKEAWAYS

Community-based strategies underpin recovery:

Without community-based responses that include and involve vulnerable groups, pandemic response strategies will fail to support those communities that depend on them the most.

Multisectoral governance and coordination:

The importance of multisectoral, multi-governance and coordinated actions between all stakeholders and across vertical and horizontal lines is that it enables cities to move away from isolated action and develop a more targeted and regional response.

ASUS THEMATIC DIALOGUES

**4.1. Inclusive and Equitable
Growth: Digital Payment
Solutions to Enhance Financial
Inclusion**

4.2. Sustainable Urban Mobility

4.3. Housing and Home

**4.4. Education: Support Digital
Skills Development**

**4.5. Enhancing Urban Safety
and Security**

**4.6. Water, Waste & Sanitation:
Enhance Solid Waste
Management Systems**

**4.7. Urban Resilience: Develop
Flood Management Systems**

4.THEMATIC DIALOGUES

4.1. Inclusive and Equitable Growth: Digital Payment Solutions to Enhance Financial Inclusion

MODERATOR

Mr. Bruno Dercon: Senior Human Settlement Officer, UN-Habitat

SPEAKERS

Ir. H. Mohammad Ramdhan Pomanto: Mayor of Makassar City, Indonesia

Ms. Chay Pui San: Director of Public Affairs and Policy, Grab

Dr. Nantanoot Suwannawut: ASEAN sub-regional chair of the World Blind Union

Mr. Arup Chatterjee: Principal Financial Sector Specialist, Asian Development Bank

Ms. Alison Eskesen: Vice President, Mastercard Center for Inclusive Growth

INTRODUCTION

This thematic dialogue focused on inclusive and equitable growth in ASEAN, looking at digital solutions that aim to facilitate more inclusive and easy access to financial services to all citizens and to micro-small-medium enterprises (MSMEs) that constitute 98% of all enterprises across ASEAN. ASUS recognises how access to financial services is relatively low in ASEAN countries, when compared to the global average. AMS aim to reduce the average financial exclusion level in the region to 30% by 2025 and to increase the level of digital payment infrastructure readiness in ASEAN to 85% (it is currently at 70%).

The dialogue commenced with a presentation by Mr. Ir. H. Mohammad Ramdhan Pomanto

on Makassar City's current initiative in regard to inclusive and equitable growth by implementing the Makassar digital payment scheme. Makassar digital payment, which is based on a QR code system, was developed by taking the opportunity during the pandemic to enhance digital access. Each citizen and household have personalized QR codes (Figure 6). It initially launched as a private digital health platform to provide COVID-19 related health records and solutions, and subsequently expanded into a digital payment.

There are currently 1.2 million QR codes out of the 1.5 million-strong population in Makassar. The city aims to provide QR codes for all populations in Makassar to allow faster growth for the city's overall achievements. Following the presentation, a panel of experts and practitioners discussed some of their shared challenges and related experiences, as well as existing and emerging solutions for digital payment solutions.

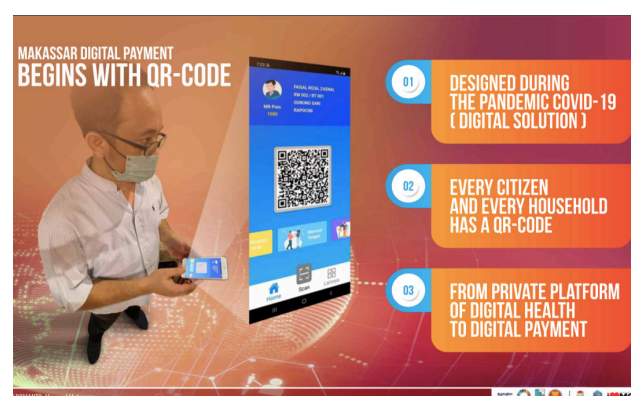


Fig.6 Makassar City's Digital Payment QE-based System

PANEL DISCUSSION

Barriers in implementing digital payment solutions to enhance financial inclusion in ASEAN countries:

Ms. Eskesen elaborated that these barriers are not only limited to accepted points, such as the availability of stores that accept digital payments, but also to having enough consumers with a variety of digital payments forms available. The government has a futuristic role to play in providing opportunities for alternative payments of traditional transactions, to ensure that a wide range of users can benefit from digital payments. Instrumental catalysts to the success of digital payments are cyber security and privacy. A single security case could be a major pushback that impacts people's attitudes towards digital payment systems.

Community awareness: *“This is not just an issue about technology, but the issue is about how do you put a human touch onto the technology and drive adoption.” - Chay Pui San*

Key areas of collaboration and integration between private and public sectors: Ms. Chay noted how Southeast Asian consumers are still very much behind the United States and Europe in terms of financial inclusion and adoption of financial services. There are three areas to work closely across private and public sectors to drive greater financial services adoptions based on Southeast Asian local context and characteristics:

1. Provide more access to financial services and digital payments, by introducing new financial products using digital tools that can provide credits / cash advances / loans to informal workers and workers in rural areas (the two common conditions across Southeast Asia) who usually do not have credit history.
2. Drive better adoption by ensuring that users know how to use these new technologies, especially seniors, street sellers, and other vulnerable and communities.
3. Education and awareness by improving financial literacy and better awareness to build trust of the people offering the financial services.

Strategy for inclusive access to digital financial services: Mr. Pomanto underscored how the success case in Makassar is due to a strong engagement approach. Mr. Chatterjee

further added that the key to accelerating digital payment is by creating the essential infrastructure, especially to handle high volume low-value transactions. Enhancing financial awareness with adequate consumer protection also ensures consumer trust and confidence by engaging communities. Governments can contribute to the formalization of the financial system to help generate better data on commercial and economic activities.

Support for vulnerable and special need communities to approach digital payment and financial services: Dr. Suwannawut discussed the need for policy that could support inclusion of the blind into the society, including awareness improvement to encourage better services to the special need communities. It is essential in the implementation to create an environment that is accessible for the system and ensure usability as efficiently as others. Privacy and identification are also often becoming accessible issues due to technical limitations of the identification requirement, which often require the help of others and increase risk to privacy concerns.

Social inclusion: *“If you have to advance financial inclusion, you have to involve women. Women need to be at the front and centre. Home is the best school. If the lady understands financial products and technology, that’s a double boom. Not only the children will learn the importance of financial inclusion and use of technology, but also the family and in the sense the community and the society at last.” – Arup Chatterjee*

KEY TAKEAWAYS

Synergy of multi-stakeholder partnerships: These can include government, private, and the unique role of civil society help to encourage innovations and build trust in communities, which drive adoptions and behaviour change contextually.

Women representation is critical to advance financial inclusion: Women contribute to family education and create a greater impact at the community scale.

Mainstreaming technology to create an accessible environment: This should be ensured by multi-stakeholder collaboration to create an inclusive society, leaving no one behind.

4.2. Sustainable Urban Mobility

MODERATOR

Mr. Ryan Sequeira: Senior Urban Mobility Expert, UN-Habitat's Urban Lab

SPEAKERS

Engr. Riza Marie T. Paches: Head of the Public Safety Office of General Santos City, Philippines

Ass. Prof. Sorawit Narupiti: President, ITS Thailand and Associate Prof. of Civil Engineering (Transportation), Chulalongkorn University

Prof. Jennifer Oxley: Associate Director, Monash University Accident Research Center (MUARC)

Dr. David Logan: Senior Research Fellow, Monash University Accident Research Centre (MUARC)

Mr. Alvin Mejia: Research Fellow, Mobility and International Cooperation research unit, Wuppertal Institute in Berlin

INTRODUCTION

The thematic dialogue on Sustainable Urban Mobility discussed the development and enhancement of sustainable transport systems in ASEAN cities, with a fundamental priority in improving environment quality and living standards across the ASEAN region.

Many cities within the region endure undeveloped and underdeveloped transport systems which affect many citizens, especially in underserved areas. Indeed, some have already adopted private transportation: ASEAN cities have seen a progressive increase in the use of private vehicles as the main mode of transportation, and congestion has become a major concern, with the World Health Organization (WHO) reporting that the average number of road fatalities in Southeast Asia, 20.7 deaths per 100,000 population, is higher than a global average, with 18.2 deaths per 100,000 population (based on a study of 193 countries globally).

Sustainable solutions are necessary to provide an accessible, affordable, safe, and energy-efficient service. Integration of transport modes, including non-motorized transport, as well as the adoption of technologies to improve traffic management are encouraged to contribute to creating better cities through efficient urban mobility within the ASEAN region.

The dialogue commenced with a presentation by Ms. Engr. Riza Marie T. Paches on General Santos City, Philippines. The city context was introduced through the alignment of city priorities with the national government towards an efficient and sustainable transportation system, focusing on General Santos City as an international gateway in the island of Mindanao in the Philippines, as well as its role as an agro-industrial centre, and the integration of effective transport system within the region through the Regional Development Plan.

Challenges on current mobility systems were discussed such as the difficulties in the implementation of existing ordinances, limited capacity building in data management, changes in political authority and plan continuity, and comprehensive profiling of the transport sector. However, opportunities also arose with the local government actively seeking improvements to the public transport system by conducting ongoing studies to improve the utilization of public transportation and by connecting with different local institutions and non-government actors. With this, the city has defined development and investment areas to implement proposed transport projects and programs.

Collaboration: *"A collaborative approach to include everyone [will provide] good results, and with collaboration, we can make it (improved public transportation) can happen."* – **Sorawit Narupiti**

The presentation was followed by a panel discussion in which experts were able to share their knowledge on sustainable transport solutions. Assoc. Prof. Sorawit Narupiti described the success factors of data collection in traffic management, while Mr. Alvin Mejia discussed the transition towards energy-efficient transportation.

