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: Seminar Objectives
Introduction to Seminar

Opening Session

Dr. Vann Monyneath
Chairperson,
ASEAN Working Group on Environmentally Sustainable Cities (AWGESC); and
Deputy Secretary General of National Council for Sustainable Development
Ministry of Environment, Cambodia

8 February 2017

How did the HLS begin?

| Nov 2007 | 3rd East Asia Summit (EAS) |
| Oct 2008 | East Asia Summit Environment Minister’s Meeting (EAS EMM) was inaugurated. |
| Mar 2010 | Env. Ministers agreed that ‘ESC’ shall be an immediate priority area for initial collaboration. |
| 1st HLS ESC was organised as an annual seminar for networking key stakeholders (not only national governments, but... |

Held in Jakarta, Indonesia. The Chair’s Summary recommended to create the ASEAN ESC Model Cities Programme, to nurture ‘frontrunners cities’ and scale up ground impacts.

HLS seminars and Model Cities in parallel

- Mar 2011 2nd HLS Welcomed the implementation of the ASEAN ESC Model Cities Programme (Year 1) (2011/12).
- Mar 2012 3rd HLS Shared the achievements, analysis of lessons learnt of Model Cities Year 1 and preparation for Year 2 activities.
- Mar 2013 4th HLS
- Mar 2014 5th HLS Welcomed the implementation of the ASEAN ESC Model Cities Programme (Year 2) (2014/15).
- Mar 2015 6th HLS Shared the achievements of ASEAN ESC Model Cities Year 2 and future directions.
- Mar 2016 7th HLS Agreed to re-design of HLS (‘new HLS’), in line with the 2030 Agenda and other global trends (including the SDGs). Launched ASEAN ESC Model Cities Programme Year 3 (2016/17).
- Feb 2017 8th HLS Discuss how to bridge policy and implementation on the ground and how to localise the SDGs effectively?

How to bridge policy and implementation

1. Must link policy, training and implementation of projects on the ground.
2. Continue to support the implementation of the ASEAN ESC Model Cities Programme and the High-level Seminar on Sustainable Cities.
3. Scale up the ASEAN ESC Model Cities Programme to Year 4, with clear link to SDGs and ASEAN Socio-Cultural Community (ASCC) Blueprint 2016 – 2025.
4. In addition, more creative mutual learning/capacity development opportunities should be continued (combination of ‘classroom’ and ‘site visits’).

What can we do more?

1. Cities want to learn from each other. How can we better facilitate it?
2. Cities want to learn how to effectively engage multiple stakeholders (including the private sector, youths, academia, civil society etc.), including for environmental education and city branding. How can we help them?
3. How can (1) and (2) be streamlined with the global agenda, including the SDGs?
OPENING CEREMONY

: Keynote Address
Royal visits to the rural areas

To meet the people and learn about their plight through first-hand experiences by observing the area conditions and interviewing the people himself.

4,685 Royal Development Projects throughout Thailand

The majority concern the development of water sources

Agricultural Development

Soil Development
The Philosophy of Sufficiency Economy

The term was first mentioned and introduced by His Majesty the King in 1997 when Thailand faced a severe economic crisis. *Tom Yum Kung Crisis (1997)*

3 Stages of Sufficiency Economy

- **Stage 1: Fundamental Stage** (for individuals)
- **Stage 2: Progressive or Interdependent Stage** (cooperation among farmers / forming groups)
- **Stage 3: Networking Stage** (establishing networks / cooperation across the communities)

The New Theory Farming

*Sufficiency Economy for Agricultural Sector*

- Residential areas & Animal husbandry: 10%
- Rice field: 30%
- Pond: 30%
- Multiple cropping: 30%
- Diverse activities
- Selling surplus

*Sufficiency or self-reliance at the farm level*
Six Royal Development Study Centres

To conduct studies, researches and experiments

- Representing the region’s local characteristics with a focus dealing with specific problems of the areas and providing alternative means to solve the problems

' Model of Success '

To provide a comprehensive or ‘one-stop service’

Demonstrations in the form of ‘living natural museum’

Support the farmers in two ways:
- providing technical knowledge
- offering production inputs

Target groups = people living in the surrounding villages

To serve as a centre for integrated development patterns

Multi-disciplinary concept

Integration of development activities

To be the place for exchange of experiences & knowledge

- Integrating theory with practice
- Gathering successful results for demonstration

Model farmers / Learning centres

Efficiently applying the knowledge gained from the centre

Sharing the knowledge with others
Sufficiency Economy Learning Centres
Mr. Chantee Prathumpa
The New Theory farming

National Economic and Social Development Plans

Sri Muang Chum Farmers’ Group
Setting up farmers’ school, organic farming

The Bathroom Design Company Limited
Bangchak Petroleum

Household Account
Research by Thailand Research Fund (2010)

Samples = 2,381 agricultural families in Chainat Province

REVENUE = 384,242 Baht (10,978 USD)
EXPENSE = 293,752 Baht (8,392 USD)
INCOME = 90,490 Baht (2,585 USD)

average per family per year

Sufficiency Economy has been globally recognized
“We shall reign with rightousness for the benefits and happiness of the Siamese people.”
Challenges for Sustainable Cities

- Why and How -

Shuzo Murakami
Chair of Promotion Committee of FutureCity
Professor Emeritus(Dr.), the University of Tokyo

Topics

1. Cities and sustainability
2. “FutureCity” Initiative in Japan
3. Development of SDGs guidelines for local governments

Key Concept of Sustainable Society: 5Ps

1. People
   End poverty and hunger, ensure health, dignity and equality
2. Planet
   Protect the planet from degradation so that it can support the needs of the future generations
3. Prosperity
   Economic, social and technological progress in harmony with nature
4. Peace
   No sustainable development without peace and no peace without sustainable development
5. Partnership
   Participation of all countries, all stakeholders and all people
   No one will be left behind

New strategy for global governance through SDGs

Three tiered structure
- Goals (17)
- Targets (169)
- Indicators (230)

Thematic targets and means of implementation under Goal11

Goal 11 (Urban SDGs) and administration by LG (LGs: Local Governments)

- Goal11 is closely related to city administration
- The other 16 Goals are also related
Background and necessity for introduction of SDGs to LGs

1. Position
   - LGs are located between global / national levels and local communities level
   - LGs are facing issues of various scales, which can be solved with the aid of SDGs

2. Stakeholders
   - LGs can organize various stakeholders within their communities

3. Citizens
   - LGs have close communication with citizens, which support the introduction of SDGs to local communities

4. Identity
   - LGs can strengthen their own identities by promoting SDGs

5. Challenges
   - LGs can solve various challenges through the introduction of SDGs

LGs are located between global / national levels and local communities level

Benefits of promotion of SDGs

1. Improvement of QOL of citizens
2. Development of local identity and vitalization of local community
   - Promotion of unique town-development by intensifying their own local resources
3. Integration of economy, society and environment
   - Solutions to trans-boundary issues and creating co-benefits
4. Promotion of partnerships
   - Promotion of partnerships among LGs, both domestically and in other countries, as well as sharing best practices
5. Development of international cooperation and international contributions

Topics

1. Sustainability of cities
2. FutureCity Initiative in Japan
3. Development of SDGs guideline for local governments

Aim of FutureCity Initiative:
(1) Raise the peak and (2) Boost the base

(1) Raise the peak: select and certify top-runner cities by Central Government
(2) Boost the base: dissemination of best practices and promotion of partnerships

FutureCities selected by the Government (11 cities: 2011)

- Shimokawa Town
- Toyama City
- Kashima City
- City of Yokohama
- City of Kitakyushu
- Kamaishi City
- Rikuzentakata City, Sumita-cho, Ofunato City
- Higashimatsushima City
- Iwatsushima City
- Shinchi Town
- Minamisoma City (Disaster-hit areas)

FutureCity initiative provides a platform for training city management towards a sustainable society

A variety of ambitious proposals towards a sustainable society
Integrated assessment of city performance used in FutureCity Initiative based on Q - L chart: Q and L are the two major factors for sustainability evaluation, used in FutureCity Initiative based on Q - L chart:

- **Integrated assessment of city performance**
- **Q and L are the two major factors for sustainability evaluation**
- **Used in FutureCity Initiative based on Q - L chart:**

  - Realization of a sustainable society based on reduction of L and improvement of Q

---

**CASBEE-City**: Assessment tool developed in Japan

- **Virtual boundary of the city**
- **Evaluation of L based on Paris Agreement (CO2 emissions)**
- **Evaluation of Q based on SDGs**

  - Q = Quality of City Environment
  - L = Environmental Load

- **Q - L chart** and BEE = Q/L
  - **Built Environment Efficiency**

---

**How has such great success been achieved with the FutureCity initiative?**

1. The Central and Local Governments present clear images of a future sustainable society to citizens
   - Local Governments have been motivated and incentivized by receiving the prestigious title of “FutureCity”

2. FutureCities promote their action plans on their own initiative
   - They create self-sustaining models for city management

3. Establishment of global partnerships among cities around the world

---

**Next Stage of FutureCity Initiative**

- **SDGs**
- **Promotion of Paris Agreement**
- **International Contribution**

---

**Topics**

1. **Sustainability of cities**
2. **FutureCity Initiative in Japan**
3. **Development of SDGs guideline for local governments**
Guideline: how to apply SDGs to Local Governments

「SDGs for our Cities and Communities」

SDGs for our Cities and Communities
-The Guideline for introduction of SDGs to Local Governments-
(Mar. 2017)

-By the Institute for Building Environment and Energy Conservation

Shuzo Murakami, Institute for Building Environment and Energy Conservation

Structure of Guideline

Step 1: What are SDGs?
Step 2: Management-team for introducing SDGs
Step 3: Vision and targets
Step 4: Program for action
Step 5: PDCA

Step 3-1 Target setting

1. Flow-oriented
   - Extension of past policy targets

2. Backcasting and then forward
   - Setting targets based on future visions

Flexible response to social change


Shuzo Murakami, Institute for Building Environment and Energy Conservation

Step 2 Target setting and implementation system to achieve SDGs

1. Survey of SDGs and their own circumstances
2. Formulation of long-term visions to achieve SDGs
3. Setting short-term targets to achieve SDGs
4. Implementation
5. Assessment

Step 3-2 Clarify the subjects to be tackled according to each LG’s own circumstances

1. Action 1: Obligatory / Comprehensive
2. Action 2: Voluntary / Selective
3. Rediscovering the subjects to be tackled

Finding unique attractiveness by exploiting local resources
Upgrading potential for the future development of each LG

Shuzo Murakami, Institute for Building Environment and Energy Conservation
3. SDGs guidelines for LGs will surely help cities.

2. For SDGs introduction and localization, experiences of FutureCity Initiative in Japan can be used in many countries.

3. SDGs guidelines for LGs will surely help cities in addressing challenges towards sustainability, and will produce many partnerships among cities and countries.

Step 3-3 Selection of indicators: tools to measure the progress of actions

Process 1: Prioritizing action objectives from 17 Goals and 169 Targets

Process 2: Selection of indicators

1. Review of 230 global indicators
   - Selection of indicators that can measure the progress of actions for Goals and Targets
2. When there is no suitable indicator, or no sufficient data for evaluation
   - Modify global indicators’ definition
   - Propose new indicators suitable for individual situation by own initiative

Step 4 Checkpoints for action program

1. Do they reflect the local individual situation?
2. Are they pioneering and reasonable?
3. Realizability of the program
4. Governance of the SDGs management-team
5. Organization of stakeholders
6. Financing-scheme for action program
7. PDCA and dissemination

Step 5-1 Establishment of follow-up system

- Turn the PDCA cycle

Step 5-2 Checkpoints of follow-up

1. Investigation of domestic and overseas situation related to SDGs
   - Does the management-team reflect social change?
2. Evaluation of the output and outcome as the achievements of SDGs
   - Is there a necessity for revision of visions and targets?
3. Survey of the indicators
   - Are they suitable for evaluating the present social situation?
   - Maintenance of the data-base for calculating the indicators

Concluding remarks

1. ASEAN ESC Model Cities Program and related national activities have made valuable achievements.
2. For SDGs introduction and localization, experiences of FutureCity Initiative in Japan can be used in many countries.
3. SDGs guidelines for LGs will surely help cities in addressing challenges towards sustainability, and will produce many partnerships among cities and countries.

Thank you for your attention!

Acknowledgement:
I have received great support in drawing up this PPT from Assistant Prof. S. Kawakubo of Hosei University. I would like to extend my sincere gratitude for his efforts.

Reference:
3) ICLEI: ICLEI Briefing Sheets – Sustainable Development Goals (SDGs), 2011.11.
5) Global Taskforce of Local and Regional Governments: Roadmap for localizing the SDGs: Implementation and monitoring at subnational level, 2016.6

http://www.ibec.or.jp/index.html
PLENARY 1

Localising the SDGs in Asian Cities:
Connecting Policy with Implementation
Localising SDG’s Goal of Sustainable City in Indonesia:
Connecting Policies with Implementation

Directorate of Solid Waste Management
Directorate General of Solid Waste, Hazardous Waste, and Hazardous Substance Management
Ministry of Environment Republic of Indonesia
2017

BACKGROUND

Urbanization Rate

Urbanization rate 2.75% per year > national population growth rate of 1.17% per year.

2015: 59.35% urban population
2045: 82.37% people will live in the cities!

Incorporating Sustainable Development Goals (SDG’s) Agenda

1. By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
3. By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
4. By 2030, increase per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
5. By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
6. Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials
**FUTURE CITY: Sustainable and Competitive City**

1. Achieving urban system
to reduce the gaps
2. Building safe,
comfortable, and
livable cities; and
fulfilling the urban
standard services
3. Developing green cities
that resilient to climate
and disaster
4. Developing smart cities
that is competitive and
based on IT and
technology
5. Improving capacities of
city management that
is transparent,
accountable,
participative, and
professional

**Clean and Green City**
- Zero waste
- City Parks
- Biodiversity

**Clean, Green, and Healthy City**
- Clean and healthy
- Low Ecology Footprint
- Mobility of community
- Self-dependent Energy,
  water, food
- Strong Social Network
- Adaptable with Climate Change

**Sustainable City**
- Clean, green and healthy
- Low Ecology Footprint
- Mobility of community
- Self-dependent Energy,
  water, food
- Strong Social Network
- Adaptable with Climate Change

**Livable City**
- Safe and comfortable
- Strong Neighborhoods
- Walkable
- Affordable
- Connectivity
- Comfortable
- Cultural

**National Policy and Strategy for Urban Development 2015 - 2045**

Building Indonesia Urban Identity based on physical characteristics, economy advantages, and local culture

Building inter city and village-city linkages and benefit under regional based NATIONAL URBAN SYSTEM

**Roadmap of Sustainable City**

**Implementation of Policies and Program: ADIPURA Program**

**Revitalization of Kali Mas Surabaya**

**Clean, green, and healthy in every city’s corner**
One Village, one children playground
Bandung

Community Based Solid Waste Management

Map of Solid Waste Bank Distribution in Indonesia 2015

From Trash to Health
Health Insurance through SW exchange

Innovation on water pollution control and water conservation
Improvement of Green Open Space Ratio
Davao City, Philippines

LOCATION
Approximately 588 statute miles southeast of Manila
Approximately 41 statute miles to Cebu City

Total Land Area: 244,000 hectares or 2,440 sq kms.
No. of Barangays: 182 (91 Rural and 91 Urban)

LAND AREA AND NUMBER OF BARANGAYS

<table>
<thead>
<tr>
<th>Administrative District</th>
<th>Area (Has)</th>
<th>Barangay</th>
<th>Population (2010)</th>
<th>No. of Households</th>
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<tbody>
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<td>District I</td>
<td>10,054</td>
<td>54</td>
<td>535,855</td>
<td>127,698</td>
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<tr>
<td>Poblacion</td>
<td>1,138</td>
<td>40</td>
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<td>Talomo</td>
<td>8,916</td>
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<td>380,663</td>
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<td>83,037</td>
<td>46</td>
<td>526,839</td>
<td>120,369</td>
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<td>Agdao</td>
<td>593</td>
<td>11</td>
<td>99,188</td>
<td>23,134</td>
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<tr>
<td>Buhangin</td>
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<td>256,483</td>
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<td>19</td>
<td>81,364</td>
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<td>Toril</td>
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<td>133,261</td>
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<td>Tugbok</td>
<td>15,391</td>
<td>18</td>
<td>91,132</td>
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<td>Grand Total</td>
<td>244,000</td>
<td>182</td>
<td>1,443,890</td>
<td>334,473</td>
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</tbody>
</table>

Working Age (18-64 years old) 58.73% 983,041
Children (0-17 years old) 37.60% 614,381
Old Population (65 and above years old) 3.67% 59,967

Female 50.11% 818,793
Male 49.89% 814,198

Davao City Sustainable Development Goals (SDG) Initiative

Goal 1: End Poverty in all its Forms Everywhere

Poverty Incidence
Davao City: 10.6%
Philippines: 27.9%

Sustainable Livelihood Program
Comprehensive Shelter Program
Micro, Small & Medium Enterprise
**Goal 2: End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture**
- 98% of all Households of the City have food for the next 3 days
- Farm to Market Road (FMR) Investments correspond to 20% of the Infrastructure Budget

**Goal 3: Ensure healthy lives and promote well-being for all at all ages**
- Maternal Mortality Ratio - 55 per 100,000 livebirths
- Under 5 Mortality Rate - 12.45 per 1,000 livebirths
- Neonatal Mortality - 5.14 per 1,000 livebirths
- Awarded as The Most Healthy Lifestyle Advocate by the World Health Organization
- Awarded 1st 100% smoke-free Metropolitan in ASEAN Region by Southeast Asia Tobacco Council Alliance (SEATCA)

**Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**
- Early Childhood Care and Development
- Participation Rate Primary Davao City – 86.73%
  Philippines – 91.02%
- Secondary Davao City – 56.69%
  Philippines – 68.15%
- Alternative Learning System (ALS)
- Educational Benefit System unit

**Goal 5: Achieve Gender Equality and Empower All Women and Girls**
- Women Development Code
- Women Participatory Governance
  Legislative – 42%
  Executive – 36%
  Barangays – 9%
- Women-Friendly Jail Facility (Ray of Hope)

**Goal 6: Ensure availability and sustainable management of water and sanitation for all**
- 99% of Households have access to safe water
- Drinking water at $0.29 per cu. meter
- 90% of the households in Davao City has access to sanitary toilet facility
- Watershed Management Council

**Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all**
- 50% Davao City’s Energy is sourced from Hydro Power Plant
- Davao City is 100% energized
- Power Rate - $ 0.17 per kwh
GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Employment Rate
  - Davao Region: 94.5%
  - Philippines: 94.6%
- Best Public Employment and Services Offices (PESO) – Hall of Fame Award

GOAL 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Davao City’s economic drivers: Agriculture, ICT and Tourism
- Upgrading of Drainage and Waterways Projects amounting to 5% of the total infrastructure budget
- Center of Excellence for IT-BPM (Information Technology and Business Process Management) Operations

GOAL 10: Reduce inequality within and among countries
- Gross Domestic Product grew by:
  - Philippines: 6.3 percent
  - Davao Region: 7.9 percent
- Annual Average Family Income: $4,940
- Annual Average Family Expenditure: $3,800
- Anti Discrimination Ordinance

GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- Comprehensive Urban Shelter Services Development Code
- Davao Urban Public Transport Study
- Peace and Public Safety Programs

GOAL 12: Ensure sustainable consumption and production patterns
- Agro Fishery Resource Management Program
- Aerial Spraying Ban Ordinance
- Promotion of Organic Farming

GOAL 13: Take urgent action to combat climate change and its impacts
- Davao City Climate Change Action Plan
- 5% of Annual Budget Allocated for Disaster Fund
- Establishment of Davao City Disaster Risk Reduction and Management Office
- Central 911 – only 911 emergency response system outside of the U.S. and Canada
Goal 14: Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development

- Coastal Resources Management Plan
- Mangrove Rehabilitation
- Declaration of Marine Protected Areas

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- Watershed Management Code
- Ecological Solid Waste Management Ordinance
- Zoning Ordinance. Resolution No. 02561-13 Series of 2013

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- Public Safety Command Center
- Task Force on Child Trafficking
- Council for the Welfare of Children
- Brgy. Council for the Protection of Children

Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

- Global Linkages and Private Partnership
  - Japan International Cooperation Agency (JICA)
  - Korea International Cooperation Agency (KOICA)
  - Asian Development Bank (ADB)
  - United Nations Children’s Fund (UNICEF)
The Role of Cities in SDGs

Localize SDGs to Bridge Policy and Implementation

1. Japanese Government
   - Chairperson: Mr. Shinzo Abe, Prime Minister
   - SDGs Round Table HQ
   - Prioritize into 8 tasks
   - Environment Future City Initiative: SDGs Working Group
   - Establishment of IBEC: Guideline for implementing SDGs in local government

2. Toyama
   - IBEC: Committee member
   - SDGs for local government
   - Existing policies

International Recognition

- 2012: OECD recognizes Toyama as one of five cities (along with Melbourne, Vancouver, Paris, and Portland) with advanced "Compact City" policies.
- September 2014: Toyama is the only Japanese city selected for the UN initiative SE4All (Sustainable Energy for All).
- December 2014: Toyama is the first Japanese city chosen for the Rockefeller 100 Resilient Cities initiative.
- July 2016: Toyama is one of the four cities (along with Kitakyushu, Kobe, Yokohama) chosen in Japan for joining the World Bank City Partnership Program.

G7 Environmental Ministers Meeting in Toyama

Toyama has been selected as the host city for the G7 Environmental Ministers meetings of the 2016 G7 Summit in Japan. Environmental Ministers from Britain, France, Germany, Italy, Canada, the United States, and the European Union discussed crucial environmental issues such as climate change and bio diversity. For the first time, Mayors of G7 countries also discussed the role of cities parallel to Ministers Meeting.

100 RC: Resilience Strategy

Toyama 1st Phase
- Preliminary Resilience Assessment
- Working Group Formation
- Resilience Planning
Toyama Vision 2040
Live Toyama, Love Toyama: Community, Nature and Innovation for the Future

Toyama City Vision Statement
The Toyama vision is to be a vibrant, world-class, innovative city and tourism gateway, a model of resilience and environment-friendly living: where strong community bonds help citizens flourish, and the high quality of life for all its residents achieves a harmonious balance between traditional arts and modern technology and between economic prosperity and the inspiring natural surroundings of the pristine Northern Japan Alps.

Our Effort to achieve SDGs Goal 7
UN SE for ALL = SDGs Goal 7
SE for All: three objectives:
1) Ensure universal access to modern energy services
2) Double the global rate of improvement in energy efficiency
3) Double the share of renewable energy in the global energy mix

Our approach as Energy Efficiency Improvement city
1) LRT (Light Rail Transit)
2) Compact City Policy
3) Support for Renewable Energy

Number of Projects in Toyama 10 year plan
- In SDGs point of view

Rich Potential in cities SDGs initiative
• Many assistance and support will be available in various fields for developing countries
• Know-how and successful stories of environment future city will be shared to overseas
• Possible to realize the special plan by focusing the SDGs Goal for cities
• Possible to compare the daily life in worldwide basis for encouraging both foreign and domestic people to move to the cities and city promotion for tourism
<table>
<thead>
<tr>
<th>Benefit</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the Goals and targets are more specified and refined for municipality,</td>
<td>Selection of Goal for municipality and its reasoning</td>
</tr>
<tr>
<td>• City partnership relations will be enhanced both in foreign and domestic countries in addition to an assistance to developing countries</td>
<td>• Relation with National gov. and other municipalities</td>
</tr>
<tr>
<td>• As environment, prosperity and society will be deeply cross involved, better cycle expected</td>
<td>• Incentive for new projects based on SDGs is necessary</td>
</tr>
<tr>
<td></td>
<td>• Rule setting for unified index for goals in Japan</td>
</tr>
</tbody>
</table>
8th East Asia Summit High-Level Seminar on Sustainable Cities

'Localising the SDGs in Asian Cities: Connecting Policy with Implementation' for Mandalay City

Plenary I
8 February 2017

Mr. Thit Sinn
Committee Member
Mandalay City Development Committee
Mandalay, Myanmar.

Presentation Guidelines

1) Presentation duration: 10 minutes
2) Highlight the most outstanding achievements and initiatives of Mandalay City to achieve green and sustainable city development, especially to connect policy and implementation.
3) If Mandalay City has not yet made plans to localize the new global ‘Sustainable Development Goals’ (SDGs), share your views on the SDGs.
4) to answer the questions below from Mandalay City’s point of view.
   • Has the national government of Myanmar promoted the SDGs to Mandalay City and other Myanmar cities?
   • When it comes to sustainable development and the SDGs, how does Mandalay City address the trade-offs and balances among the three dimensions of sustainability – economic, social and the environment?
   • In what new ways could Mandalay City experiment with implementing public participation and partnerships with non-government stakeholders? And how can development partners and supporting organisations help Mandalay City?

Introduction to Mandalay

Mandalay Region

Mandalay City 121.5 square miles (314.76Km2)
Population = 1.21 million

Historical Map of Mandalay (drawn on 30 Oct 1856)
from East to West = 13 miles, from North to South = 32 miles

Total Population of Mandalay Region in 10 years interval from 1901 to 2012
About Mandalay City Development Committee (MCDC)

- Previously called Mandalay Municipality or Mandalay City Development Organization under General Affairs Department up to 1992 (during Burma Socialist Programme Party regime and early period of State Peace and Development Council).
- MCDC was formed in accordance with The State Law and Restoration Council Law 10/92 and called Mandalay City Development Committee under Prime Minister, Union Government.
- Now called Mandalay City Development Committee under Chief Minister, Mandalay Region Government.

Minister for Development Affairs of Mandalay Region (Mayor of Mandalay)

- Vice-Mayor
- Secretary
- Joint Secretary
- 9 Committee members

Most Outstanding Achievement

Community-based Solid Waste Collection Practice
- i.e. we started from where we need to/must/can start.

Reversed Flow
Integrated Approaches: Developing Policy and Strategic Framework

Policy & Laws and Rules

- Environmental Policy (1994)
- Constitution (2008)
- Environmental Conservation Law (2012)
- Environmental Conservation Rules (2014)
- EIA Procedures (2015)
- MIC Law & Rules & Notification (2013)
- SEZ law (2014)
- Relevant Sectoral Laws and Rules

On ground - as policies, laws and regulations on environmental concerns went down farther & farther away from ‘up’, more and more of its essences of cross-national/ global effects were lost (means that local community hardly paid attention on cross-national/global). It became localized in other ways.

Has the national government of Myanmar promoted the SDGs to Mandalay City and other Myanmar cities?

-not yet but key stakeholders from Mandalay were made aware of SDGs by Environmental Conservation Department, MONREC.
-Tradition of MCDC - focused on infrastructure development / practiced regulatory mechanism/ enjoyed tangible/visible outcomes.
-In cases sustainability and development are to be addressed in SDGs, the role of MCDC – limited to contribution from common ground’ even if Goals are highly specific to MCDC.
-Working together with others in various ways of relationship is vital.

The trade-offs and balances among the three dimensions of sustainability

Voices of Mandalaythar (Mandalay born people): “Mandalay was lost...lost...lost.”

Means that Mandalay’s tradition was gradually faded away over 20 years in the past.

- Mdy City Planners - preserved culture on one hand and inserted efforts for economic development on other hand.
- Mdy City Master Plan in 30 years perspective (2011-2040) was formulated by the Department of Housing Estate placing culture on one side and economic development on the other side.
- Zoning Plan – 16 zones (high class low-rise residential area, mid-rise residential area, high-rise area, commercial area, mixed-commercial zones, traditional compounds, historical conservation zones around palace, historical conservation zone around Mandalay, area visual axis, green area with parks, green area with sports, development freeze areas, development promotion areas, industrial areas (non pollution), industrial area (with pollution), industrial area (with hazardous).
The trade-offs and balances among the three dimensions of sustainability

**Land Use in Mandalay City Area (2014)**

- Agricultural Land: 4.08%
- Urban Land: 65.03%
- Village Land: 16.60%
- Creeks: 2.90%
- Water Bodies: 6.02%

**Preconditions**

- Land Speculation & Land Confiscation

- Environmental conservation & Sustainability are emphasized in Land Use Policy & Management of MCDC.
- Was overwritten but now trying to Rewrite.