Ms. Jennifer Oxley and Dr. David Logan shared the Safe System approach from the Stockholm Declaration that mainly emphasizes addressing road safety in an integrated way through land use, street design, transport system planning, and governance.

PANEL DISCUSSION

Coordination between local governments and stakeholders: Ms. Paches discussed existing collaborations with service providers in General Santos City. The city also actively promotes stakeholder participation and works together with several departments to address transport sector issues. Ms. Paches supports bringing in both state and non-state actors to come up with a sustainable transport management plan that covers all aspects. Involvement of local universities were also a part of the process such that research activities were channeled to these institutions to complement gaps in research.

Success factors behind data collection in traffic management: Mr. Narupiti pointed to the importance of stakeholder involvement in the general planning of sustainable mobility.

Road safety: *"We can't accommodate safety as an add-on. We cannot accommodate after all the changes are being made. We have to design safety to any of our plans, to our transport mode shift."* – **David Logan**

People awareness and social collaboration are some of the success factors behind developing and implementing good programs. Changing stakeholder paradigms by categorizing them into thinkers, doers, and users, helps to reinterpret what it means to have a collaborative approach in providing key solutions for traffic management and public transportation.

Complex systems in public transportation:

Mr. Mejia discussed some of the socio-technical challenges to public transport system planning, such as the overall governance aspect, different ownership and operation structures, and heavy dependency on informal transit. Additional layers in current complex systems were also described, such as infrastructure, regulations, and incentives to support sustainable modes of transport. Mr. Mejia also shared a case study about building cohesive demonstrations with urban living labs in several cities in Asia, including analyses on different technologies, business modes, and financing schemes, to scale up e-mobility and digital solutions.

Road safety perspective: Ms. Oxley tackled sustainable mobility from a road safety perspective. There was an emphasis on having no trade-offs between sustainable mobility and safety, and this was further discussed through the Stockholm Declaration, concluding that saving people's lives is a necessity.

Safe system approach: Dr. Logan talked about addressing road safety issues in an integrated way as to how it correlates with physical health, development, gender quality, safety, and sustainable cities, among others that are emphasized under the Sustainable Development Goals (SDGs). A key issue is on how to encourage a shift of transport mode to active travel and increased public transportation without compromising safety that is compatible with human tolerance for injury. It was emphasized that pedestrians mixed with motorized transport must keep a maximum speed of 30km/hr. Transfer to active travel must also be integrated with the design of interchanges. To conclude, the design of infrastructure must be appropriate and should always cater to the most vulnerable road user.

KEY TAKEAWAYS

Integrated transport planning: An integrated approach is necessary to address current transport issues. The involvement of different actors and sectors can help to devise a plan that is informed by informative and inclusive discussions. To add, having baseline information on what is happening on the ground is a start to knowing how the transport sector is addressing their needs. Collaboration among groups can provide efficient results.

Bridging gaps: Gaps in between different transport modes must also be taken into consideration. Integration between public transportation and active transit must be addressed through regulations and in the design of public infrastructure. Promoting road safety benefits all.

4.3. Housing and Home

MODERATOR

Ms. Mia Davison: Immediate Past President, EAROPH International

SPEAKERS

Mr. Aminuddin Buntar: ASCN, Acting Chairman, Bandar Seri Begawan Municipal Department

Dr. Pham Thai Son: Senior Lecturer of Sustainable Urban Development program of VGU

Ms. Bernadette Bolo-Duthy: National Director Habitat for Humanity Cambodia

Ar. Mumtazah Mustajab: Co-chairman, Housing and Urban Wellbeing Committee, Malaysian Institute of Architects

INTRODUCTION

This thematic dialogue focused on housing management and planning in ASEAN countries. It is noted that many ASEAN cities suffer from a shortage of affordable housing which is often exacerbated by rapid urbanisation. The resulting pressure on the cost of housing means residents are forced to substitute housing expenses for expenditure on other basic needs, including food, health care, and schooling for children.

Limited access to affordable housing can also lead to the formation of informal settlements (i.e., slums) - this is evident in how 28% of the urban population lives in informal settlements in cities across AMS. People living in these settlements often do not have access to water and sanitation, and other public services (e.g., schools). Substandard housing also has implications for disaster resilience; one study estimates that some 115 million urban residents across Southeast Asia will be vulnerable to coastal flooding.

The presentation delivered by Mr. Aminuddin Buntar,

Acting Chairman, Bandar Seri Begawan Municipal Department in Brunei Darussalam introduced a city project (see Figure 7) to revitalise the Kampong Ayer settlement where most citizens living in old and poorly maintained houses are vulnerable to both human and natural disasters such as fires and flooding events, due to limited infrastructure investment and a lack of urban planning. This presentation was followed by a panel discussion with a group of experts from Cambodia, Malaysia, and Vietnam, who continued the dialogue, sharing their experiences and proposing some practical solutions for affordable and inclusive housing planning.

PANEL DISCUSSION

Mobilising multi-stakeholders and empowering local communities into the planning process: Ms. Duthy, Habitat for Humanity in Cambodia proposed 3 solutions to make land and housing affordable in Cambodian cities where housing funding is still limited:

- Provide the policy and institutional framework to engage and mainstream multi-stakeholders to tap into sufficient resources for housing projects by self-financed, self-built approaches. Alternatively, provide more opportunities to access financing.
- Continuously educate key partners to explore and discover together and familiarise with the local community by providing adequate and appropriate training and materials.
- Clarify what the community's responsibility is in exploring feasible solutions.

Integrating housing projects within a wider urban plan: Ms. Mustajab highlighted that integrated housing development should refer to the strategy of blending and incorporating all the supportive elements for the housing units concerning accessible transportation, green space, education, etc. to serve social, cultural, and spiritual purposes.

Furthermore, housing requirements should also address different income groups and be integrated with different scales of development and clusters.

Beyond housing development: *"Urban planning and design should be considered as well as the community economic development and urban heritage planning ...at the end of the day, we would like to keep the heritage as our landmark for Brunei..." - Aminuddin Buntar*

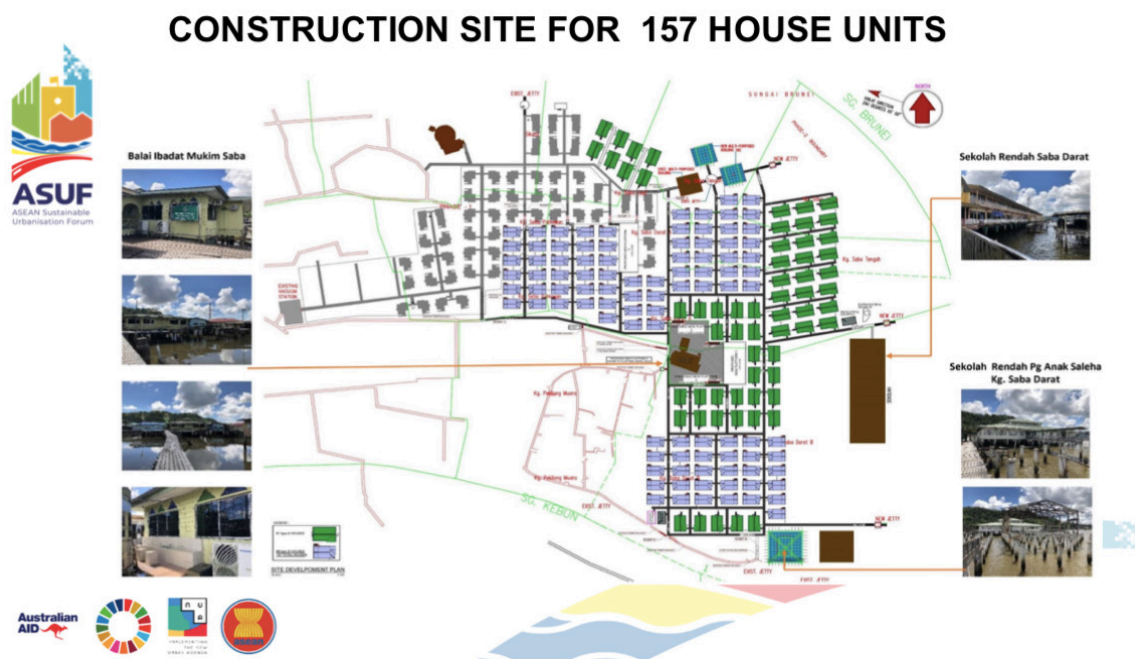


Fig.7 Housing Plan for 157 units

Capacity building enhancement to understand integrated planning, housing market, and housing finance: Dr. Son mentioned four main challenges that city authorities in Vietnam are facing: these include the lack of integrated mindset and skills to design affordable and inclusive housing projects, a lack of understanding on housing market mechanisms and functions, top-down approaches for housing policy and guidance, and limited knowledge on housing finance. Following this, Dr. Son recommended that local governments should improve their capacity

and their understanding of the information on housing development to properly provide better solutions for informal resettlement.

The need for better understanding of informal housing projects: *“Across ASEAN cities, many city authorities try to improve the housing development by removing the informal housing settlements and replace them by better development projects without the knowledge of how the community established and works”-*
Pham Thai Son

KEY TAKEAWAYS

Affordable housing should be integrated into wider urban planning: For any project and any goal concerned with trying to create more affordable housing, the city should consider how the project could fit the purpose of scalability within the city and target the neighbourhood. This can be achieved by improving the city's capacity for integrated urban planning and enhancing the city's knowledge on housing markets, housing finance, and community needs.