**External Inputs**

**Loan, Grant, BOT**

1. Capacity building support for project identification (ADB)
2. Project preparatory technical assistance for Mandalay Urban Service Improvement (ADB)
3. Pro-poor community infrastructure and basic services (ADB)
4. 30% water supply system of Pyeigyitagon Township (JICA)
5. To assist water supply system and buy small-scale equipment (AFD, France)
6. Green City Development (SAFEGE, France)
7. Technical Cooperation for Water Supply System (VEI, Netherlands)

**In-kind Contributions**

- Provision of Education on solid waste management and environmental conservation (Kitakyushu City, Japan)
- Education on solid waste separation (ASEAN Environmental Sustainable Cities)
- Medical waste management (KEKO)

**Public participation and partnerships with non-government stakeholders**

- CSOs/NGOs/CBOs etc. – NGOs & Parahita
- Parahita Orgs. (Parahita – altruistic)
- Community attitude towards NGOs and Parahita – impressive. “It is different from Government. It brings ‘no harm’.
- Eg. Participation in community-based solid waste collection
  - Enabling environment vs Actor and working in the context of behaviour change
  - Still there are needs – representativeness/multidimensional approach and their limited representation

**Identify - Forces affecting Urban Changes in Mandalay:** Socio-economic Factors, Economic Factors, Environmental Factors, Institutional Factors, Educational Factors

**And Projection - Waste Production in Mandalay City**

- Waste production (t/d)
  - Total Waste Production: 1.0-2.0 mil (2010-2045)
  - Rate of Collection (%): 90-99%
  - Waste Production (kg/d/capita): 0.75-1.05 kg/d/capita

**Public participation and partnerships with non-government stakeholders**

- Segregate
- Pack
- Dispose by correct way
- Push to cooperate
- Coordination
- Scheduling
- Identified the Collection Points
- Dogs Catching
- Control the Scavengers
- Cooperation
- Monitoring and evaluation
- Suggestion
- Pull to cooperate
- Coordination
- Cooperation
For development partners and supporting organisations which are outside of Mandalay City

• Only one word to Say

“Come to Mandalay”
PLENARY 2

Public-Private Partnerships and SDGs: Going Beyond Corporate Social Responsibility
8th East Asia Summit High Level Seminar on Sustainable Cities

CSR, Public-Private Partnerships, Social Entrepreneurship and SDGs: The Malaysian Context

Mrs. Kamariah Ibrahim
Director of Research and Development Division
PLANMalaysia
Ministry of Urban Well Being, Housing and Local Government

SDGs - OUR COMMON GOALS

GOAL 17

Partnerships between
- Government
- Private sector
- Community/NGOs

SDGs: MALAYSIAN CONTEXT

11MP: ANCHORING GROWTH ON PEOPLE

11MP AND AGENDA 2030 SDGs

IMPRESSING PEOPLE'S QUALITY OF LIFE

FOSTERING EQUITABLE GROWTH

PROTECTING THE ENVIRONMENT

THE CONCEPT

Corporate Social Responsibility (CSR)

The assumption of responsibility of companies whether voluntary or by virtue of statute in discharging socio-economic obligations to society.

Public-Private Partnership (PPP)

A long-term contract between a private party and a government entity, for providing a public asset or service.

Social Enterprises

Organisations that have a social cause as their primary mission and use a private sector business model to sustain themselves.

CSR IN MALAYSIA

- 1970's - CSR began in the form of small contributions driven by religious and racial motivations.
- Overtime - Influenced from the west - more multinational companies are formed - became more structured and linked to corporate strategies.
- Currently
  - Increased focus and promotion of CSR
  - Policies and regulations
  - Framework for CSR
  - Yearly budget report
  - 5 years Malaysia Plan
  - Tax and fiscal incentives
  - Endorsement through awards
**FRAMEWORKS AND REGULATIONS FOR CSR IMPLEMENTATION**

   - Guidelines for Government-linked Companies (GLC)
   - Part of GLC’s Transformation Programme

2. CSR Framework (2006)
   - Guidelines for Public listed Companies (PLC)
   - Developed by Bursa Malaysia (Malaysian Exchanged Holding Company)
   - Mandatory reporting of CSR activities
   - Focus areas: Environment, Workplace, Community, Market Place


4. Environmental, Social and Governance Index for PLCs

**CSR IN MALAYSIA**

**Government linked Company (examples)**

**Public Listed Company (examples)**

**CSR – TENAGA NASIONAL BERHAD**

**Empowering the Community – Kampung Kuantan (Fireflies park)**
In partnership with the State Government, community and NGOs:
- Fireflies protection
- Replanting of Trees
- Campaign and awareness programmes

**Tree For A Tree – Tree Planting in Port Dickson**
In partnership with the State Government, community and NGOs:
- Trees planting
- Campaign and awareness programmes

**CSR – THE ACHIEVEMENTS**

**Programmes**

1. Welfare initiatives
2. Education support
3. Environment conservation
4. Child protection
5. Heath programmes
6. Housing for the bottom 40%

**PUBLIC-PRIVATE PARTNERSHIP IN MALAYSIA**

<table>
<thead>
<tr>
<th>1983</th>
<th>2006</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privatization Policy</td>
<td>Private Finance Initiatives (PFI)</td>
<td>Public Private Partnership</td>
</tr>
</tbody>
</table>

**Enabling Framework**

- Formation of Public Private Partnership Unit (UKAS) under the Prime Minister’s Department
- Main roles:
  - Processing and evaluation of PPP Project
  - Propose potential projects to the government
- Projects: Infrastructure, Facilities, Services
- Guidelines and Master plan for Privatization

**Public Private Partnership Guidelines (2009)**

**Key Principles**

1. Socio-economic impacts
2. Value for money and cost savings to the Government
3. Quick delivery of the project and service enhancement
4. Increased level of accountability, efficiency and effectiveness
5. Risk transfer
6. Long term contract
7. Output specification
8. Competition
9. Performance-based payment
10. Value for money
PUBLIC - PRIVATE PARTNERSHIP - THE ACHIEVEMENTS

- More than 500 privatized projects
- Saving in capital expenditure: RM161 billion (estimated RM25 billion over 25 years)
- Reduce government administrative expenditure following privatization of 58 government agencies
- Provided world class infrastructure (north south highways, LRT, Ports, KLIA)
- Successfully created local conglomerate - Tenaga Nasional Berhad (National Electricity Board), TELEKOM Malaysia, etc.
- Development and maintenance of infrastructure and facilities

SOCIAL ENTERPRISE BLUEPRINT IN MALAYSIA

- The folks in Kakiseni are fighting the good fight for Arts in Malaysia. Revenue: Events and training program
- Provides HIV/AIDS education and support programs for communities. Revenue: User fees at drop-in centres
- One-stop-hub for volunteering in Malaysia. Revenue: Licensing its technology and arranging volunteering opportunities
- Bridging the urban-rural divide through building houses for aboriginal families. Revenue: organizing workshops

SOCIAL ENTERPRISE - THE ACHIEVEMENTS

100 successful social enterprises in 2015

SOCIAL PUBLIC PRIVATE PARTNERSHIP (SOCIAL PPP)

It is an initiative under the National Blue Ocean Strategy (NBOS).

Social PPP is a collaborative initiative between Malaysia Innovation Agency (AIM) and UKAS
SOCIAL PUBLIC PRIVATE PARTNERSHIP
4 Pilot Projects (Completed 2016)

Malaysian Collective Impact Initiatives (MCII)
- An innovative model for multi-sectoral partnership for corporate CSR involves 7 corporate funders

School Retention Programme (subset of MCII)
- Peer tutoring and mentoring programme to increase student’s Maths and English proficiency

Youth Up Skilling (subset of MCII)
- To upskill disadvantaged and at-risk youth towards employment by providing opportunities

Scalable, Commission based telemarketing Center
- An establishment of a virtual call center service, allowing 18 disabilities and impaired person the opportunity to be financially independent and contribute to the society

SOCIAL PUBLIC PRIVATE PARTNERSHIP
6 Projects (coming up)

1. After School STEM Programme
2. Empowering Single Mother
3. Building Library for the Autism Children
4. Using Technology to Address Social Issues
5. Developing Local Center in Urban Low Cost Housing Area
6. Free on-line Tuition for Students with Disabilities

THE CHALLENGES

Social development & environmental conservation are not growing at the same pace with economic development

Traditional ways of delivering social services are not fully effective, and consume a huge portion of public expenditure

Measurement of performance and targets for the existing CSR/PPP/SE initiatives towards Sustainable Development

Social purpose organizations lack of the resources and professionalism to scale and achieve wide impact

THE WAY FORWARD

- To link CSR, PPP, SE and Social PPP with sustainable development and SDG’s
- To embed environmental and social safeguard in targets and goals
- To develop performance measurement towards sustainable development
- To replicate the initiatives at city scale
  - creating policies and guidelines to achieve SDG’s Goals,
  - identify projects for partnerships.
- To promote and extend the initiatives to small and medium industries (SME’s)

SUCCESS STORY AT THE CITY LEVEL:
THE PARKLIFE - CITY OF SHAH ALAM

Thank You

PLANMalaysia
MINISTRY OF WELL BEING, HOUSING AND LOCAL GOVERNMENT, MALAYSIA
http://www.townplan.gov.my
SCG Corporate Social Responsibility

...be Good to do GREAT

SCG Business Overview

- Historical roots in producing Cement and expanded to Petrochemicals, Paper & Packaging, Building Products, and Distribution.
- Listed on the Stock Exchange of Thailand since 1976.
- In 2015, Assets 510.0 billion baht, Revenue from sales 439.6 billion baht, (23% within ASEAN), EBITDA 82.7 billion baht (16% on Total Assets).
- Total employees of 53,096 persons within the ASEAN region (31st December 2015).

Core Business Units:
- SCG Cement - Building Materials
- SCG Chemicals
- SCG Packaging

SCG Vision

ASEAN Sustainable Business Leader
Innovative Workplace
Role model in Corporate Governance & Sustainable Development

4 Core Values
Business Philosophy
- Adherence to Fairness
- Dedication to Excellence
- Belief in the Value of the Individual
- Concern for Social Responsibility

SCG 3 Key Success Factors

Stakeholders Delight
Leadership
Commitment

Corporate Culture

Stakeholders Delight
Governance
Economy
Environment
Society

SCG Sustainability Pathway

Green Manufacturing
- Advocating & promoting SD concepts to others
- Creating value-added to producers & consumers
- Building capacity of suppliers and contractors

Balance Triple Bottom Line
Growing Economy
Healthy Environment
Happy Society

Compliance with regulations and laws is a minimum requirement for all SCG operations.

Sustainable Development Framework
**SCG CSR Approach**

*Don’t catch fish for them, but Teach them how to fish*

---

**Corporate Social Responsibility**

**CSR Strategy**

Categorized for a more Focus

- Leadership
  - Advance (Support the development of capable specialists in different areas)
  - Commitment (Partnership)
- Engagement (Encourage the participation of employees)

---

**Corporate Social Responsibility**

**SCG Involvement**

---

**Beyond CSR : Partnership Model**

Community Partnership Association in Map Ta Phut, Rayong

- Uplift operations of members’ factory
- Enhance quality of life of community
- Strengthen mutual understanding among companies, community and relevant parties

---

**Beyond CSR : Partnership Model**

Memorandum of Association

Scholarship for Nurse and Medical Personnel (2011 – 2016)

- 440 scholarships for B.A. in Nurse
- 10 scholarships for M.A. in Occupation Medicine and other related fields
- Provide special contract for 35 doctors to medical service in Rayong

---

**Beyond CSR : SCG Conserving Water for Tomorrow**

Check Dam Area

- Lampang
- Lamphun
- Chiangrai
- Chiangmai
- Phrae
- Nan
- Rayong
- Khonkaen
- Saraburi
- Kanjanaburi
- Ratchaburi
- Nakhonratchasima

2007 Start

2015 Collaboration for sustainable water management

2014 1st Community Learning Center in Lampang

2013 2nd Community Learning Center in Lampang

2016 Sustainable Water Management

3rd Community Learning Center in Rayong

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THEMATIC SESSION A

New Initiatives, Theories and Frameworks from Development Partners

A1: Cities for Clean Air
Overview

- Situation Analysis
- Overview of Clean Air Asia work with cities
- What are we learning?

## Transport is a major contributor of PM emissions

### Challenges in addressing air pollution

Our engagement with Cities have shown there are challenges in taking action on air pollution at the city level as a result of:

- Impacts being the side effect of other decisions
  - How can we better integrate air quality into economic and development decisions?
- Unclear responsibilities.
  - What can local government do compared to regional and national governments?
  - How to improve vertical and horizontal co-ordination?
- Prioritizing actions amidst data complexity

### 97% of cities in Asia with unhealthy air quality levels

<table>
<thead>
<tr>
<th>PM10 Concentration (μg/m³)</th>
<th>Developing cities</th>
<th>Developed cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;150</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>100-150</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>70-100</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>50-70</td>
<td>83</td>
<td>13</td>
</tr>
<tr>
<td>30-50</td>
<td>66</td>
<td>26</td>
</tr>
<tr>
<td>20-30</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>&lt;20</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Total of 493 cities
- 436 developing Asian cities
- 57 developed Asian cities

Data collected from publicly available sources compiled by CAA and WHO.
Data for the last available year in the period 2009-2015
Clean Air Asia, 2016
About Clean Air Asia

Objective: To work towards achieving better air quality and livable cities by translating knowledge to policies and actions that enable Asia’s 1,000+ cities to reduce air pollution and greenhouse gas emissions from transport, energy, other sectors.

Clean Air Asia was established as the premier air quality network for Asia by the Asian Development Bank, World Bank and USAID in 2001, and operates since 2007 as an independent non-profit organization.

Working with Cities

<table>
<thead>
<tr>
<th>Supporting Air Quality Management</th>
<th>Assessing Air Quality Management Capacity</th>
<th>Recognizing City actions to address air pollution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Audience</td>
<td>Clean Air Scorecard</td>
<td>Cities for Clean Air Certification</td>
</tr>
<tr>
<td>Focus</td>
<td>Technical Support, Capacity building</td>
<td>Capacity Review</td>
</tr>
<tr>
<td>Geographical focus</td>
<td></td>
<td>Policy Implementation</td>
</tr>
<tr>
<td>Indonesia, Mongolia, Philippines and Vietnam</td>
<td>China, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam</td>
<td>India, Indonesia, Nepal, Philippines</td>
</tr>
</tbody>
</table>

About the Clean Air Scorecard

The Clean Air Scorecard tool aims to provide an objective and comprehensive assessment of cities leading to informed policies and identified necessary actions.

Community Perception Survey

Complemented by a perception survey on the community’s understanding and outlook of AQ in their city. Results provide insights on the community’s level of awareness of air quality issues.

CAA’s Capacity Building Approach in China – similar process is starting in India

- MOU with FECO of the MEP
- Annual City AQM Workshops
- Regional Clean Air Forum to address regional capacity building needs & promote dialogue
  - Yangtze River Delta
  - Pearl River Delta
  - NE China
  - SW China (new)
- Support to cities
  - City to city collaboration
  - AQM assessments
  - Clean Air Report
  - Expert on-site guidance
Partnerships
- Clean Air Asia has been recognized as the Regional Training Hub of the Train-for-Clean-Air (T4CA) program, recognized by the ASEAN Working Group on Environmentally Sustainable Cities
- Established partnerships with key institutions in the Philippines
- Memoranda of understanding with:
  - Vietnam Environment Administration (VEA)
  - Foreign Economic Cooperation Office of the Ministry of Economy and Planning

Voluntary certification can play a key role in the latter circumstances.

Clean Air Asia launched the initiative in 2014 with the goal of setting 200 cities across Asia on the pathway to achieving improvements in air quality by 2020 through a clean air certification program.

The certification program (or voluntary standard) will:
- Recognize actions that cities take to improve air quality
- Increase opportunities for cities to learn from each other and collectively address issues
- Make it easier to establish new collaborations with public and private stakeholders

Clean Air Certification – Action Areas

Cities are required to demonstrate action in six areas. The focus is on actions cities can take to address air quality, not absolute air quality levels.

Engage people to take action
Identify responsible personnel and inter-agency and community outreach to take forward actions that advance air quality goals.
1. Institutional Co-ordination
2. Engaging New Stakeholders

Consolidate and communicate relevant data
Collect existing air quality monitoring data, air quality-related health data and review emission sources in the city in order to prioritize air pollution reduction measures.
3. Air Quality Information
4. Understanding Pollution Sources

Demonstrate action that improves citizens lives
Integrate air quality into economic and development decisions.
5. Infrastructure and Planning
6. Air Pollution Reduction

Certification steps and indicative timeline

0-1 month
- Expression of Interest
- 1-2 months
- 2 City Commitment
- 3 Take Actions
- 3-6 months
- 4 Third-party Audit

0-1 month
- Assign focal person
- Secure mayor and city council support
- Establish city certification team

1-2 months
- Demonstrate action on:
  - Institutional coordination
  - Aligning urban stakeholders
  - Air quality information
  - Air pollution emissions inventory
  - Planning and infrastructure
  - Air pollution reduction

3-6 months
- Submit evidence/s of completed actions online for verification and assessment – www.cleanairasia.org/ccap

18 months
- Award
- Bronze Leaf Certification
- Note: logo is for illustrative purposes only
National Stakeholder Groups

It's vital that certification links to existing initiatives in order to build reinforcing momentum. Partnerships to support the certification are being developed at National and international levels.

City Network/Local Government Association

Academic/Research

Private Sector

National/Regional Govt.

Health/Civil Society

Other

Pilot and Objectives

A new online management system is in development to support certification roll-out. This will allow cities to track and upload their actions – providing both an individual management resource and a means of sharing and aggregating data and best practices.

By 2018
- At least 5 cities to have achieved certification and therefore taken demonstrable and credible action to address air quality (assuming 18 month trajectory)
- At least 50 cities to be working towards certification

What are we learning?

- The need to integrate environmental issues with city development priorities, jobs and investment.
- The need to engage urban stakeholders, particularly the private sector, to develop shared goals as well as support solutions relevant to improving air quality.
- The need to focus on outcome indicators to help to localize international agendas and also to scale up the collection and dissemination of relevant local data that is necessarily embedded in city development decisions.

Panel Discussion

1. Environmental Governance: What governance arrangements allow for the most effective action?

2. Facilitating multi-stakeholder solutions: How can we encourage the alignment of different stakeholders and initiatives around the same goals?

3. Outcome indicators: How to balance data collection with driving and communicating implementation?
Clean Air Asia

cleanairasia.org

Clean Air Asia China Office
china@cleanairasia.org
11-13J, JianGuoMenWaiDiplomatic Residence Compound, No.1 XiuShui Street, Chaoyang District, Beijing 100600 China

Clean Air Asia India Office
india@cleanairasia.org
Basement C-3, Green Park Extension New Delhi 110016 India

Clean Air Asia Country Networks

Indonesia, Malaysia, Nepal, Pakistan
Philippines, Sri Lanka, Vietnam

For more information: www.cleanairasia.org
Mayor: H. Moch. An
Area: 110,056 square
440 – 667 m above the sea level

Sustainable Sustainability

Air Pollution, City Problem, Global Impact

Air pollution per year:
- CO2 Emission: 249,120,924 Kg/Tj
  - Three Highest CO2 Emission from:
    - Private Vehicle: 88,917,140 Kg/Tj
    - Motorcycle: 71,182,656 Kg/Tj
    - Small Vehicle: 34,884,338 Kg/Tj

Disease per year:
- Total Patient: 278,558
- Three Highest Patient Disease:
  - Upper Respiratory Infection (URI): 83,462
  - Primer Hypertension: 50,612
  - Influenza (Unidentified virus): 29,108

Issues related to air quality

Air Quality, City Problem, Global Impact

Environmental data challenge: environmental data inventory with 30 schools, we are collecting waste and energy data weekly based, transportation data every semester.
https://datachallenge.ecomappingpilotindo.org/
Environmental data support Adiwiyata program (Environmental School Award) participatory approach (bottom up) using eco-mapping process as a supporting tool.

Future plan
- PM 2.5 data collection
- Smart city with reliable and real time data
- Policy decision based on the real data
- Gold level Clean Air City
- Comprehensive Public transport

Thank you Terima kasih Matur Suwun
Davao City for Clean Air

ENVIRONMENTAL GOVERNANCE

Smoke-Free Davao City

Policy:
- In advancing the 2003 National Tobacco Control Law and to strengthen anti-smoking policy of then City Mayor Duterte, the City passed its Comprehensive Anti-Smoking Ordinance in 2002 and amended in 2012.
- The Ordinance bans smoking in all public places and enclosed places but has an option for designating a smoking area—provided establishments pass through a series of rigid inspections by the Anti-Smoking Task Force.
- The ordinance also extends smoke-free places to some public outdoor spaces where people congregate to be together or attend concerts, rallies and other events.

Implementation:
- The Anti-Smoking Task Force was organized to prepare and implement an enforcement plan.
- Stakeholders support was ensured to strengthen commitments, consolidate efforts, and sustain the participation of partners.
- Popularization was initiated and sustained through “No Smoking” signs informational billboards on the hazards of smoking and important provisions of the law placed in public places within the City.
- Enforcement through inspection of establishments, community vigilance and apprehension of violators.
- Regular monitor the implementation of the law and evaluate its Results and the need for improvement.
Smoke-Free Davao City

Results:
- Majority of public places are completely smoke-free.
- Intensity of smoking reduced in the city.
- Davao City’s smoke-free experience has been recognized by, and become a learning resource for, other cities and countries in the region and the world.
- Residents and visitors are well aware of the smoking regulation of the city.
Anti Smoke-belching

Policy:
- The Anti-Smoke Belching ordinance of Davao City was passed in 2006 to protect the air quality of the Davao City Airshed declared under the Clean Air Act of 1999
- Standards and procedures for emission testing was established
- All private emission testing centers (PETCs) shall be monitored by the city and national government agencies

Implementation:
- Established the Anti Smoke-Belching Unit (ASBU) for the city to enforce the ordinance
- Vehicle emission testing is being conducted for all vehicles annually by private emission testing centers
- Random testing is conducted by the ASBU to vehicles suspected of smoke belching

Results:
- An annual average of 10,783 vehicles are being randomly monitored by the Anti-Smoke Belching Unit
- Ensure vehicles run under allowable emission standards
- 18% decrease in Carbon Monoxide (CO) emissions from vehicles; 66% decrease in Nitrogen Oxide (NO) emissions
Policy:
• In 2007, Davao City passed Ordinance 0309-07, banning aerial spraying of chemicals as an agricultural practice.
• The ordinance was passed to protect the communities around agricultural plantations as well as communities downstream and the river systems. Moreover, it aims to protect the aquifers, the city’s source of drinking water.
• A thirty (30) meter buffer zone within the boundaries of their agricultural farms/plantations must be provided for by all agricultural entities.

Implementation:
• Strict enforcement was immediately implemented.
• Participation of affected agricultural entities was enjoined through meetings and fora.
• A Multipartite Monitoring Team was formed to constantly monitor the progress of compliance by the agricultural plantations.

Results:
• More than 5,000 hectares of fruit plantation complied with the ban.
• Safer (lesser health risk) communities situated near agricultural plantations.
• Lesser risk of water and ground pollution.
Managing Solidwastes

Policy
- The Davao City Ecological Solid Waste Management Ordinance was enacted in 2009 to ensure the protection of public health and the environment. This is in compliance to the Republic Act 9003 of 2002, providing for an ecological solid waste management program.
- Promote research and development programs for improved methods of waste collection, separation, processing, recovery and disposal.
- Encourage greater public-private partnership in solid waste management.
- Instill environmental awareness and action among citizenry.
- Prohibit open burning of solid waste.

Implementation
- Acquisition of solid waste management equipment such as dump trucks, compactor trucks, garbage bins was prioritized.
- Intensive Information Education Campaign was sustained to familiarize families, businesses and institutions.
- A sanitary landfill facility was constructed and has been in operation.
- Composting Facilities and Materials Recovery Facilities were also established.
- A solid waste management enforcement unit was created to enforce the ordinance.
- Complementary and essential facilities were established such as composting facilities and materials recovery facilities.

Results
- Eliminated open dumping, which can be a source of pollution and health hazards.
- Greatly reduced volume of waste disposed to the landfill facility by 43.77% from 377,220 tons in 2009 to 212,112 tons in 2015.
- Encouraged families to segregate wastes at source.
- Process biodegradable wastes and convert it into something useful.
- Greatly reduced the risk of polluting waterways.

Popularization
- Segregation
- Collection
- Upgrading of Facilities
- Composting Facility
- Sanitary Landfill Facility
- Materials Recovery Facility
- Populatration
**Greening**

**Policy**
- Massive reforestation on a nationwide scale through the National Greening Program (NGP) by virtue of Presidential Executive Order
  - The program is seen as a climate change mitigation strategy as it seeks to enhance the country’s forest stock to absorb carbon dioxide
  - This is a convergence initiative among the Departments of Agriculture, Agrarian Reform and Environment and Natural Resources
- Urban greening is a priority of the city government which includes tree planting, seedling propagation and parks maintenance
- The Zoning Ordinance of Davao city, implemented in 2015, declared a total of 74,684 hectares (or 31% of the city’s land area) as conservation, forest, parks & recreation or mangrove rehabilitation.

**Implementation**
- Areas declared as protection forests have been prioritized for greening
- Operation and maintenance of nurseries around the city
- Private groups and schools are enjoined in the tree-planting activities both in upland and urban areas
- Protection forests are considered “No-Habitation zones” through strict implementation of the Zoning Ordinance

**Results**
- A total of 6,104 hectares were planted with various tree species
- A total of 19 urban parks are being maintained, including roadsides and road islands
- For 2015, a total of 230,231 seedlings of various mangrove, fruit and forest trees to watershed, riverbank, roadside and mangrove areas were distributed and planted
Davao City Airshed was established by virtue of DENR Memorandum Circular 02-Series of 2003.
Davao City Airshed Governing Board was created which is tasked to formulate and carry out its air quality action plan.
In 2013, the Davao City Air Quality Monitoring Network (DC AQMN) was established. It is an area quality monitoring network of urban scale representation and composed of selected sampling sites from the three AQMNs of neighborhood scale representation. The devices used for the monitoring network measure PM_{10}, PM_{2.5}, SO_{2}, NO_{2}, O_{3}, and CO parameters.

Air Quality Monitoring Stations in 6 locations

Stack Sampling
FACILITATING MULTI-STAKEHOLDER SOLUTIONS

Davao City Water District – Adopt-A-Site Project

Interface Development Interventions – Adopt-A-Riverbank Program

Mindanao Land Foundation – Disaster Preparedness

Disaster Risk Reduction and Management Council – Formulation of Plans that address Environment Concerns

UN Habitat – Vulnerability Assessment
**OUTCOME INDICATORS**

**Air Quality:**

Based on the 2015 monitoring of air quality:

- **PM10** (Particulate Matter) concentrations are within the short-term guideline value of 150 ug/Ncm.
- **SO2** (Sulfur Dioxide) concentrations fall within the short-term guideline value of 180 ug/Ncm.
- **NO2** (Nitrogen Dioxide) concentrations are all within the short-term guideline value of 150 ug/Ncm.
- The 8-hr **O3** (Ground-level ozone) concentrations are within the short-term guideline value of 60 ug/Ncm.
- **PM2.5** (Particulate Matter) concentrations are within the short-term guideline value of 75 ug/Ncm.
- The 8-hr **CO** (Carbon Monoxide) concentrations are all within the short term guideline value of 9 ug/Ncm.

**Health:**

- The number of cases (lung cancer, chronic bronchitis, ischemic heart disease) which could be related to smoking has decreased by 37.33% from 3,410 in 2010 to 2,137 in 2015.
- The number of cases with respiratory diseases related to air pollution decreased by 17.33% from 8,216 in 2013 to 6,792 in 2015.