The synergy of multi-stakeholder partnerships: For any affordable housing project, mobilising the participation of all relevant stakeholders may not only bring potential benefits on providing more options for housing finance, but also improve the project implementation and create project transparency.

4.4. Education: Support Digital Skills Development

MODERATOR

Ms. Amalia M. Serrano: Senior Officer, Education, Youth and Sports Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat

SPEAKERS

Dr. Sitha Khemmarath: Vice-president for research and post-graduate studies, Savannakhet University (Ministry of Education and Sports)

Mr. Budi Santoso: Head of Communication and Information Office, Banyuwangi Regency Government, Indonesia

Prof. Mathews Nkhoma: Dean of School of Business & Management, RMIT University, Vietnam

Dr. Non Arkaraprasertkul: Senior Expert, Digital Economy Promotion Agency (DEPA)

Ms. Sharifah Norizah Syed Ahamad Kabeer: Regional Caucus Coordinator (Asia-Pacific), Major Group for Children and Youth (MGCY)

INTRODUCTION

This thematic dialogue focused on Education in ASEAN, emphasising and supporting Digital Skills Development. This session aimed to discuss education efforts in ASEAN that address and concentrate on the internet economy in Southeast Asia and the increasing demand for digital professional expertise.

One of the priority areas identified by ASUS is industry and innovation which includes education as a priority sub-area and the development of digital skills through industry bootcamps as a priority action. ASUS highlights how digital technologies are estimated to displace 12 to 17 million non-farm jobs in ASEAN

from 2025 to 2030; therefore, there is a need for a radical shift in education programs to produce an appropriately skilled workforce.

This dialogue-based session served as a platform to share knowledge and increase participants' awareness of challenges and opportunities related to education through digital skill development. The session started with two presentations from city representatives on the cities' experiences and recommendations on how targeted digital skill development can support education to adapt with advanced automation, AI and digital technology use. The presentations were followed by a discussion on the shared challenges, related experiences and emerging solutions for digital skill development, and ended with a Q&A session.

Dr. Sitha Khemmarath presented on digital skills development through education, using the context of Kaysone in Lao PDR, which, through the ASEAN-Australia smart city trust fund, aims to enhance employment with matching tools and e-learning modules. Research from Savannakhet University has found that there is a need for improvement in practical and technical skills (see Figure 8), especially for the IT industry. Through the fund, this improvement is met through gamification simulation teaching methods, which is used in soft skills development. These e-learning modules are also disseminated through a smartphone application, since they found that most, if not all, college-age students have a smartphone.

Mr. Budi Santoso presented on the perspective of the Banyuwangi regency government in Indonesia, where life-long learning is a priority, and where education for residents is being integrated with skills for information technology. Since 2015, a Smart Kamound Program has been integrating digital infrastructure in schools for children.

Role of youth in digitalization education “Much of the digitalization in education are already in the hands of the youth. We can see they are the communicators between communities that are previously do not know how to use smart phones, and engage or communicate with other communities out there using the internet. This could help local communities, especially to bring up the economic level using the many apps that we have today, and all the technologies that we have in hand” - **Sharifah Kabeer**

Current situation on skills development

Mismatched point of views: Skills supply and demand



Gamification: Use of game elements and game design techniques in a non-game context

Fig.8 Skills Development: Situational Analysis

Apart from this program, there are others that target youth empowerment through digital skills development: programs that offer farmers smart online agricultural consulting services, that offer youth mentoring for 3 months to develop startups, and that offer new businesses connection and networking opportunities.

skills: (1) Technical Skills: software developer, user experience designer, quality analyst etc., (2) Business Skills: project manager, data scientist, product manager, digital marketing manager etc., and (3) Creative Skills: web designer, social media manager, and user interface designer.

PANEL DISCUSSION

The main growing market areas related to IT and digital skills: Mr. Nkhoma stressed that we are now in the industrial 4.0 era, where the main characteristic is the interconnection between the system and the device. Most companies are hiring people with three main

The need for a Healthy market “Even though the government can help with the infrastructure, at the end of the day, the best way to deliver the most affordable and the best technologies is to rely on the market competition” - **Non Arkaraprasertkul**

KEY TAKEAWAYS

Main growing market areas related to IT and digital skills: Skills that are increasingly important include: (1) Technical Skills: software developer, user experience designer, quality analyst etc., (2) Business Skills: project manager, data scientist, product manager, digital marketing manager etc., and (3) Creative Skills: web designer, copywriter, social media manager, and user interface designer.

Need for alignment between education and industry: Industry, especially the digital industry, is changing at a fast pace, and so education institutions must align with the industry to be able to produce an appropriately skilled workforce.

How the youth could contribute to the digitalization of education: Youth are important actors in bringing initiative and engagement of stakeholders, government, and the local community in the digitalization of education. It is very important for young professionals to be recognized for their expertise and to be empowered so that they play their role in promoting technological knowledge across communities.

The education institution must align with the industry and the government and must bring in industry partners to share their problems and experiences with both students and the workforce.

How DEPA, as a national government agency, contributes to education on digital skill development at the local level:

Dr. Arkaraprasertkul talked about how DEPA, in promoting education, aims to make sure that people are able to achieve not only in terms of their career goals but also their well-being. The concept of Smart People, which is based on the life-long learning concept, needs to be promoted to ensure that people are willing to engage in advancing education. To support digital skills, three main components are needed: (1) Institutional infrastructure, (2) Digital literacy, and (3) Digital Competency.

How youth can contribute to the digitalization of education:

Ms. Kabeer emphasized that youth are important actors in bringing about the initiative and engagement of stakeholders, government, and the local community in the digitalization of education. They are also important stakeholders in global governance. Young professionals often serve as a bridge between organizations, companies, and the government to strengthen virtual engagement. They are also communicators who promote technological skills such as the use of smartphones and the internet across the community. In achieving the SDGs and the idea of leaving no one behind it is very important to make technology accessible to all the communities.

4.5. Enhancing Urban Safety and Security

MODERATOR

Ms. Kalpana Viswanath: Co-Founder, Saftipin and Member of the Advisory Group on Gender Issues (AGGI)

SPEAKERS

Assistant Professor Dr. Wichai Kanjanasuwan: Deputy Mayor of Hatyai City Municipality

Ms. Malavika Jayaram: Executive Director, Digital Asia Hub

Mr. Rama Raditya: Founder & CEO of Qlue, Indonesia

Ms. Cathryn Anila: Founder, Vanguard for Change

Dr. Nicole Kalms: Director, XYX Lab and Assoc. Prof., Monash University

INTRODUCTION

This thematic dialogue focused on urban safety and security management. Crime, in particular, is a burden that falls disproportionately on urban populations globally. Urban crimes range from personal crimes (e.g., homicide, assaults, robbery, rape), to property crimes (e.g., burglary), to crimes against public order (e.g., firearms, drug trafficking, drug abuse).

Women and children are particularly vulnerable to becoming victims of crime – especially human trafficking, intimate partner violence, and sexual assault. The prevalence of these crimes could exacerbate gender economic inequalities as women might be discouraged to work or travel for fear of being victims of crime. Thus, safety and security management has become one of the top priorities in urban management in ASEAN.

This dialogue commenced with a presentation by Assistant Professor Dr. Wichai Kanjanasuwan,

Deputy Mayor of Hatyai City Municipality on the city's current initiative to improve the city's safety and security. The presentation started with the city's context. As a southern hub of transportation, work, and education, Hatyai has experienced rapid population growth and urbanisation for decades.

Currently, the city is the 3rd most populated municipality in Thailand. Crimes, southern-border insurgency in the adjoining provinces, and repeated flooding are the most pressing issues. Thus, the city is proposing to enhance digital solutions, namely CCTV, artificial intelligence, and data analytics systems, to tackle these problems. The proposed intervention focuses on CCTV coverage expansion (see Figure 9), surveillance efficiency improvement, and output centralization.

Not limited to physical improvements, the proposed intervention ensures strong digital governance and citizens' privacy through the development of Digital Safety and Security Management strategies and enhancement of awareness on digital literacy and digital rights. Last but not least, one of the key success factors found in Hatyai city was the engagement of various stakeholders related to safety, data, and the public in all processes from planning, implementation, and operation. This presentation was followed by a panel discussion on some of the shared experiences and challenges behind initiatives that target urban safety and security in ASEAN cities.

PANEL DISCUSSION

Applications of safety data to tackle urban management issues: Dr. Kalms emphasized the importance of a people-centric approach and inclusion in all the processes of public safety technology implementation. She shared various tools such as crowd-mapping that is applied to help city authorities in Victoria to identify real needs of people, especially those who are more

Roles of people when technology cannot be implemented:

"In some of the cities that really cannot use AI CCTV because of a lack of infrastructure, we utilize the people. A small city in Indonesia cannot implement any AI CCTV to detect anomalies and suspicious objects and people. So, in the first phase, we empower the people with a participatory app to report floods, helping national authorities who are working hard every year. Those floods were tremendously reduced after that." – **Rama Raditya**



Fig.9 CCTV Locations in Hatyai, Thailand

vulnerable such as women, girls, and gender-diverse people. 'Craft Making' and 'Your Ground' are examples of initiatives to empower women and children in public spaces. Dr. Kalms ended her discussion by stressing the importance of partnerships with local governments to build a better design framework based on the data collected by CCTV.