**Awards**

- **DAVAO CITY**
  - Hall of Fame of the Department of Health’s **RED ORCHID AWARD**

**Ways Forward**

- Expansion of air quality monitoring network
- Atrium for hospitals
- Installation of anti-pollution devices in large manufacturing plants to reduce if not eliminate air contaminants
- Greening programs for carbon sequestration
- Inclusion of “Green Architecture” in the zoning ordinance
- Urban greening (parks and other open spaces)
- Adopt waste-to-energy technologies
- Encourage and promote use of renewable energy source
THEMATIC SESSION B

Good Practices, Experiences, and Successes from Cities in Asia

B1: Institutionalising Resilience in a Changing and Warming Climate
WELCOME TO CAN THO CITY, VIET NAM

Climate change & resilience strategy in CAN THO CITY

CONTENTS
1. INTRODUCTION
2. CLIMATE CHANGE IN CAN THO
3. RESILIENCE ACTIVITIES PLAN OF CAN THO CITY.

1. INTRODUCTION
- Can Tho is one of five cities directly under the Central Government, located in the central of Mekong Delta.
  Area: 1.405 km²  Population: 1.23 million
- Can Tho's climate is tropical and monsoonal with two seasons: rainy (from May to November) and dry (from December to April). Average annual humidity is 83%, rainfall 1.700mm/year (65in) and temperature 27°C (81°F).
- The economic structure: GDP in 2015: US$4.6 billion
  Agriculture accounted for 6.49%,
  Industrial - construction accounted for 35.02%,
  Commerce and Services accounted for 58.49%

2. DEMONSTRATION OF CLIMATE CHANGE IN CAN THO
- average temperature increase 0.7°C
- annual rainfall tends to decrease, from about 1.700mm to 1.500mm/year.
- changes in the water level: both of highest and lowest level increase 50cm.
- appearing many places were flooded
- bank erosion
- drought and salinity intrusion
- tornado and storm
The trend of actual data change 1978 to 2013, CanTho

Flooding

THÀNH PHỐ CẦN THƠ

Vùng ngập lụt do nước từ sông Cửu Long

area flooded by water from the Mekong River

area flooded by the tide

Drought and Salinity intrusion

Salinity sensors system monitoring and alerts

03/2016, the first time, measured the salinity up to 2g/l in Ninh Kieu district

Riverbank erosion

Bán đỏ các khu vực sát lởbö sông rio

Erosion areas

Tornado and storm in Can Tho

30/07/2014, in Co Do town, a strong tornado damaged 147 houses, 56 of which collapsed completely.
B2 scenario by 2100, MONRE.

- Average temperature increases 2 - 3°C
- Rainfall increases 10-20%.
- Sea level rises 76-82 cm.

3. Climate Change resilience Strategy

The key tasks and solution

- Propagate and educate to raise awareness
- Support diversified response with scientific researches
- Strengthen capacity for state administration in climate change
- Improve the system of legal policy
- Renovate financial mechanisms
- Integrate to international climate change response

Climate Change resilience Strategy

Solution to make communities have better adaptations

COMMUNITY BASE DISASTERS RISK MANAGEMENT

Advantage
- The actual phenomenon demonstrate,
- The interest and support of the government and the community,
- The domestic and international support.
Disadvantage

- The uncertainties of climate change,
- Lack of specialized knowledge of leaders & community,
- To make the whole covering resilience plan is very difficult,
- Lack of funding.
Higashimatsushima
Community Development for Recovery after the Great East Japan Earthquake

Population: 40,183 (as of December 1, 2015)
(Population before earthquake: 43,142)

Higashimatsushima City is located in the northeast of Japan, bordering the Pacific Ocean. It is a scenic city that includes Matsushima, one of Japan's three great views. The JR Senseki Line and Sanriku Expressway run through the center of the city, and it is only around 30 minutes from Sendai City. Higashimatsushima features convenient public transportation as a regional city.

Experiences and Exchange
Higashimatsushima City is blessed with nature, with spectacular views of the sea, mountains, and rivers. It is particularly rich in marine leisure opportunities, such as coastal swimming, clam digging, pleasure boat trips, and fishing. Prior to the earthquake disaster, it was visited by roughly 1.1 million people each year. The Japan Air Self-Defense Force Matsushima Base holds an air show every summer, and airplane fans gather from around the country to see Blue Impulse fly.

City flower: Cherry blossom
City tree: Pine

Overview of Higashimatsushima

10 m 50 cm giant tsunami caused by the Great East Japan Earthquake on March 11, 2011

Deaths/missing persons nationwide: 18,460
In Higashimatsushima: 1,134

Higashimatsushima damage conditions (as of end of August 2015)

- Human damages (city residents)
  - Deaths: 1,110
  - Missing persons: 24
  - Total: 1,134 (approx. 3% of the city's residents)

- Home damage
  - Completely destroyed: 5,513 homes
  - Partial but extensive destruction: 3,060 homes
  - Partially destroyed: 2,500 homes
  - Total: 11,073 homes
  - (Approx. 73% of all households)

- Evacuees (peak): 15,185

- Shelters (peak): 106

- Flooded agricultural area: 1.465 ha
  - Total agricultural area: 3.349 ha

56% of the city's urban area was inundated by the tsunami (more than any other municipality in Japan)

Higashimatsushima's unique regional autonomy framework
8 autonomous organizations, based on basic autonomous regulations

Promoting regional mutual assistance

Higashimatsushima's autonomous residents exercise their abilities even during major disasters.
**Higashimatsushima City**

**Bonds between people played an important role after Higashimatsushima suffered devastating damage.**

- Careful adjustment of intentions with resident organizations such as the Relocation Committee resulted in an autonomous cooperation, established prior to the earthquake disaster.

- Recovery plan discussions
- Discussions in shelters
- Self-assistance
- Mutual assistance
- Public assistance

**Making progress on building homes with residents**

1. Establishment of disaster prevention collective relocation sites (planned single-family housing zones)
   - 3 collective relocation sites: During the disaster prevention collective relocation project for a total of 1,285 units (including 717 planned single-family housing zones), 528 planned single-family housing zones have been completed, for a completion rate of 100%.

2. Establishment of disaster public housing
   - 127 housing complexes (including 67 single-family housing divisions)
   - 23 housing complexes (including 14 single-family housing divisions)
   - 22 housing complexes (including 145 single-family housing divisions)
   - 9 housing complexes (including 19 single-family housing divisions)

**Collective relocation sites that residents can move to**

- Near JR stations that offer convenient public transportation
- Collective relocation sites that residents can continue to live in
- Near factories and industrial areas
- Recommended relocation areas - Planned and buyup areas

**Higashimatsushima style recycling of disaster waste**

- **Disaster rubble volume:**
  - Total: 1,098,000 tons
  - Unburnable mixed garbage: 185,000 tons
  - Metal: 25,000 tons
  - Asphalt: 34,000 tons
  - Concrete: 404,000 tons
  - Mixed garbage: 79,000 tons
  - Wood / wood scrap: 371,000 tons

- **Processed disaster waste:**
  - Total: 1,073,000 tons
  - Incineration: 464,000 tons
  - Recycled: 30,000 tons
  - Unburnable mixed garbage: 22,000 tons
  - Total: 1,088,000 tons

- **Recycled tsunami debris:**
  - Wood / wood scrap: 371,000 tons
  - Metal: 25,000 tons
  - Asphalt: 34,000 tons
  - Concrete: 404,000 tons
  - Mixed garbage: 79,000 tons
  - Wood / wood scrap: 371,000 tons

**Simple recovery**

- Simple recovery
- A city still facing challenges such as energy supply, decreasing birth rate, graying society, and disaster prevention issues.

**New plans for recovery**

- Two plans are being implemented simultaneously: a recovery plan and the Future City Initiative

1. Recovery plan
   - **Build Back Better Plan**
   - **Challenge for the solution to problem**
   - **Build Higashimatsushima so that it can continue to develop**

2. “Future City Initiative”
   - Future City Initiative

**This type of school is very rare in Japan.**

- Natural and Healthy Elementary School
  - Made from trees in the area
  - A city that will be safe in the future (disaster prevention collective relocation diagram)
**Higashimatsushima City**

**Clinic**

**Oku-Matsushima “Kizuna” Solar Park**
- Operator: Resident fund
- Linked capacity: 1,990 Kw (approx. 2 megawatts)
- Power generation: Approx. 2.1 million Kwh/year (4) Power generation: 1,990 Kw (approx. 2 megawatts)
- Planned area: Part of Higashimatsushima Oku-Matsushima public facility roofs
- Multiple cars can be parked at the site.

**Higashimatsushima Organization for Progress and Economy, Education, Energy (HOPE)**

**Founding objective**
- Promoting the implementation of leading projects based on Higashimatsushima recovery community development plans

**Nobiru northern hillside area**

**Nobiru Nursery School**
- Construction started in 2012
- Construction completed in 2014
- Total area: 1,525.27 sq.m

**Other facilities**
- Nobiru nursery school (tentative name)
- Naruse Elementary School #2 (tentative name)
- Junior High School #2 (tentative name)

**FutureCity Initiative Vanguard Project**

- Electric local production for local consumption
- Low-carbon energy social development promotion operation

**Disaster public housing**

- 170 units (3.2 ha)
- 15,298 residents

**Residential lots**

- 278 divisions (9.1 ha)
- 8,000 households

**Total area**

- 91.5 ha (including development area of 24.6 ha)

**Eco-town**

- Total: Approx. 269 Kwh

**Disaster prevention infrastructure**

- Balancing reservoir, etc.
- Commercial area
- Residential area
- Special streets
- Compartment streets
- Urban planning streets
- Enforcement area boundary

**Safety**

- Fire brigade
- Medical institution
- Medical care facility
- Nursing care facility
- Clinic
- Hospital
- Nursing care facilities

**Verin**

- Green space
- Park
- Facilities run by city/town
- Railroad site
- Post office/parking/commercial area
- Public housing for area of distress

**Project land**

- By CEMS
- Energy is optimized
- The Japan’s first protection disasters model eco-town

**Key**

- Pay attention to future City Initiative Vanguard Project

Higashimatsushima City

**SUSTAINABLE DEVELOPMENT GOALS**
1. No poverty
2. Zero hunger
3. Good health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation, and infrastructure
10. Reduced inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Climate action
14. Life below water
15. Life on land
16. Peaceful and inclusive societies
17. Partnerships for the goals

---

**International exchange after the disaster**

**Memorandum on agreement on cooperation for reconstruction (example of Aceh City)**

- **Indonesia**
  - Tsunami Affected Area
- **Philippines**
  - Leyte Typhoon Afflicted Area

**Main fields of cooperation**
- Urban planning, disaster prevention planning
- Education, health, culture
- Tourism, trade
- Technical development, communication system development

**Example of the project**

- Reception of trainees from Aceh (Higashimatsushima)
  - 2 trainees x 3 times,
  - 6 trainees in total

- Training on 10-year reconstruction project as an advanced reconstruction site
- Information sharing (Aceh)

Higashimatsushima and JICA agreed on regional revitalization and promotion of reconstruction through international cooperation on 2015.

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**Higashimatsushima: Toward becoming a FutureCity**

- Shin Nobiru Station
- Kizuna megasolar
- Tsunami monitoring cameras
- Nobiru northern hillside area
- Collective relocation creation area
- Medical institution, etc.
- Forest school
- Miyazumori Elementary School: the forest school

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- JICA
- Disaster-prevention education (Aceh City)
Innovative Solutions for Urban Development in a Changing and Warming Climate

— Experiences and Cases from China

By Li Panwen
China-ASEAN Environmental Cooperation Center

Contents

1. Challenges in a Changing and Warming Climate
2. Chinese Experiences of Sponge City
3. China-ASEAN Partnerships for Eco-Friendly Urban Development

Part ONE

Megatrends in cities

1. Water use & water scarcity
   Water withdrawals have tripled over the last 50 years. In 2030, there will be a 40% supply shortage of water.

2. Sanitation
   Currently, 2.5 billion people are without improved sanitation facilities.

3. Human health
   Currently, 3.4 million people mainly children—die from waterborne diseases every year.

4. Hazards
   Water-related hazards account for 90% of all natural hazards.

Water-related challenges

1. Widespread Flooding in China, 2016

   - A soldier carries a sandbag to reinforce the dyke of Baoding Lake in Anhui.
   - Cars are inundated in floodwater in Wuhan, Central China’s Hubei province in July.
   - People reinforce a dyke in Nanjing, Jiangsu province.
   - Wuhan, a city of 10 million people in Hubei in dire need of efforts to counter the risk of flooding.

2. Urban Heat Islands

3. Wastewater disposal and treatment

4. Water Scarcity

Urban Heat Islands

Wastewater disposal and treatment
Water as a resource is irreplaceable. Yet heavy rainfall can be a disaster even in modern cities if rainwater is not drained in time. This was recently evident in Shanghai, Nanjing and other cities, especially in southern China, where streets more like the canals of Venice.

An estimated 32 million people across 26 provinces were affected and more than 300 people were killed. 280,000 hectares of cropland was destroyed, with state damage estimates of about US$5.73 billion. The damage estimate has reached US$22 billion. Flooding of this magnitude was last seen in the country in 1998.

Wuhan saw 570 millimeter of rainfall during the first week of July 2016, surpassing the record that fell on the city in 1991. A red alert heavy rainfall was issued on 2 July. At least 27 people were the province and 400,000 required evacuation. Flooding encompassed 500,000 hectares of crops; 15,000 homes or more sustained major damage, and economic losses reached ¥5.7 billion (US$850 million).

International Concepts about Sustainable Urban Development

Widespread Flooding in China, 2016

Urban Waterlogging in Beijing, 2012

Part Two

Definition of Sponge City

A Sponge City refers to a type of urban area which allows much of the surface water to be absorbed by the ground. Thanks to the vast amount of permeable surfaces across the city (green areas, wetland, lakes, gar etc.) the water is able to be absorbed by the ground which naturally filters the water. The naturally filtered water can then be re-extracted and reused through natural or artificial wells within the city.

Definition of Sponge City

Definition of Sponge City

Part Two

Part Two

Part Two

Part Two

Part Two

Part Two

Part Two
Background

In December 2013 President Xi Jinping announced a national plan to address flooding in China’s cities—hindered by 450 million people. He said that during the upgrade of urban drainage infrastructure they make it a priority to retain valuable water resources and to integrate with the natural system to achieve drainage, to establish natural infiltration and natural purification – like a sponge.

The sponge city programme takes inspiration from low impact development in the US, water sensitive urban design in Australia and sustainable drainage systems in the UK. But nothing at this scale has ever been attempted before. The sponge city programme is more comprehensive and ambitious.