Digital rights: "Digital rights are human rights. People often forget and act like they are separate categories and do not fall within the existing human rights frameworks." – **Malavika Jayaram**

Public safety technology implementation in limited resources: Mr. Raditya started the discussion by noting that a similar trend of limited resources to implement public safety technology is found across ASEAN cities including Thailand and Indonesia. Limited resources are not only limited to physical infrastructure, but also educational technology. They prohibit the implementation of artificial intelligent technology in cities. Finally, he showcased

Digital resilience: "There's no escape towards technology – it is important for the multi-generations to have a digital resilience. Technology resilience has to start from the young. Today's syllabus should not just include ICT, technicalities, digital devices, but it should help the young generation to understand digital ethics, and privacy of yourself, your friend, and your family." – **Cathryn Anila**

examples of efforts to improve Indonesian cities' safety and security when resources are limited.

Ensuring inclusion in the age of the digital transformation: Ms. Anila talked about how the coming of technology is inevitable. Thus, multiple generations must have digital resilience and digital awareness. Both government and non-government agencies are key players to create strong societies that embrace technology by, for example, including digital resilience into the education syllabus. She also highlighted the importance of educating young people to understand their rights in the digital world – rights to access to systems and rights to speak.

KEY TAKEAWAYS

Technology has to come with an awareness of digital rights: Digital rights are the most crucial factor behind the application of digital solutions in urban management. It has to start from a strong policy framework and data governance that supports citizens' privacy, to education that helps people to understand their rights in this new digital world.

Inclusion and empowerment of marginalized groups in all processes: When public safety technology is implemented, some groups may have more difficulties accessing the technology. Meanwhile, some groups may be more vulnerable to technology abuse or biases in artificial intelligence. Thus, it is important to include and empower different groups of people in the society including children, youth, women, people with disabilities, and the elderly.

4.6. Water, Waste & Sanitation: Enhance Solid Waste Management Systems

MODERATOR

Dr. Vong Sok: Head of Environment Division, Sustainable Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat

SPEAKERS

Mr. La Thien Luan: Manager of Environmental Protection Agency, Lam Dong Province Department of Natural Resources and Environment, Ministry of Natural Resources and Environment of Viet Nam

Professor Agamuthu Pariatamby: Special Studies Division, Jeffrey Cheah Institute on Southeast Asia

Mr. Hendra Gupta: Project Manager, BORDA-AIT, Regenerative Sanitation Hub

Ms. Swati Singh Sambyal: Waste Management Specialist, UN-Habitat, India

Dr. Poonsak Chanchampee: Senior Director, Waste Management Siam Co., Ltd

INTRODUCTION

This thematic dialogue focused on finding new and innovative ways for solid waste management in ASEAN countries. An introductory presentation from Vietnam's Da Lat city from Lam Dong Province showcased their plan to address the growing challenges of solid waste management. Like other ASEAN cities, Da Lat city faces several environmental and solid waste management challenges due to their rapidly rising economy and the influx of tourism.

Responding to these challenges, Da Lat city shared their plan on 'strengthening the capacity of domestic solid waste management by raising the rate of solid waste classification at source

and improving solid waste collection and transportation networks.'

Under the plan, the city proposes five major interventions; 1. Improving skills of propagation and training for environmental staff on solid waste classification at sources, 2. Raising awareness on environmental protection and guidance on solid waste classification for households and tourists, 3. Improving solid waste collection and transportation networks, 4. Implementation of solid waste classification at households by conducting pilot studies, and 5. Applying policy mechanisms to support solid waste classification. Furthermore, the city acknowledged the many challenges that may occur during the implementation phase and shared their mitigation strategies. In conclusion, Da Lat city's long-term strategy is to incorporate solid waste management as a critical indicator in its socio-economic development plan (see Figure 10 for other implementation and success factors)..

This presentation was followed by a panel discussion by experts and practitioners, who discussed some of the shared challenges and existing and emerging solutions for solid waste management.

PANEL DISCUSSION

Big challenges for ASEAN cities on SWM and clinical waste management:

Professor Pariatamby emphasized the three major challenges that ASEAN cities are facing in solid waste management. He categorized them as: (i) Big amounts of approximately 70-80% waste needlessly going to dumpsites, creating water, environmental and air pollution; (ii) Waste collection not being efficient in its processes; and (iii) primitive waste technologies that are outdated and inefficient.

The professor also noted that large increases in quantities of clinical waste in the wake of the COVID-19 pandemic has posed an additional challenge to existing solid waste management in ASEAN cities. He shared some examples which are currently in place to treat medical waste, such as incineration, and also mentioned an innovative solution – the sterilization and shredding of recyclable items

Awareness raising: *'Awareness is imperative and ensuring and enforcing that this awareness leads to behavioural change towards solid waste management'* - **Swati Sambyal**

Implementation

- ❖ **Success factor:** Having **clear and specific goals**.
 - 100% of households in all wards and communes will be trained on solid waste classification.
 - The domestic solid waste collection rate will reach 100% in both urban and rural areas.
 - At least 75% of urban households will properly classify their solid waste.
 - Tourists will classify and dispose their garbage in the right places.
- ❖ **Way to maintain sustainable action in the future:** incorporating the solid waste management target as an important requirement indicator into the city's annual socio-economic development plan.

Fig.10 *Implementation factors for SWM*

which are not impacted by the virus, which can thus be remoulded and reused, reducing the generation of waste. He further added that a lack of knowledge of disposal of COVID-19 waste at the household level ends up being mixed into municipal waste, which is extremely harmful and toxic to the staff at landfills and dumpsites. In conclusion, Professor Pariatamby urged cities to use incineration as a method for COVID-19 clinical waste and sterilization before disposal.

Data and participatory planning in Solid waste Management: Ms. Sambyal highlighted four key inputs that cities should consider when moving forward to achieve sustainable and holistic solid waste management: (1) With the current lack of evidence-based planning on solid waste management, cities need to focus on enabling data-centric decisions; (2) Participative and inclusive planning brings in key relevant stakeholders to the waste value chain; (3) The need for decentralized systems; and (4) Inclusion of bottom-up initiatives in cities' policies on the circular economy.

Integrating vulnerable communities into solid waste management systems: Mr. Luan found integration to be a major challenge

currently and mentioned that the city plans to integrate the vulnerable sections of society into the waste management system by providing the opportunity to sell the recyclable items that they collect, thus supporting them in creating livelihoods through waste. He added that the city understands and is concerned about informal workers in the waste sector.

Ms. Sambyal emphasized that in most cities in ASEAN countries, there is a huge presence of the informal sector, and integrating the informal sector into waste management models should be through policies at the city, regional and national levels and should be included in implementation mechanisms as well. She further gives examples of practices of how these can be included such as by the formalisation of the informal sector into self-help groups or cooperative methods with added social security networks.

Another example of formalization is through skill development training for this sector to support the informal sector in upscaling into local entrepreneurs. In conclusion, both speakers shared a similar view of a holistic view on the integration of the informal sector, through providing them with the right to dry waste recyclables.

KEY TAKEAWAYS

Creating social enterprises for communities: Creating benefits for communities through social enterprises helps to generate income and become self-sustaining. Mr Gupta used the example of BORDA (Bremen Overseas Research and Development Association) in Indonesia to illustrate community participation, an organization that has implemented community-based solid waste management projects in Indonesia, where material recovery facilities are supporting communities to generate income.

Innovation policies in Waste Management: There is a need to introduce extended producer responsibility-based policies into legislation to encourage people to be more involved in recycling systems. Dr. Chanchampee noted some countries like Singapore have initiated EPR on e-waste management and discussions and knowledge-sharing on EPR is ongoing in Thailand. However, these are still fledgling policies, and all stakeholders should learn to understand the EPR framework - it is an important long-term consideration.

4.7. Urban Resilience: Develop Flood Management Systems

MODERATOR

Ms. Lucy Price: Regional Urban Risk Management Coordinator, Disaster and Crisis Unit, Asia Pacific Office, IFRC

SPEAKERS

Ms. Antonette Anaban: City Planning & Development Coordinator and OIC, Baguio City, The Philippines

Ms. Fiona Barbour: Global Practice Leader, Water Resources and Flooding, Mott MacDonald

Mr. Werner Gruber: Head of Cooperation, Swiss Cooperation Office, Embassy of Switzerland, Vietnam

Mr. Hans Guttman: Executive Director, Asian Disaster Preparedness Centre

Mr. Buahom Sengkhamyon: Chief Technical Advisor, UN Habitat

INTRODUCTION

This thematic dialogue focused on flood management in ASEAN, a critical issue that several cities in ASEAN are facing, given that 80% of ASEAN is surrounded by water. Threats to urbanising cities are compounded by climate change and rapid population growth, and when coupled with poor infrastructure maintenance, growing infrastructure gaps, and more frequent disastrous weather events, these threats make flooding and flood management systems a pressing concern for ASEAN cities.

The dialogue commenced with a presentation by Ms. Antonette Anaban on resilient flood management in Baguio city in the Philippines, where the existing waterways and drainage infrastructure are troubled by high rainfall, garbage accumulation, and settlement encroachment. Following this presentation, a panel of experts and practitioners discussed some

of the shared challenges and related experiences, as well as on existing and emerging solutions, for resilient flood management systems.

One project discussed was the Baguio City Smart Flood Warning, Information and Mitigation System, which aims to improve community disaster preparedness and awareness by ensuring ownership to enhance urban resilience. One of this project's outputs was a baseline assessment of Baguio city's current situation, assessed through parameters on climate change assessment, hazard mapping, and FEWS, among others (see Figure 11), looking at the data and information gaps and necessary actions needed to fill in these gaps. Another completed project output was a hydraulic model and risk mapping of flood-prone areas, their characteristics and risks in Baguio city.

PANEL DISCUSSION

City learning opportunities for technical and strategic areas of flood risk management:

Ms. Anaban and Ms. Barbour discussed how COVID-19 restrictions forced Baguio City to shift to virtual means of stakeholder engagement and pilot project implementation. COVID-19 was also a source of opportunities and success factors: it pushed the transformation towards digital solutions, and it proved the strong commitment and political will of the city government and project teams to the project development.

Integration of vulnerable communities into flood risk planning processes:

Mr. Sengkhamyong described how integrating vulnerable communities into flood management projects and planning through participatory processes can begin with stakeholder mapping - to understand their positions in relation to the decisions being made - followed by comprehensive, transparent

Funding for flood management: *"There are three ways to ensure funding for sustainable flood management: the first one is to use general public budget funding; the second one would be to assure funding through a utility and finance it by beneficiaries and consumers, through a public service tariff scheme; and the third one is access to private funding, special vehicle or to public private partnerships. In practice, these three ways of funding are probably going to be mixed and complemented with each other"*
Werner Gruber

Engaging & Empowering the Vulnerable

- Complementary project, "Gender Transformative Approach for Strengthened Development, Application, and Replication of the Baguio City Smart Flood Early Warning" feeds into the Baguio FEWS project
- Provides specific, usable, and relevant actions/guidance on gender transformative approaches that can be built into the design and implementation of the FEWS.



bit.ly/3Bcz1HU

bit.ly/3BgoVpx

Fig.11 Baguio City's GESI Plan

monitoring and evaluation strategies to create a better shared vision.

Data: "Availability, management and quality of data ensures that relevant information is available to support the quality of the project. Data gaps and IT infrastructure are key challenges to overcome" – **Antonette Anaban**

Risk reduction and the scaling up of collaboration and cooperation among stakeholder groups:

Mr. Guttman has found that anchoring flood work with on-the-ground groups of stakeholders and partners will strengthen the planning process and help with drawing evidence-based conclusions. Risk reduction is a key issue, and both the immediate effects and the lingering damages of floods must be planned for – the knock-on effects of floods include electricity cuts, water supply issues, and damaged public and private infrastructure – with repeated, consistent testing of such plans and systems is key to continued responsiveness.

Recommendations or best practices on accessing sustainable funding mechanisms for flood risk management:

Mr. Gruber detailed some of the best practices for sustainable flood risk management, stressing that managing flood risk through proper risk assessment, risk-based approaches and prevention measures should be through precautionary strategies of disaster risk reduction. To sustainably finance flood risk management, examples of innovative funding mechanisms include a tariff on waterway carriage systems, the set-up of infrastructure finance facilities in cities (as a means of private finance), and the use of land-based fiscal tools to leverage public funding for flood infrastructure.

Systems thinking: "We need to start integrating flooding solutions into our other city policies and strategies, and start to look at them holistically: As flood experts, we need to learn more about housing strategies, and the other challenges cities face from urbanisation, and they also need to learn more about flooding strategies" – **Fiona Barbour**

KEY TAKEAWAYS

Digital solutions for resilient flood infrastructure: Digital solutions can be integrated into flood risk management plans to collect more robust data and to integrate real-time responsive systems into the planning process.

Risk reduction through planning: Planning for both the immediate and lingering effects of floods is key to strengthening flood risk plans, as is collaboration and cooperation with all stakeholder groups, including vulnerable communities.

Sustainable and innovative financing mechanisms: Innovative financing mechanisms for flood infrastructure should be based on a precautionary and safety-first approach towards disaster risk reduction, and new and innovative financing mechanisms exist and will continue to evolve to meet the needs of flood projects.

TRAINING SESSIONS

5.1. Implement Public Transport Plans

5.2. Introduce Digital Solutions for Urban Safety

5.3. Enhance Solid Waste Management Systems

5. TRAINING SESSIONS

5.1. Implement Public Transport Plans

MODERATOR

Moderator: Ms. Dori Nguyen: Managing Partner of Utopia

SPEAKERS

Mr. Prasongsinh Chaleunsouk: Mayor, Kaysone Phomvihane City, Lao PDR

Mr. Tran Trong Thong: Vice Chairman, Sa Pa Town People's Committee, Vietnam

Engr. Riza Marie T. Paches: Head of the Public Safety Office of General Santos City, Philippines

Mr. Tomaz Cigut: Urban Mobility Expert, UN-Habitat

INTRODUCTION

This training session complemented the thematic dialogue on sustainable urban mobility. It aimed to strengthen the expertise and knowledge of participants, and used an interactive exercise to gather and share their insights. Public transportation networks in many cities within AMS are fairly underdeveloped - at present, many public transport systems only serve a small section of the community and leave large swathes of underserved areas.

Of increasing concern, the use of public transport (measured as a proportion of total trips) across many large cities in ASEAN is declining, with many citizens switching to private modes of transportation (e.g. motorcycles) instead. Should this trend continue, cities in ASEAN are likely to face even greater pressure on their road infrastructure and rising congestion.

With this backdrop, representatives from two cities shared their experiences and proposals for

improving urban transportation, and participants then discussed the benefits of improved transport systems, the skills or training needed for such improvements, and the linkages between the transport sector and other sectors.

The training began with a city presentation by Mr. Tran Trong Thong on the development of public transport plans in Sa Pa, Vietnam, by introducing the current state of the transport sector, the local issues experienced, and how they developed a transport master plan. Sa Pa's local transport issues are defined by narrow roads that are under severe deterioration, and by a system that has insufficient parking lots, is dependent on private transport, and faces a lack of public transport or management of public transport systems. However, opportunities also arise through enhanced technical capacity, partnerships and collaborations. Sa Pa joined the ASUS project to develop a comprehensive transport master plan that is more accessible, inclusive, and safer.

Over eight months, the three-phase project aims to: 1) create alignment among beneficiaries; 2) improve and develop data collection and sharing processes; and 3) assess, plan, and train to strategically build personnel capacity. These will support government decision-making, improve future solution identification, and institute a transformational change approach to public transport. Through ASUS, activities in Sa Pa town commenced in March 2020 with a consultation meeting, followed by the formulation of a Steering Committee in May 2020 to oversee the formulation of a technical proposal.

The second city presentation, by Mr. Prasongsinh Chaleunsouk, was on Integrated Transport for Sustainable Urbanisation in Kaysone, Lao PDR. Despite being the third largest city in Laos and accessible by land, air and water, Kaysone has limited urban transport data and the necessary business and implementation plans to sustain their transport system. Concurrently, an increase in private vehicle ownership is heightening traffic congestion. Kaysone's three-phased project aims to: 1) assess the transport situation and plan stakeholder engagement; 2) develop a City Sustainable Transport Master Plan; and 3) identify an implementation plan, business model, and an SDG monitoring strategy. Seeking to overcome a limited understanding of urban transport systems and limited knowledge on developing business plans, the city of Kaysone also seeks to increase the city's attractiveness,

build an Infrastructure Development Program 2021-2024, and improve accessibility and inclusion for women and persons with disability in its planning and management of the transport sector. These activities will particularly help improve the quality and efficiency of public transport, improve connectivity at local and regional levels, and help attract investors.

In between presentations, an interactive exercise instilled engagement between the city presenters, the speakers and the participants on the benefits of transport systems, skills or training necessary for the transport sector, and links between transport planning and other sectors. This conversation led to a common understanding of the transport sector in the Southeast Asian region.

INTERACTIVE DISCUSSION

How improved public transit systems benefit the public: The participants collectively found savings in terms of both time and costs, and economic activity potential to be the two most important benefits accruing from improved transport infrastructure (Figure 12), and many other benefits of better safety, connectivity, mobility, air quality, mental health, social relations, opportunities, livelihood and accessibility were also listed. When discussing this question, Mr. Trong added that improved public transit also attracts more tourism to a city, and can also be seen as an environmental improvement. Ms. Paches also stressed the economic benefits of improved transport, in creating an enabling

environment for business, and in promoting the socio-economic well-being of locals.

Necessary training and skills needed for various actors in the transport sector: Data collection, management, and analysis are increasingly common skills needed for most actors in the transport sector, with context-driven demand and supply analysis being fundamental to this process, as one participant stressed (Figure 13). Ms. Paches also emphasised the foundational value of data for establishing baseline information, and for all phases of the transport planning process. She suggested using ASUS's guidelines on data collection for transport plan development, as it focuses on what is needed and simplifies the process of data collection, organization and management to be more easily implementable.

Public transportation:

"[It] provides opportunities to people who usually don't have access to opportunities. Indirectly, [public transportation] influences society as whole. Those who are socially less well-off, they tend to save up money for other modes of transport, so they go to [different] services. However, if transport is made affordable and easy to use, then it gives these people an opportunity to travel across the city to access services, [and] secondly, [they can] make savings from income that is already low for them" – Tomaz Cigut



Fig.12 Poll Result from an interactive session, asking: How would improved transport systems benefit the public?

- accessibility and inclusivity
- Link with Nationally Determine Contribution
- Expanding the urban green cover
- transport and urban form
- inclusivity
- GESI and accessibility
- Energy Saving Options
- environment and climate change
- Disaster risk reduction
- Traffic management can support planning toward safer roads and neighbourhood
- Transportation and security
- Transport routes for primary schools
- Public safety
- Climate and Disaster Resilience
- economy
- urban density should be supported by adequate transport services
- Transportation and tourism
- Landuse and spatial planning
- Public health
- transportation and land use planning (such as CBD and job locations)

Fig.13 Poll Result from an interactive session, asking: What are the links between transport planning and other sectors?