Benefits of Sponge City

- More clean water for the city
- Cleaner groundwater
- Reduction in flood risk
- Lower burdens on drainage systems
- Greener, healthier, enjoyable urban spaces
- Enriched biodiversity

Relevant Policies issued on Sponge City

- 2013: Chinese president Xi Jinping suggested cities “should be like sponges”
- 2014: Ministry of housing and urban-rural development: Guidelines for the Sponge City (Low-Development)
- 2015: Ministry of housing and urban-rural development, Ministry of Finance, Ministry of Water Resources selected 16 cities as the first batch of pilot city.
- 2015: Ministry of housing and urban-rural development, The performance of sponge City Construction Evaluation and evaluation index
- 2015: Promoting Sponge City Construction (State Council)
- 2016: Each pilot city should submit a draft Specialized Planning before October, 2016.
- 2016: Second batch of pilot cities (14 cities)

Methodology

City Design (Natural storm water infrastructure, storm water filtration, flood resilience, etc.)

A roadmap for each city with a focus on win-win’s

Pilot Cities

6 cities were selected as China’s “sponge cities” and are being made roadmaps for each city with a focus on win-win’s. A national project is being promoted by central government, local government and the sector. The central government is giving each city a year for the first batch of pilot city, in return, 20% of the storm water must be constructed by 2020, by 2030. All of the pilot cities must have completed the construction by 2017.

Six Components of Sponge City

Permeate

Detain

Use

Store

Purify

Drain
sponge cities and the goals to support their needs such as for permeable concrete furtherments.

Technology

water permeable brick

Sponge City Cases

Changde

Chongqing

Xiamen

Nanning

Changde

Rain Garden

Permeable paving

Low Elevation Greenbelt

Changde

Green Roof

Rain Garden

Low Elevation Greenbelt

Changde

Natural pond

Green Roof

Ecological Filter

Ecological Wetlands

Ecological riparian zone

Ecological floating island

Storing

Retaining

Purifying
After the "Xiamen Sponge City Constructio Technical Specifications (Trial)", another important document -- the "Xiamen Spong City Construction Management Interim Measures" (the Measures) has also been promulgated. The Measures document sets regulations for the management of the sponge city construction operation undertaken by the government and applicable to the entire municipal area. Standard atlas guidelines, implementation specification and other relevant documents are yet to be completed, to comprehensively guide the development of the Xiamen sponge city.
“Nanning Characteristics” Highlighted in Sponge City Construction

By April 2015, Nanning, with the standing achievements, was identified as the first batch of national pilot cities to act sponge city. Now, the construction has made significant progress: the operating mechanism and technical system for planned action have been set up, and on the green land of parks, new water has led in to form a contiguous sponge body with Nanning characteristics. The present achievements provide a good foundation for Nanning’s goal of 70% of rainfall in 20% of the built-up area in 2020.

China-ASEAN Partnership for Eco-Friendly Urban Development

To tackle the issues related to urban development, especially the challenges related to climate change and sustainable development
To share the policies, regulations, methodologies for urban design
To scale up innovation, good examples and best practices among this region
To fuel up the implementation of SDGs

What We Need? Cooperation!

China-ASEAN Partnership for Eco-Friendly Urban Development

Explore a China-ASEAN partnership for ecologically-friendly urban development, and jointly pursue green development.
Seminar on Cooperation under the China-ASEAN Partnership for Eco-Friendly Urban Development
12-13 December 2016, Shenzhen, China

Areas of Cooperation

**Objective 1: Treatment and Recycling Use of Urban Waste**
- Policy and Experience Exchange on Development of Eco-Cities
- Organize China-ASEAN Eco-cities Summit
- Conduct seminars and joint studies on management of urban ecosystems
- Conduct capacity build activities on eco-city development

**Objective 2: Building Green and Eco-friendly Communities**
- Conduct seminars on corporate social and environmental responsibility
- Establish low carbon and EST cooperation network

**Objective 3: Ecosystem Conservation - Mangrove Conservation and Management**
- Conduct exchange activities on eco-community
- Promote public awareness

**Objective 4: Cooperation on Environmentally Sound & Low carbon Industries & Technologies**
- As the implementation body of the Partnership
- Provide the cities of China and ASEAN countries with a region-wide platform to carry out cooperation activities
Thanks.
**Overview of PAT**

** PAT's Green Initiative**

- An autonomous government agency under the jurisdiction of the Ministry of Transportation (MOT)
- 5 ports under the good governance of PAT including Bangkok Port, Laem Chabang Port, Chiang Saen Commercial Port, Chiang Khong Port and Ranong Port
- 1 River port, 1 International deep sea port and 3 Regional ports
- Operate 4 ports, only Laem Chabang Port is landlord port

---

**Pat Authority of Thailand (PAT)**

- Land area: Total of 941 Acres, only 342 Acres are utilized for Port
- consists of 2 Cargo operation areas: West and East Quay
- Inland location limits access to ships of 1.34 million T.E.U.s/year

**Mechanical Handling Equipment**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Crane</td>
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<tr>
<td>Mobile Crane</td>
<td>8</td>
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<tr>
<td>Rubber Tyred Mobile</td>
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<td>Mobile Truck</td>
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<td>Reach Stacker</td>
<td>23</td>
</tr>
<tr>
<td>Tag-Beat</td>
<td>9</td>
</tr>
</tbody>
</table>

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**Laem Chabang Port**

- Handling of 70% of sea transport volume
- Thai government likes to put as the main leading gateway in landcocks with the future expansion
- consists of 2 Basins
- 21 berths at Basin 1 were leased for private sector’s investment, management and operation
- A multi purpose berth with a 26 m x 134 m., Accommodate 2 barges with maximum loaded cargo of 500 gross tonnage

**Saison Commercial Port**

- Located on the Mekong River in the north of Thailand
- 2 berths, which is 12 m. and a width of 208 meters quayside terminal
- Accommodates 3-5 motor vessels of up to 80-150 gross tonnage

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**Bangkok Port (BK)**

- Land area: Total of 941 Acres, only 342 Acres are utilized for Port
- consists of 2 Cargo operation areas: West and East Quay
- Inland location limits access to ships of 1.34 million T.E.U.s/year
- West Quay is used for container general cargo and domestic/international berth

---

**Ranong Port**

- consists of 2 berths
- A multi purpose berth with a 26 m x 134 m., Accommodate 2 barges with maximum loaded cargo of 500 gross tonnage

---

**Electric consumption production**

- 35,590 ton carbon dioxide in 2012 and growth rate
PAT's Green Initiative

The Sudden Awakening

In March 1991, a chemical explosion occurred in Dangerous Goods warehouse in Bangkok Port.
A SHE management system was given top priority.
In March 2005, Port Safety, Health and Environmental management System (PSHEMS) was introduced.

PAT's Greenport Projects

Act Name: the development of PAT's environmental master plan and estimation emission line (2014)

Active:
> Prepare the GHG inventories and identify the port activities that cause GHG emissions
> Analyze emission baseline using 2013 as the base year
> Develop PAT's Environmental Master Plan for 2015-2019
> Identify an emission target

Area: 5 ports under the good governance of PAT (Bangkok Port, Laem Chabang, Saen Commercial Port, Chiang Khong Port, and Ranong Port)

PAT's Environmental Policy

Environmental policy was issued on July 8th, 2011.
> Development of business plans and port-related activities must consider potential and possible impacts on the environment and local communities. Necessary approaches shall be focused on preventive and mitigation measures that reduce the impacts.
> Port-related activities must not affect the environment and must also comply with federal environmental regulations and relevant international conventions.
> Environmental monitoring and impact assessment programs must regularly and continuously be conducted to minimize potential impacts.

PAT's Environmental Management Timeline

- Analyzing Emission Baseline, 2014
- Emission Reduction Target 10% by 2019
- 1st PSHEMS for DG 2006-2012
- 2nd PSHEMS for All Services 2011-2014

Goal
> Sustainable and Green Port
> Low Carbon Ports
> Renewable Power Implementation

- The Study of Green Port, 2013
> Review Green Port Practices
> Sustainability Framework
> Sustainability Vision & Policy

The Study of Green Port, 2013

¢ Environmental Policy and new Environmental Protection
¢ The Study of Green Port, 2013
¢ PAT's Green Initiative

Environmental monitoring and impact assessment programs must regularly and continuously be conducted to minimize potential impacts.

Aims of PAT's Greenport Projects

- Prepare the GHG inventories and identify the port activities that cause GHG emissions
- Analyze emission baseline using 2013 as the base year
- Develop PAT's Environmental Master Plan for 2015-2019
- Identify an emission target

Goal: 10% emission reduction by 2019

Guideline: 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Tier 1)

GHG: Carbon dioxide (CO2), Methane (CH4) and Nitrous oxide (N2O)

Sectors: Energy, Road Transport, Off-road Transport, Water Transport

Time Period: 209-2013

Economic Framework of GHG Inventory

Scope of RFP PSHEMS recognized by PHEKSA

- Service for Handling of Dangerous Goods
- All Service of Bangkok Port

Effective years of emission
- December 2006-2009
- November 2009-2012
- August 2013-2014

Activity Data Related Departments

- GHG Calculation
- Energy
- Road Transport
- Off-road Transport
- Water Transport

Emission Factors

EF = Emission factor (kg/TJ)
Fuel = Fuel consumed (TJ)
A = Fuel type a (e.g., diesel, gasoline, natural gas)

GHG Emissions = \sum [EF_A \cdot Fuel_A]
Greenhouse Gas Emission Inventories and Forecasts

**Greenhouse Gas Emission Inventories and Forecasts**

**Greenhouse Gas Emission Inventories and Forecasts**

**Corporate Plan 2015-2019**

- Good Governance, Service Mind, Innovation, Environmental Concern
  
  9.3 Green Port Development

  Development of Environmental Policies, Plans, Measures and Studies
  Installation of Energy Efficient/Renewable Energy Equipment and Improvement of Environmental Performances

  - Implement On-site Renewable Energy
  - Implement Energy Efficiency
  - Improve Waste water Management
  - Improve Waste management

  - Raise Environmental Awareness among Personnel
  - Increase public participations

**Emission Reduction Target**

- Reduce Emissions by 10% by 2019 from the Baseline (2013)

- Business-as-usual Pathway
- Green Pathway

- 2013: 147,273
- 2019: 194,409
- 194,409 (10% of baseline)

**Current projects**

- Reducing Air Emissions of Cargo Handling Equipment Project
- Replace 3.0 Metric Ton Diesel Forklifts to electric ones
- Install electric quay cranes
- Install energy-saving equipment for RTGs

- Energy Efficiency Project
- Replace of ordinary light to LED for street light and office building
- Install solar panels in the four sides of a cubic buoy
- Install solar panel on the water level station
- Continuously monitoring reporting and verification project
- Implement Environmental management Information Systems (EMIS)

**Current projects**

- Waste Management System in Bangkok Port, MARPOL Annex 5 Compliance
- Sink Plantation Projects
  - Reforestation of near-port areas

- Safety, Health and Environmental Management System (PSHE-MS)
  - Bangkok Port: 3rd PSHEMS for All Services on March 2015
  - Laem Chabang Port: on the process of recertification
Environmental Programs and Projects

- Measurement of black smoke
  - Cooperate with Department of Land Transport (twice a year)
- Measure carbon monoxide, hydrocarbon and noise levels from the PAT's vehicles
- Monitor and Survey:
  - Environmental Quality Monitoring Program
    - Parameters: Ambient Air Quality, Noise Level, Waste Water, River quality
  - Environmental Surveillance Program
    - Monthly Surveillance

Partnership between PAT and the City of Yokohama

- Partnership between PAT and the City of Yokohama to promote “Green Port Project” and increase possibility for PAT to achieve the goal of Green Port Project.
- The City of Yokohama and Yokohama Port Corporation will utilize their knowledge and experiences about carbon reduction gained through environmentally friendly measures introduced at the Yokohama port.
- Proposed projects are such as installation of solar roof on the warehouse, implementation of environmentally friendly technologies like electronic kllifts and hybrid RTG etc.

Workshops & Workshops

- Management and executive
  - Gain fresh perspectives on broader economic environmental and societal challenges
  - Understand the role and direction of PAT towards sustainable development and green economy
- Personnel
  - Raise awareness of environmental issues and possible impacts related to port performance
- Workshop for Environmentally responsible personnel
  - Learn more about new technologies and inventions

Thank you for your kind attention
THEMATIC SESSION C

Thailand Feature Sessions

C1: 3Rs and Waste Management in Thailand: Policy and Implementation
Solid Waste Management in Thailand: Policy and Implementation

Dr. Wijarn Simachaya
Permanent Secretary
Ministry of Natural Resources and Environment

**Situation of municipal solid waste management in Thailand 2016**

- Community-based waste generation
  - 27.04 m. ton/year
  - Per capita 1.14 kg/person/day
  - Country wide 74,073 tons/day

- Waste recovery 5.76 m. tons/year
- Appropriate sanitary disposed system 9.59 m. ton/year
- Improper disposed methods/activates 11.69 m. ton/year
- Remaining waste 10.13 million

**Waste Composition**

- Recyclables 30%
- Hazardous 3%
- Others 3%
- Organics 64%

- Plastic 17% (2.5 mt) Plastic bag, foam and other packaging
- Paper 8% (1.1 mt) News paper, magazine, Paper packaging
- Glass 3% (0.4 mt) Glass container and packaging, one-way products
- Metal and aluminum 2% (0.3 mt) packaging and container

Source: Thailand State of Pollution Report 2015

**National Agenda on Waste Management**

<table>
<thead>
<tr>
<th>Year</th>
<th>Agenda</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Road Map on Waste and Hazardous Waste Management</td>
<td>Approved by the National Council for Peace and Order on 26th August 2014</td>
</tr>
<tr>
<td>2016</td>
<td>National Solid Waste Management Master Plan (2016 - 2021)</td>
<td>Approved by the cabinet on the 3rd May 2016</td>
</tr>
</tbody>
</table>