KEY CONSIDERATIONS

Together with the city presenters, panellists and participants, the training session collected insights and shared technical and strategic considerations on approaching the development of public transport systems. Some key considerations for the development of improved transport plans are detailed here:

Baseline data: Baseline data helps to determine what the city needs, in terms of availability of sufficient transit routes, frequency of transit options, peak and off-loading on the transport system, etc. Data supports decision-makers and highlights local issues for context-sensitive planning. For example, land use and topographic conditions (such as the high altitude in Sa Pa) should help determine the modes and focus of transport systems. For cities with limited available data, existing and open-sourced data should be the starting point – for example, in General Santos, household census data was used as the baseline to determine travel behaviour. Transport use cases can also be incorporated into land use and data gathering systems like the census, to help plan for current and future transport scenarios.

Design and plan for vulnerable groups: Mr. Cigut stressed how public transportation provides opportunities to people - when public

transport is made affordable and adequate, economic opportunities are more readily available, travel costs are reduced, and this can also result in income savings. Inclusive transport systems provide access to social and economic opportunities across the city, and especially for those with limited resources to spend on commuting costs. Social cohesion and well-being can only improve if people from across backgrounds are collectively able to travel and take advantage of opportunities.

Transport enables businesses to grow: Public transport increases access to jobs and economic activities, supporting an enabling business environment: Sa Pa identified public transport development as key for strengthening its tourism industry.

Proposed activities: Mr. Thong listed proposed programs and projects that cities can consider to address their transport challenges: from developing a baseline survey on the actual transport situation to the development of a City Sustainable Transport Master Plan. Through the ASUS framework, alignment with the beneficiaries' needs and interests can lead to data sharing and documentation, and further develop capacities in terms of human resources.

5.2. Introduce Digital Solutions for Urban Safety

MODERATOR

Moderator: Mr. Hafiz Amirrol, Local Project Officer, UN-Habitat

SPEAKERS

Tpr. Annie Syazrin Ismail: Senior Assistant Director cum Sustainable Development Officer, Majlis Bandaraya Shah Alam, Malaysia

Drg. Jean D'arc F. Senduk-Karundeng: Head of Tomohon Family Empowerment and Welfare, City of Tomohon

Prof. Suhono Supangkat: Director, Smart Cities and Communities Innovation Center, Bandung Institute of Technology, Indonesia

INTRODUCTION

This training session complemented the thematic dialogue on enhancing urban safety and security. It aimed to strengthen the expertise and knowledge of participants, and used an interactive exercise to gather and share their insights on urban crime and digital solutions to prevent crime and enhance safety in cities, and on the specifics and priorities behind digital solutions for urban safety.

Introducing digital solutions to enhance safety and security in ASEAN cities is a fundamental priority to improve the quality of the environment and the living standards of everyone in ASEAN. Initiatives to improve 'public safety and security' can be defined as steps to ensure that the basic needs of residents (such as food, health, shelter) are met and that they are protected from crime and natural hazards. A majority (85%) of cities indicated that this sub-area was of utmost importance to the sustainable development of their city – the highest proportion for any sub-area in a survey conducted by ASCN.

The session commenced with presentations from two cities, who shared their approach to using technology to improve safety and security for their residents. The first presentation, by Drg. Jean D'arc F. Senduk-Karundeng, discussed digital strategies to enhance safety and security in the City of Tomohon, Indonesia. A majority of Tomohon's budget was consumed by handling COVID-19, leading to the budget deficit for other issues, such as safety and security (crimes and violence against women and children) and natural disasters (volcanic activity, landslides, and repeating flooding), two of the city's most pressing issues. Tomohon, chosen to participate in the Indonesia Smart City Program, faces challenges of rapid urbanisation, slow emergency response times, limited coordination on safety management, and a lack of infrastructure (software and hardware) to support systems.

To address these challenges - of limited coordination in safety management and its support infrastructure – their proposed project will develop guidelines for software and governance integration, and a plan for required hardware (e.g. CCTV, early warning systems), building on the existing Tomohon Command Center. The proposed project will have 4 phases, which will: 1) assess the local safety and security conditions, 2) develop and adopt a digital safety and security strategy, and 3-4) implement and monitor the strategy. Success factors for this project include demonstrations of: long-term commitment, local capacity, strong endorsement and support from the multi-level government, alignment with the local master plan, and collaboration between agencies.

The second presentation, presented by Tpr. Annie Syazrin Ismail, looked at Shah Alam's Smart and Safe City Program in Shah Alam, Malaysia, a city that is committed to the SDGs and which recently submitted their VLR this year. Shah Alam faces data challenges related to a lack of an integrated database, an outdated data handling process, no real-time data, disconnected perception on crime and security, and data unreliability. One distinct opportunity is the multi-sectoral integration of existing but underused tools and systems that address urban safety.

Shah Alam's project thus aims to integrate their data repository at the city level, reducing crime rates and improving urban service delivery for Shah Alam. The city's program framework includes components that address system function (information and data gathering,

integration platform, data analytics, alert and response system, and network) and system architecture (users, smart apps/use cases, smart application development platform, and infrastructure and platforms).

Success factors for their proposed project depend upon: (1) more public involvement, (2) financial instruments and models, (3) technical capacities, and (4) knowledge building and transfer from city networks.

An interactive exercise instilled engagement between the city presenters, the speakers and the participants on privacy and safety aspects of digital solutions. This conversation led to a common understanding on the issues of safety and security in the Southeast Asian region.

INTERACTIVE DISCUSSION

Perception survey on the areas most vulnerable to privacy and protection issues:

More than half of the participants (Figure 14) perceived their personal data to be most vulnerable to privacy and hacking issues, which is a common perception that many people share given how data protection acts don't sufficiently address how major websites collect, track, store and profit from personal data.

With government data and surveillance records as key issues, this points to how participants are concerned about being surveilled, with publicly-managed systems that can track specific groups of people vulnerable to exploitation and misuse.

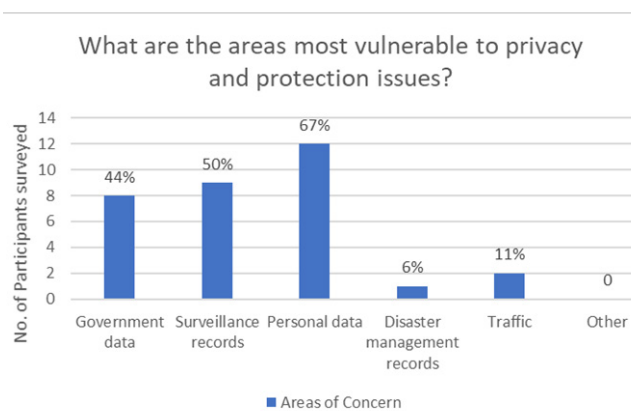


Fig.14 Diagram showing participants' perceptions on the areas most of concern when it comes to privacy and protection issues

The risks and challenges for a city to digitize its safety and security systems:

The participants identified several risks and challenges associated with how a city can digitize its safety and solutions, including cybersecurity risks, a lack of data collection tools, hacking vulnerabilities, data breaches, M&E challenges, amongst several others (Figure 15)

Professor Suhono Supangkat suggested that defining what a safe and secure city means could proceed with these indicators, along with some other indicators - data gathering, data management, and data analysis to understand people's behaviors. A key challenge that underlies such safety and security systems is also how to improve government services and people's lives, and as such, components of analytical tools and technologies are also critical considerations.

How to integrate data use across government departments and projects:

The participants collectively noted how there is a need to establish a data centre to integrate data from all agencies, with more training, information, and collective protocol development to be given to these agencies (Figure 16).

A centralized data portal for citizen identification mechanisms is also seen as an inevitable future outcome which needs careful data protocols to ensure privacy and safety of the personal data stored. Drg. Senduk-Karundeng added that the city of Tomohon has started to integrate its applications with big data, to encourage and persuade the majority of the city that such data application can indeed integrate into policy.

Actors in private, public, international development, academia and civil society sectors who can contribute to these digital safety solutions:

The participants drew from their backgrounds in answering this question, and stressed the potential for academia-government-community collaborations on digital safety and security solutions (Figure 17).

GIS companies and blockchain providers also have a stake in such solutions, as do other service providers, government, statistical analysts and local leadership bodies. In the city of Tomohon, the city collaborated with academia, media, and industry partners to develop digital literacy for societies.

- Local administrators' understanding
- Institutional structure and governance
- Open data, data exchange, and data governance
- Abuse and misuse of the general public
- User Privacy
- Risk of cyber security
- Consistency of data collection for accurate analysis
- how to protect personal data from cybercrime
- Prone to hacking from cyber terrorists and hostile countries
- Accountability and Education of the public about their rights and responsibilities
- Capacity
- Lack of data collection tools
- Data protection
- encounter opposition from the communities for fear of privacy violation
- Complex operation required high skills and knowledge
- Local capacity
- Community acceptance/ participation

Fig.15 Poll result from an interactive session, asking: What are the risks and challenges in how a city digitizes its safety and security systems?

KEY CONSIDERATIONS

Together with the presenters, panellists and participants, the session collected insights and shared technical and strategic considerations for addressing safety and security through technology.

Define what a safe and secure city means:

Create indicators for the project against which progress can be measured, and define the methods and sources for acquiring and working with data to:

Sense: During the feasibility phase, data can be gathered from a variety of sources including social media and open-source platforms. The Tomohon Command Center began to build data integration by using big data. **Analyse.** Data can help understand human behavior (daily, traffic, etc.), especially by using technological tools to support analysis (e.g. AI, IoT). **Act.** Implement based on the gathered data.

Leverage and use analytical tools and technology: Acquiring data is a challenge - both in terms of the technology and the people required to participate in and process the

information. Leadership is a key component in both encouraging the use of analytical tools and technology and in ensuring data sensitivity is protected and prioritized.

Integrating and coordinating data across sectors:

The government can signal or authorize integration through local to national level initiatives. For example, through the One Data, One Indonesia national government decree, the Tomohon Command Center encouraged the mayor to issue policies on the implementation and integration of their application with other departments in Tomohon. Pursuing opportunities to work with other sectors, particularly in areas of need, is also a key consideration.

Data analysis and data integration:

"The challenges and risks for a city to digitize its safety and security systems lie in defining the safe and secure city and then proceeding with the indicators. The key factors are data gathering, data management, and data analysis to understand people's behaviours - with the use of analytic tools and technology"

- Suhono Supangkat

- Create thematic working group
- Establish data center to inter-grate data from all agencies
- more training and centralized information to gov departments
- digital governance with integrated national statistics
- Create the sharing protocol amongst governmental agencies
- Central data portal citizen ID
- Public information on this project. Accessible to everyone.
- involvement of mayor
- Long term monitoring
- and management plan
- e-platform public service accessibility
- Awareness of the public. To solicit their support
- centralised data (one same system for all stakeholder)
- Training plan for local stakeholders
- upgrade public administration system
- National ID system
- Clear alignment of goals and objectives among

Fig.16 Poll result from an interactive session, asking: How can data be integrated across government departments and projects?

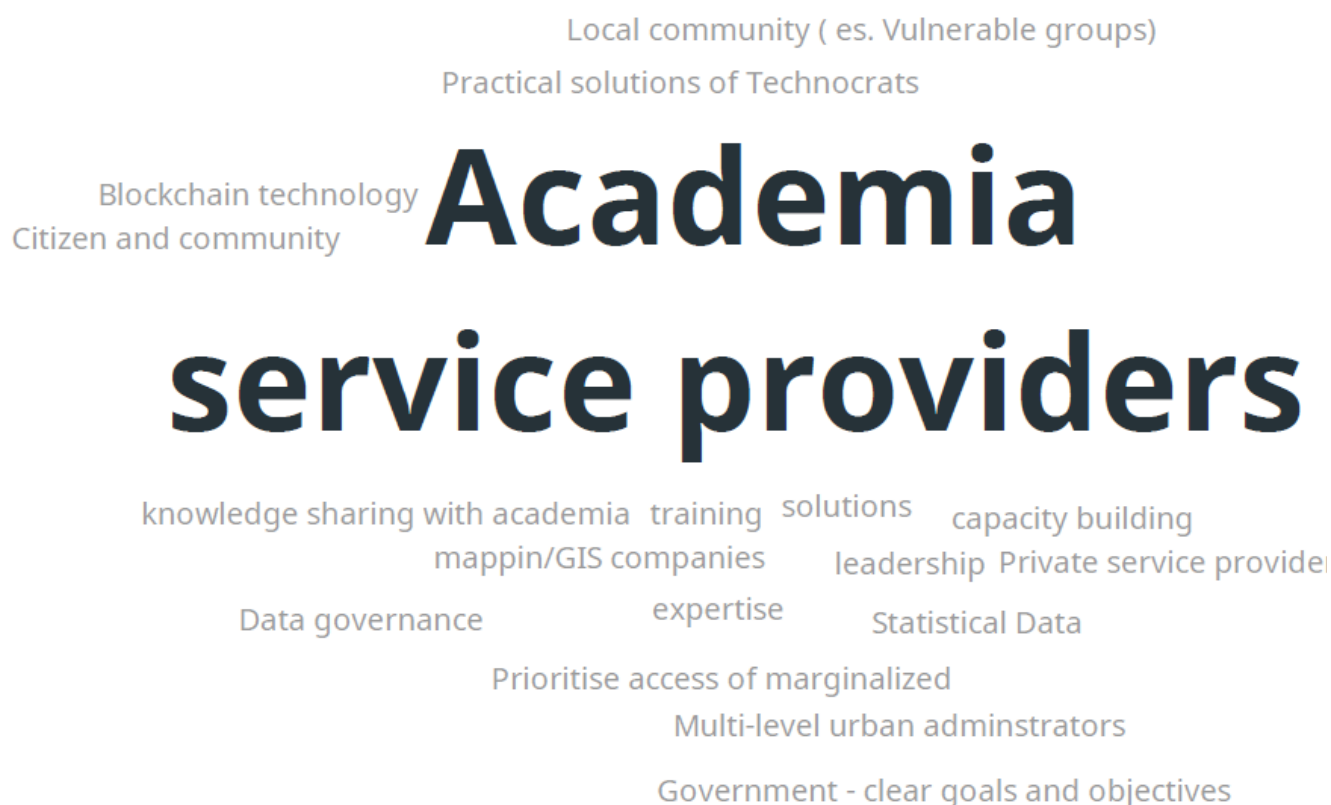


Fig.17 Poll result from an interactive session, asking: Who are the actors that can contribute to digital safety solutions?

5.3. Enhance Solid Waste Management Systems

MODERATOR

Moderator: Ms. Anuradha Panigrahi, Local Project Officer, UN-Habitat

SPEAKERS

Mr. Khorn Vuthy: Deputy governor of Kep City, Cambodia

Ms. Sarifah Yaacob: EXCO and Chairman of Training, Waste Management Association of Malaysia (WMAM)

Ms. Luksanaree Maneechot: Lecturer, Mahidol University and Waste Management Consultant, UN-Habitat

Ms. Pham Ngoc Bich: Project Coordinator for Vietnam Solid Waste Management, FCM Canada

INTRODUCTION

This training session complemented the thematic dialogue on waste, water and sanitation. It aimed to strengthen the expertise and knowledge of participants, and used an interactive exercise to gather and share their insights on better involvement practices in the waste management sector.

The volume of solid waste generated across Southeast Asia has been rapidly increasing since 2000, reaching approximately 150 million tonnes in 2016 alone. It is estimated that by 2025, the amount of waste volume will increase by 150% from 1995 levels. At present, around 53% of the waste generated in ASEAN is uncollected, and of the waste collected, under a quarter is currently recycled and the remainder is either illegally dumped after collection (around 34% of collected waste) or treated and disposed (around 43% of collected waste).

Cities have identified solid waste management challenges, but still face implementation challenges: in the city of Dhagamatu, for example, 80-90% of their budget is spent on the collection process, leaving the driving of proper disposal as a key challenge. Other such challenges include suitable technology, access to capital, operational sustainability of projects, and low public awareness.

The training session commenced with a presentation by Mr. Khorn Vuthy of Kep City, Cambodia, who shared his city's specific case and plans to enhance the city's waste system. Before COVID-19, the average generation rate in the peak season in Kep City was 55tons/day. The waste composition consists of 70% organic, 5% paper, 6% plastics, 2% metal. Kep City's project proposal on enhancing solid waste management is currently under development in alignment with ASUS.

Kep City faces waste management challenges that include insufficient and inefficient waste collection services, uncontrolled disposal, lack of policies and business partnerships to boost the recycling sector, lack of community participation, and limited capacity of city authority. Solid waste management (SWM) is a priority for the city and country and an opportunity to build the local recoverable materials supply chain.

Over three phases, Kep City will: 1) assess the SWM sector and engage stakeholders; 2) develop city SWM strategy and plans and community engagement platforms and campaigns; and 3) demonstrate a sustainable recycling business model. It aims to promote community awareness and accountability, boost recycling businesses and improve the city's capacity. Success factors for Kep City's project depend on: strengthened sectoral coordination, capacity building, inclusive stakeholder engagement, community engagement, addressing any and all existing gaps, and alignment with development city priorities and other national commitments.

An interactive exercise instilled engagement between the city presenters, the speakers and the participants on the changes needed in the waste management sector, skills or training necessary for these trainings. This conversation led to a common understanding of the solid waste management sector in the Southeast Asian region.

INTERACTIVE DISCUSSION

Working and integrating with formal private sector service providers at various points along the waste management chain:

In the case of Kuala Lumpur in Malaysia, Ms. Sarifah Yaacob talked about how privatization programs collect the waste. The city involved the private sector by giving them concessions and sub-contracts for the collection of household waste. When the collected waste is from institutional, commercial, and industrial sectors, the private sector entity must have a license from the national solid waste management department. If there are some areas that do not fall under the local authority of the city, they use their own waste methods and treatment systems.

The private sector is very active, especially in the recycling sector: for example, used cooking oil is collected locally and then resold by private entities. Challenges identified are source segregation: segregation at the household level is more difficult than at the institutional, commercial, and industrial levels. More than 50 % of the waste collected is organic waste, the challenge is the segregated source from the household, while the institution, commercial and industrial are easier.

Malaysian cities are also interested in and involved with the use of technology to transform waste into energy. Ms. Luksanaree Maneechot discussed the waste management system in Thailand, talking about how the local government organization is the main operator, though the system does involve the private and public sectors, especially in medium and large cities. In a small city, the system is only operated by the public sector, the local government. Issues encountered in smaller cities are: working with a smaller budget and ineffective management with (1) limited workers, (2) a lack of a common knowledge base for workers, and (3) safety and sanitary concerns for the blue-collar workers. In bigger cities, private sector services providers' involvement can be clearly seen, especially in disposal, recovery, and recycling streams. She notes that this helps to make the management of waste more effective, since the private sector is better able to control safety and protection for their workers.