**Waste disposal sites in Thailand (2016)**

- Overall waste disposal sites in Thailand 2,801
- Appropriate management system (12%) 319 sites
  - Appropriate landfill site: 287 sites
  - Incinerator with air pollution treatment system: 18 sites
  - Mechanical and biological treatment system (MBT): 18 sites
- In-appropriate management system (88%) 2,474 sites
  - Dumpsite method: 1,730 sites
  - In-appropriate landfill system: 16 sites
  - Improper incineration system (without ventilation treatment system): 71 site
  - Open spaces and outdoor burning activities: 657 site

**Principle of SWM Roadmap**

- Reduced amount of accumulated waste
- Promoted appropriate MSW and Hazardous Waste Management
- Specific law on SW Management
- Instill National Discipline
The Cabinet approved the plan on the 3rd of May 2016

National Waste Management Master Plan 2016-2021

Waste generation and collection system
- Apply 3R into waste management strategy
- Increase efficiency of waste separation and collection

Waste recovery and disposal
- Improve improper waste disposal sites
- Apply integrated technologies i.e. WTE, Biogas, RDF

Law and Regulation
- Law amendment and development
  - MSW/WEEE
  - Environmental Law

Public Involvement
- Education Program
- Awareness rising
- Capacity building


Goals
1. Municipal solid waste are disposed properly (19.6 millions of tons)
2. All accumulated waste are disposed properly (30.5 millions of tons)
3. Household hazardous waste are collected and disposed properly (0.17 millions of tons)
4. Infectious waste are collected and disposed properly (0.05 millions of tons)
5. All hazardous industrial waste are collected and disposed properly (2.06 millions of tons)
6. Local governments have systems for waste separation at the source (households) (3,889 LGs)

Action plan “Thailand Zero Waste”


According to the Participatory State Principle

Role of related agencies

Regulator
- Ministry of Natural Resources and Environment
- Ministry of Interior
- Ministry of Public Health
- Ministry of Industry

Operator
- Ministry of Natural Resources and Environment
- Ministry of Interior
- Ministry of Public Health
- Ministry of Industry

PCB/ONEP/DEQP
- Local Authority
- Hospital
- Factory

Policy/Action plan/Guideline/COP
- Municipal solid waste
- Infectious waste
- Industrial waste

Infectious waste

Goal
1. Increasing of household hazardous waste separation
2. Reduction of MSW in final disposal
3. More industrial waste & infectious waste disposed of properly
4. Reduction amount of MSW to be disposed of by 5% (from 2016)
5. Household hazardous waste collection centers in Villages/community by 100%
6. Infectious waste disposed of properly by 85%
7. Industrial waste disposed of properly by 70%

Action plan goal and target

More than 75% (by 2021)
More than 50% (by 2021)
100% (by 2019)
100% (by 2019)
100% (by 2020)
100% (by 2020)

More than 30% (by 2021)
**Master plan of solid waste management in Thailand 2016-2021**

**The government approved the agreement in May**

**Direction**

3R Principle: Reduce Reuse Recycle:
- Appropriate management, waste centralization, disposal, waste-to-energy
- Public Participation & Social responsibility

**Solid waste and hazardous waste management measurement**

1. Waste minimization at source
   - Separation & recovery
   - SCP concepts environmental friendly
   - Production, consumption & services

2. Capacity Improvement
   - Waste collection, transportation and disposal
   - Solid waste disposal centre
   - Waste collection and disposal site
   - Law and regulation improvement
   - Law enforcement

3. Management Promotion
   - Public awareness & consciousness building
   - Knowledge enhancement
   - Treatment and disposal technology
   - Database development
   - Management incentives & motivations

**Solid waste management: Driven Mechanisms**

- Waste management Laws
  - Public Sanitary and Oder Act, B.E. 2560
  - The Bill of the Remains of Electronic Appliances and Electronics Equipment Management Act B.E. ...
  - The Bill of National Waste Management B.E...
  - The Bill on waste minimization and utilization promotion B.E...

**The implementation of 3R Policies Laws and Regulations.**

- Initiating (draft) strategy on promoting of Reduce Reuse Recycle: 3R
  - Providing the framework guidelines for 3R implementation
  - Emphasizing on the minimum amount of waste at sources and the final disposal
  - Maximizing the values of natural resources

- Initiating (draft) Country’s Waste Reduction and Recycling Promotion Act
  - Supporting law and regulation of related agencies
  - Enhancing the reference framework for support and applicable guidelines on 3R activities

**Zero Waste Action Plan and Civil State: The Nexus Clean City and Happy People Action Plan.**

- Implementation and action plan under the Civil State approaches
- Up-scale public awareness and participation on waste reduction and waste separation according to 3R principle.

**Ministry of Natural Resources and Environment (MNRE)**

The Department Core Activities

- Solid and Hazardous wastes reduction and separation project

16 departmental organizations of MNRE’s 3R operation includes:
- Inter departments wastes separation
- Zero Polystyrene food packaging
- Reducing the amount of wastes for disposal – at sources
- Reducing plastic bags and disposable food containers
3R Activities: The Examples

- End of life product disposal - voluntary project
  - End of products
    - Donation of aluminum (pull-tab lid) to make prosthetic limbs
    - Green roof project
  - fluorescent tube
  - mobile phone and battery

Public Participation Promotion

Public Participation Promotion & Campaign on waste management in local levels nationwide (76 Provinces)

Country’s Discipline & public participation promotion towards sustainable waste & environmental management programme

Waste Collection & Transportation

Community based waste management activity

- Organic waste for composting, earthworm farming
- Selling the recyclable waste to the recyclable shop
- Collect & let the remaining waste to the disposal site by the local administration
Reduce

No plastic bag & container promotion: textile bag & wooden basket promotion

Recycle waste bank

Zero bath shop & grocery

- The shop accept only recyclable waste materials as payment for the purchased grocery items

Charitable activities like recyclable waste materials donation for Buddhist

Hazardous waste collection point

Public Involvement
Conclusion
- Country Strategy – local action
- Waste is waste
- Lesson learned – City to City
- Strong Local Authority Involvement
- Waste to energy
- Leader’s Vision

Thank you for your attention
Knowledge Platforms for Cities & City-to-City Cooperation

8th East Asia Summit High-Level Seminar on Sustainable Cities
8 Feb 2017, Chiang Rai, Thailand

Natalja Wehmer
Sustainable Urban Development Section
United Nations Economic & Social Commission for Asia & the Pacific (ESCAP)

Aim & Structure of today’s session

Aim:
- Explore cities’ greater role in global development
- Importance of city-to-city cooperation increased
- Online platforms important role in linking cities & other stakeholders

Structure:
- Presentations
  - Introduction, Natalja Wehmer, UNESCAP
  - Urban SDG Knowledge Platform, Felix Kalkowsky, CityNet
  - Toolbox for Localizing the SDGs, Arief Mulya Ramadhian, UCLG-ASPAC
  - The Cities Clean Air Partnership – online knowledge-sharing experiences, Katharine, CCA
  - Asia Pacific Adaptation Network (APAN), Augustine Kwan, IGES
  - City perspective, Jarupong Pengglieng, Bangkok Metropolitan Authority
- Discussion
- Survey on knowledge platforms and session

Cities & the 2030 Agenda for Sustainable Development

- Cities are central to the implementation of the 2030 Agenda for Sustainable Development
  - Dedicated goal on cities: Goal 11: Make cities inclusive, safe, resilient & sustainable
  - Implementation of all goals depends on local action
  - 65% of targets relevant to cities (UCLG)

Habitat III: Cities take center stage

- Renewing political attention on & commitment to way cities planned & managed
- New Urban Agenda (NUA) complementary to 2030 Agenda, & other global mandates – e.g. Addis Ababa Action Agenda, Sendai Framework for Disaster Risk Reduction, & Paris Agreement
- NUA provides tremendous opportunity to advance agenda of cities in the region but also to drive implementation of other landmark global commitments at the local level

Key role of cities recognized at regional fora

- The key role that cities play in the pursuit of sustainable development was recognized at key regional fora organized by ESCAP, including:
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  - Apr 2016: Third Asia-Pacific Forum on Sustainable Development (APFSD)

Importance of knowledge sharing

- Cities concentrate development challenges, but they are also best placed to develop solutions
- Collaborative efforts & city-to-city cooperation can go a long way in enabling cities to develop & adopt innovative solutions to shared challenges
- As cities seek to find solutions to persistent & emerging issues of sustainable development, important to highlight & share such initiatives among cities - to facilitate knowledge sharing & cooperation
- Cities’ best practices can be basis for crafting national policies to address specific issues: imperative to learn from such best practices & to up-scale & replicate them
Background research

- To inform development of the platform, a user needs survey was conducted to assess the needs of the main target users – local government representatives.
- A benchmark review of other existing platforms was also undertaken by ESCAP to inform development of this platform and its content.
- Many forms of offline city-to-city knowledge sharing already exist (UCLG, CityNet, ICLEI, CLGF, among others) & there are many online platforms.
- But, there is a gap for an online platform that focuses on sharing the knowledge acquired by local governments related to planning, financing, implementing, monitoring & evaluating progress against SDG targets.

Existing platforms: explicitly SDG related

Localizing the SDGs [http://www.localizingthesdgs.org/]

- Recently launched by UNDP, UN Habitat & UCLG
- Provides guidance & resources for localizing SDGs
- Arief introduce it in today’s panel

Existing platforms: explicitly SDG related

Partnerships for the SDGs [https://sustainabledevelopment.un.org/partnerships/]

- SDSN Knowledge Platform
- Good SDG resources
- Users can upload any initiative related to SDGs

Existing platforms: explicitly SDG related

World Urban Campaign [http://www.worldurbancampaign.org/]

- UN Habitat + 136 partners
- Advocacy & partnership platform to raise awareness about positive change in cities
- Focus on New Urban Agenda

Existing platforms: User-generated content sites

PreventionWeb [http://www.preventionweb.net/]

- Participatory web platform for DRR community
- Provides news, views, tools for exchange & collaboration
- Includes resources on Sendai Framework, Events, Publications, Op-eds/ articles

Existing platforms: User-generated content sites

ACCCRN [https://www.acccrn.net/]

- Asian network on urban climate change resilience
- Well-established community online & has some user-generated content such as op-eds, articles, good practices
- Members gain Knowledge on inclusive UCCR
- Resources – access to funds, people, networks
- Advocacy
Existing platforms on Sustainable development

**Global Platform on Sustainable Cities**
https://collaboration.worldbank.org/groups/global-platform-for-sustainable-cities
- Partnership of GEF & World Bank
- Recent
- Information & resources linked to offline knowledge sharing

Other existing platforms:

- Seoul Solutions - https://seoulsolution.krien/content/seoul-solution
- 100 Resilient Cities - http://www.100resilientcities.org/
- Global Platform to End Violence Against Women - http://evaw.unwomen.org/en

**Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC)** - http://www.waste.ccacoalition.org

Associated events

- Work around the Platform will be linked to other events related to the SDGs, including key regional fora organized by ESCAP such as:
  - The Asia-Pacific Urban Forum (APUF)
  - The Asia-Pacific Forum on Sustainable Development (APFSD) to be held 29 – 31 March 2017 in Bangkok
  - The International Forum on Urban Policy for the SDGs hosted by Seoul and organized together with SMG and CityNet
- The Platform will also help partners:
  - Identify cities that are leading in SDG implementation
  - Identifying speakers for events & facilitating potential side events of forums and events such as APFSD & APUF
  - Inform future research and publications
- The platform will also facilitate the regional follow-up & review of progress in implementing SDGs

Thank you
http://www.unescap.org/our-work/environment-development/urban-development
**DISCUSSION PURPOSE ONLY**

### Recommendations for Policy

- Secure Income for Waste Management
  = Reasonable Price for Tipping Fee and Feed in Tariff
- Promote 3R (Reduce, Reuse, Recycle)
- Develop Emission Guideline
- Promote Public Education

---

**DISCUSSION PURPOSE ONLY**

### Why WTE fail in many countries?

- **Planning (pre-FS)**
  - Weak policy enforcement, public opposition, no financial source, no supporting regulations, etc.
- **Design (FS)**
  - Reject of proposal by a competent authority, opposition from existing stakeholders, lack of budget, gap between proposal and needs, etc.
- **PQ/Tender Stage**
  - Unsuccessful PQ/tender due to conflict of price (tipping fee, etc.), etc.
- **Operation/Maintenance**
  - Insufficient performance of facility, critical change of waste management policy, bankruptcy of operation company, etc.

---

**DISCUSSION PURPOSE ONLY**

### Challenges for PPP Project Realization

- Creating Data System (Collection, Storage, Analysis)
- Making Master Plan
- Managing Waste Pickers
- Creating Proper Power Purchase Agreement Mechanism
- Introducing Pragmatic "Feed in Tariff"
- Guaranteeing Active Government Participation
- Securing Project Site with Proper Soil Analysis and Landfill for Ash
- Building Finance Scheme

**These challenges need be overcome to realize the project.**

---

**DISCUSSION PURPOSE ONLY**

### Financial Sources for WTE (Yokohama Case)

<table>
<thead>
<tr>
<th>Name of WTE</th>
<th>Total Construction Cost</th>
<th>Central Government</th>
<th>Prefectural Government</th>
<th>City Bond</th>
<th>City Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSUZUKI</td>
<td>28,683 (100.0)</td>
<td>8,044 (28.0)</td>
<td>0 (0.0)</td>
<td>16,428 (57.3)</td>
<td>4,211 (14.7)</td>
</tr>
<tr>
<td>TSURUMI</td>
<td>51,778 (100.0)</td>
<td>12,450 (24.0)</td>
<td>0 (0.0)</td>
<td>27,532 (53.2)</td>
<td>11,797 (22.8)</td>
</tr>
<tr>
<td>ASAHI</td>
<td>27,289 (100.0)</td>
<td>4,633 (17.0)</td>
<td>96 (4.4)</td>
<td>13,911 (51.0)</td>
<td>8,649 (31.6)</td>
</tr>
<tr>
<td>KANAZAWA</td>
<td>62,594 (100.0)</td>
<td>11,030 (17.6)</td>
<td>47 (0.1)</td>
<td>43,344 (69.2)</td>
<td>8,173 (13.1)</td>
</tr>
</tbody>
</table>

---

**DISCUSSION PURPOSE ONLY**

### Major Risks and Problems on WTE Project

<table>
<thead>
<tr>
<th>Item</th>
<th>Risk/Problem</th>
<th>Impact/Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Waste Volume</td>
<td>No guarantee for Waste Volume (insufficient volume)</td>
<td>Tipping fee will be increased</td>
</tr>
<tr>
<td>2. Feed in tariff</td>
<td>PPA: Power Purchase Agreement</td>
<td>Project is not financially feasible</td>
</tr>
<tr>
<td></td>
<td>PPA is responsible for the bidder</td>
<td></td>
</tr>
<tr>
<td>3. Tipping Fee</td>
<td>Lower tipping fee</td>
<td>Project is not financially feasible</td>
</tr>
<tr>
<td>4. Sovereign Guarantee</td>
<td>No Guarantee from central government</td>
<td>Negative influence on project finance</td>
</tr>
<tr>
<td></td>
<td>providing government guarantees for infrastructure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public-Private Partnership (PPP) projects</td>
<td></td>
</tr>
</tbody>
</table>

**Guarantees and financial condition for a project are the most important.**
## Risk Allocation of PPP scheme

### Optimization of Risk Allocation between Public and Private for Minimization of Total Project Life-Cycle Cost

<table>
<thead>
<tr>
<th>Risk Allocation</th>
<th>City A in Asia</th>
<th>City B Japan (Typical)</th>
<th>City C Japan (Biogas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Quantity</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Waste Quality</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>PPA/Rate &amp; Tenure</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Survey &amp; Soil Condition</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Ash Disposal</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Plant Performance</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Durability &amp; Availability</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>O&amp;M Cost</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Law &amp; Regulation</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Escalation (CPI)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Plant Shutdown</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Concept for Solid Waste Management Project

Gen TAKAHASHI
General Manager,
Global Business Development
JFE Smart Infrastructure

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Traditional Waste Dumping

CH₄ Emission

Global Warming

Pollution

Hazardous situations for the communities and local economies

Land Availability

Difficult to secure new Landfill space

“Waste to Energy” Failure Case

Source: Internet

Why WTE? ⇒ Benefit!