Ms. Luksanaree Maneechot also discussed

how the ministry sets the policies while local governments design the gaps between policies and workers. Private sector players focus on the expansion of the economy through a profit-oriented motivation, while the public sector does not yet understand how sustainable and financial management can be operated and integrated into the city.

Currently, Kep City is also collaborating with the private sector in waste collecting services, but this is limited. The alternative is to integrate with other waste management chains, especially in recycling and treatment, and to work with experts to analyze what the most effective methods are.

Work and integrating with informal service providers at various points along the waste management chain:

The participants identified working with informal workers associations as a key priority, stressing that they need to be provided with employment pathways into formal service provisions as well. Ms. Pham Ngoc Bich discussed options for waste collection and separation: The resident could bring the separated material to a collection point before bigger transportation methods take it to the facility, like in European countries.

Alternatively, the separated material can be collected directly from homes. The separated material could be then be compacted in transportation vehicles, and then be transported to a processing facility. She also detailed the types of transportation trucks, discussing their design options: (1) A single compartment (2) A single truck with two-compartments – one for organic material, and the other for plastic material, and (3) A separated truck - the material is transported separately to the dedicated destination.

She emphasized that by 2024, all the cities in Vietnam must apply a new environmental law, which will make it more effective to integrate: (1) A city action plan on SWM and plastic reduction, (2) Leaching into international, marine and ocean spaces from Vietnam (3) Enabling of a private sector to encourage their involvement, (4) a clear plan on financial aspects, plastic waste reduction and waste management chains (5) Use of technologies, eg. energy production, organic fertilizer, etc. and (6) A provincial direction for both cities and private stakeholders.

Ms. Sarifah Yaacob discussed the participation of the informal sector in SWM in Malaysia, which mostly occurs at the level of recycling as well as in small-scale treatment plants. The large scales of treatment are controlled and managed by the government. The government and local authorities could set up better provisions for the informal sector, through organized structures such as zoning, and also by providing a community area to encourage a space for their necessary waste activities.

Promising collection, segregation, treatment, recovery and other circular waste management methods that were shared:

Waste to energy concepts and solutions were collectively identified as the most promising waste management methods that are out there (Figure 18), and this solution was linked to other concepts such as resource recovery and efficiency, and smarter waste communities.

Other identified solutions of promise were also discussed, and Ms. Luksanaree Maneechot, continuing on one of the themes of recycling, gave an example of how 5 years ago in Thailand, 95% of the waste collected daily from cities was dumped in landfills, but currently, the recycling processes adopted have reduced

this dumped waste by about 90% in the city. She agreed with the waste-to-energy solutions mentioned by participants, adding that in big cities, having a recycling facility that changes waste into energy is very much necessary currently.

Waste management models:

"When it comes to the waste management system in Thailand, the private has the ability to perform and expand the economy and understand how sustainable management is operated and integrated into the city. To develop waste management models for the public and local government, providing knowledge on sustainability management should be done, to help them see and design for the gaps between policy and workers" - Luksanaree Maneechot.

"In the case of Kuala Lumpur, Malaysia, privatization programs collect the waste involved in concessioners and sub-contractors for the collection of household waste. While the collected waste is from institutional, commercial, and industrial, the private sector must have a license from the national solid waste management department. The private sector is very active, especially in the recycling sector" - Sarifah Yaacob

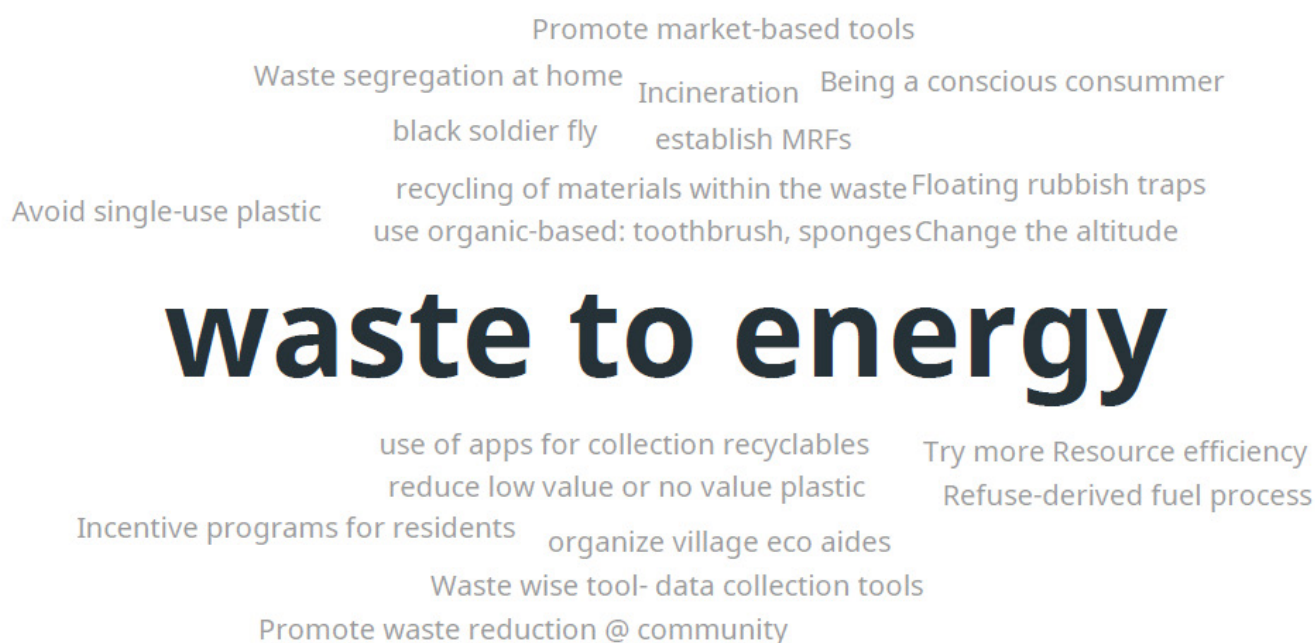


Fig.18 Poll result from an interactive session, asking: What are some promising waste management methods?

KEY CONSIDERATIONS

Together with presenters, expert panellists and participants, the session collected insights and shared technical and strategic considerations for creating integrated and efficient urban waste management systems:

The potential of private sector stakeholders: They have the ability and potential to expand the circular economy, particularly given the public sector's limited experience in operations and sustainable management. Hoi An City, in Vietnam, is working with the private sector to build a material recovery facility, with the support of the tourism association, while in Malaysia, the private sector is given concessions and subcontracts to provide services across waste collection, recovery, treatment and recycling. These are both solutions that can be considered, with the caveat being that private sector providers must have a license from the solid waste management department, to ensure standardization of services. Private actors should also be better integrated into the public policy process.

Develop a clear SWM roadmap: A SWM that also demonstrates how various and key actors can engage in target actions is an important consideration to keep in mind. This will help encourage and guide informal and private sector participation in the waste management chain, such as in treatment technologies that can range from energy recovery to bioplastic production.

Waste-to-resource: In Thailand's bigger cities, plastics are being converted to energy, or refuse-derived fuel (RDF). Such mechanical and natural biological treatments in disposal facilities are key to managing the end of the waste chain.

Context-situated collection models: Residents could bring separated material to a designated collection point where it is stored before being transported to a processing facility. Prepared bags of separated materials are usually collected from home by hand carts, who then deliver to transfer stations before it is transported to the processing facility. Using green-colored bags for organic waste will help to distinguish between waste streams even if the bags are mixed in the collection vehicle.

There are also several design options for collection vehicles: Bags of separated materials placed in the same compartment of a truck, a single truck that has two compartments (organic and non-organic), or separate trucks transporting separate materials individually to dedicated destinations. Trucks can also have compacting capacities, an innovative in-situ solution.

CLOSING SESSION

6. CLOSING SESSION

SPEAKERS

Moderator: Mr. Bruno Dercon: Senior Human Settlements Officer, UN-Habitat

Mr. Lim Chze Cheen: Director, ASEAN Connectivity Division, Office of the Secretary-General, ASEAN Secretariat

SUMMARY

A final concluding session on the last day summarised the main outcomes of the Forum and acknowledged the support and contribution of all partners. The moderator Mr. Bruno Dercon shared a statement to commence the closing session, by first noting that the ASUF Forum contributed to the commemoration of Urban October, a month-long celebration of all that is urban related.

With over 1400 registrations and 825 active participants, of which 54% were women, and with more than 80 speakers, this event was a wonderful communication tool for further implementation of the ASUS. The Forum also created a collaborative effort on knowledge-sharing and contributed to the development of the ASEAN Sustainable Urbanisation Report. The collaboration between UN-Habitat and ASEAN brought a more effective alignment of regional initiatives with global efforts and goals towards sustainable development.

Mr. Lim Chze Cheen's closing remark observed how the Forum included a combination of a roundtable, thematic dialogues, special sessions, and training sessions, that created engaging and lively discussions. The audience was able to share and learn about sustainable urbanisation from speakers, city representatives, experts, and participants.

REFLECTIONS AND STEP FORWARDS

- The challenges reflected upon through the Forum were complex and multi-faceted, which stresses the need to constantly plan and strengthen coordination within and between governments, and include broader groups of stakeholders.
- There is a critical need to use citizen-centric approaches, thereby building capacity, scaling up solutions, funding, and financing, and incorporating inclusivity and resiliency.
- The opportunities discussed during this Forum are worth harnessing to enable further development.
- ASEAN's partners will continue to engage and work towards these reflections for ASEAN communities, people, and regions.