Emission level is lower than environmental standard

Waste Heat Reuse for Local Community

Close to waste generator and short transportation distance

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Integrated Approach for Waste

**Wastes**

- Pre-Treatment
- Conversion
- Utilization

**Conversion**

- Gasification
- Gasification Plant
- Gasification Unit

**Utilization**

- Recycling
- Power

**JFE’s Stoker Furnace**

**Proven Track Record**

- Minimization of environmental impact
- Low DXN
- Low NOx

- Intermediate Ceiling
- Combustion gas
  - O₂, NOx, CO₂
- Two-Way Flow

**Anti-DIOXINs Technology**

- Waste receiving
- Incinerator & Boiler
- Gas cooling
- Flue gas treatment

1. Dioxin reduction control
2. Inhibit Dioxin re-generation by quenching flue gas temp.
3. Dioxin removal by Activated Carbon
4. Dioxin decomposition by SCR

**Low Calorific Value Waste Experience**

- Qingdao (2012)
- Shanghai (2013)
- Taichung (1996)

- 1970
- 1980
- 1990
- 2000

- Yokohama Kohnan (1974)
- Fukuoka South (1981)
- Tokyo Meguro (1991)
- Osaka (2003)

We can manage low calorie MSW!

**Reference ; Stoker Furnace (Nerima, TOKYO)**

- Completion: Nov 2015
- Capacity: 500 tpd (250 tpd x 2 lines)
- Power Gen.: 18.7 MW
- Site Area: Approx. 15,000m²
- Flue gas treat.: dry-type flue gas treatment system, bag filter, wet scrubber, deNOx reactor
- Ignition Loss of Bottom Ash: ≤ 5%  

**Emission Performance**

- Dust & Fly ash: 0.01 g/Nm³, 0.04 g/Nm³
- SOx: 10 ppm, 91 ppm
- NOx: 50 ppm, 85 ppm
- HCl: 10 ppm, 430 ppm
- DXN: 0.1 ng-TEQ/Nm³, 0.1 ng-TEQ/Nm³
- Hg: 0.05 g/Nm³

**Design Calorific Value of Waste**

- Min. LHV: 7,100 kcal/kg
- Avg. LHV: 10,200 kcal/kg
- Max. LHV: 14,300 kcal/kg

**JFE’s JCM Project ; WTE in Yangon City**

- Counterpart: Yangon City Development Committee
- Site: Mingalardon area, Yangon City, MYANMAR
- Technology: Waste to Energy (WTE) Incinerator: 60ton/day, Generator: 0.7MW
- GHG Emission Reduction: 4,700t-CO₂/year

First WTE Project with JCM
First WTE Project in Myanmar
JCM Project Scheme; WTE in Yangon City

Japanese Government

September 16, 2015

JCM Agreement

Myanmar Government

JCM Subsidy from G of Japan

Yangon City’s Budget

INTERNATIONAL CONSORTIUM

JFE Engineering Corporation

Operation

Construction

Maintenance

Supervisor Dispatch

Monitoring

Reporting

Thank you

http://www.jfe-eng.co.jp/en/
THEMATIC SESSION A

New Initiatives, Theories and Frameworks from Development Partners

A2: Knowledge Platforms for Cities and City-to-City Cooperation
Knowledge Platforms for Cities & City-to-City Cooperation

8th East Asia Summit High-Level Seminar on Sustainable Cities
8 Feb 2017, Chiang Rai, Thailand

Natalja Wehmer
Sustainable Urban Development Section
United Nations Economic & Social Commission for Asia & the Pacific (ESCAP)

Aim & Structure of today’s session

Aim: Explore…cities greater role in global development
→ importance of city-to-city cooperation increased
→ online platforms important role in linking cities & other stakeholders

Structure:
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- Introduction, Natalja Wehmer, UNESCAP
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- City perspective, Jarupong Pengglieng, Bangkok Metropolitan Authority

Discussion
Survey on knowledge platforms and session

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Existing platforms on Sustainable development

Global Platform on Sustainable Cities
https://collaboration.worldbank.org/groups/global-platforms-for-sustainable-cities
- Partnership of GEF & World Bank
- Recent
- Information & resources linked to offline knowledge sharing

Existing platforms on the market: Sustainable development sites

The Cities Clean Air Partnership (CCAP) http://cleanairaasia.org/ccap/
- Core of CAAP development of certification scheme
- Online platform supports offline work & partnerships
- Contains tools, resources & case studies - for members only

Other existing platforms:

Seoul Solutions - https://seoulsolution.kr/en/content/seoul-solution
100 Resilient Cities - http://www.100resilientcities.org/
Global Platform to End Violence Against Women - http://evaw.unwomen.org/en
IISD - SDG Knowledge Sharing - http://sdg.iisd.org/
Green Growth Knowledge Platform http://www.greengrowthknowledge.org/
Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) - MSW Knowledge Platform

Associated events

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Thank you
http://www.unescap.org/our-work/environment-development/urban-development
Urban SDG Knowledge Platform

Mr. Jarupong Pengglieng
Chief of Vehicle Emission Control sub-division
Air Quality and Noise Management Division
Department of Environment
Bangkok Metropolitan Administration (BMA)

Challenges

Waste generation 9,900 tons/day, 22% of Thailand's (2014)

Wastewater to be treated 1,112,000 m³/day 46% of total wastewater generated (2014)

PM₁₀ on roadside exceeded the 24-hour average (120 µg/m³) in some areas. (2014)

Fuel consumption 353,707 million MJ.

Electricity consumption 32,605.44 GWh (2013)

GHG Emission 42.65 million tons (2007)

The 20-year Bangkok Development Plan
Bangkok Master Plan on Climate Change 2013-2023

The Bangkok Resilience Plan

Low Carbon Development
Green Growth
Climate Resilience Development
Sustainable Development Goals

Green Growth Project in Bangkok

Project Period
12 months (July 2014 - July 2015)

Objective
To assess the impact of urban green growth and sustainability policies on economic performance and environmental quality

Scope of Study
Green Manufacturing and R & D
Sustainable Urban Form and Mobility
Strategies for Climate Adaptation
Infrastructure for Logistics
Natural Resource Consumption
The Role of Civil Society in Green Growth

Output
The Report of Green Growth in Bangkok
Strategies Boosting Green Growth in the BMR

- Vertical and horizontal co-operation among various government in the BMR
- The involvement of all stakeholders
- Financing options
- Capacity-building activities
- Role and contributions of international co-operation agencies

Low Carbon and Resilient Bangkok

Concrete Action on Climate Resilience

Bangkok Resilience City

Bangkok was selected as one of the first 32 cities to partner with 100 Resilient Cities (100RC) pioneered by the Rockefeller Foundation. The initiative is designed to enable 100 cities from around the world to better address the increasing shocks and stresses of the 21st century.

- BMA received technical support and resources from 100 Resilient Cities
  - to hire a Chief Resilience Officer (CRO) and develop and implement a City Resilience Strategy

Bangkok Resilience Strategy

1. Flood Prevention
2. Reduction of the Impacts of Shocks
3. Mobility
4. Economic Prosperity and Equity
5. Health and Wellbeing

Bangkok Resilience Strategy
Challenge Ahead to Achieve SDG

- Inclusive policy
- Coordinated actions
- Database
- Raising awareness and participation
- Networking
- Capacity building

Thank you for your kind attention
Content

- Introduction
- SDG Knowledge Platform
  - Objectives
  - Examples
  - Benefits
  - City-to-City (C2C) Cooperation
- Outlook

Introduction

- 130 members in Asia-Pacific region
  - Cities, Organizations and Corporate
- 30 years old
- Secretariat relocated to Seoul in 2013
- Mission: To connect urban actors and deliver tangible solutions for cities across the Asia Pacific region.
- Activities
  - Training city leaders and decision makers
  - Facilitating effective dialogue between cities
  - Sharing policy, technology and technical expertise between key urban stakeholders

Problem Statement

- Many cities develop sustainable solutions to tackle urban challenges
- Many of these innovative solutions are not widely shared through the Asia Pacific region
- There is a need for knowledge sharing for cities to implement innovative ideas and best practices for sustainable urban development

Urban SDG Knowledge Platform

- Developed by Seoul Metropolitan Government, UN ESCAP and CityNet
- Addresses the knowledge sharing needs of cities in regard to sustainable urban development and supports local action for the implementation of the 2030 Agenda
Urban SDG Knowledge Platform: Objectives

- The Platform supports local action for the implementation of the 2030 Agenda, by:
  - Providing a repository of policies, initiatives and good practices at the city level.
  - Facilitating regional cooperation, linking cities that have specific solutions with cities interested in replicating them.
  - Facilitating regional follow-up and review of implementation of the 2030 Agenda.

- Target users and audience
  - The main target users of the Platform are local governments.
  - The Platform will also provide a useful knowledge base for national government officials, in particular those tasked with the implementation of the 2030 Agenda, multilateral agencies and donors, as well as civil society organizations active in cities.

Urban SDG Knowledge Platform: Examples

- Resilience Plan for Bangkok, Thailand
  - Developing an action plan to protect the city from flooding by reducing the impacts of shocks and be able to bounce back stronger
  - Holistic planning approach to build capacity and implement innovative technologies in cooperation with the public & private sectors, experts and international organizations
  - Supported by 100 Resilient Cities

- Bus Rapid Transit (BRT) Project (Islamabad, Pakistan)
  - BRT takes advantage of the Islamabad’s wide road alignments to serve 135,000 people every day
  - Supported by Cities Development Initiative for Asia (CDIA)

Urban SDG Knowledge Platform: Benefits

- Share: Promote cities’ achievements in sustainable urban development

- Learn: Gain access to activities and insights for sustainable urban development from various cities

- Connect and Replicate: Connect cities through city-to-city (C2C) cooperation, policy and best practice sharing through peer-to-peer learning

Urban SDG Knowledge Platform: Content and Functionality Overview

- The main content of the Urban SDG Knowledge Platform is available through a searchable database of urban policies and initiatives related to SDGs.
- The Platform will focus on user-generated knowledge sharing, sourced directly from local government representatives
- Cities can upload policies and share information about the key parameters of policies, including contribution to SDGs, results, risks involved, resources required, and media.
- The Platform will also provide an overview the SDGs, outlining why each goal is important for cities, and link to additional resources.
- Policy sharing: Users will be able to register to the platform and upload their initiatives by completing the policy upload form.
- Interaction and Cooperation: Members of the site will be able to interact with other users through the comments sections, and visitors to the site will be able to share platform content on social media. The Platform aims to enhance city-to-city (C2C) cooperation
Urban SDG Knowledge Platform: C2C

- **C2C Cooperation: CityNet Services**
  - Match suitable cities and partners for C2C Cooperation
  - Utilize expertise, technical advice and best practice examples from innovative cities and market leaders
  - Deliver technical assistance, study visits, consulting services, face-to-face learning exchange between different cities and organizations

Matching
- Identify possible C2C, connect partners
- Define themes, learning goals and time frame

Study Visit
- Share best practice and lessons learnt on pre-defined themes
- Adapt and replicate best practice

Replicate
- Study Visit
- Share best practice and lessons learnt on pre-defined themes

Benefits of C2C Partnerships: Learning from best practice
- Solutions through focused exchange of technical knowledge
- Narrower focus: fosters mutual understanding and reciprocity, benefits all involved parties
- Demand-driven and cost-effective process
- Can motivate decision makers: “seeing is believing”
- Multi-dimensional form of learning that combines political, administrative, technical and managerial dimensions
- Utilize co-benefits of CityNet’s and its partners’ capacity building programs

Urban SDG Knowledge Platform: Outlook

- SDG Knowledge Platform is planned to be linked with other online platforms
- The platform will grow and feature a variety of innovative initiatives from cities that are localizing the SDGs
- Work with us!

Thank You.

Website: www.citynet-ap.org
Email: programs1@citynet-ap.org
Facebook: www.facebook.com/citynetsecretariat
Twitter: @CITYNET_ORG

https://www.youtube.com/watch?v=SRPvYCCjAYE
Knowledge Platforms for Cities & City-to-City Co-operation

Katharine Thoday

8th East Asia High Level Seminar on Sustainable Cities
8 February 2017 | Chiang Rai, Thailand

Opportunities for City Learning

- Innovate new solutions
- Leverage technical assistance
- Catalyze market transformation
- Provide trusted advice amongst peers
- Replicate good ideas

Areas of Consideration for C2C Co-operation

- Common objectives
- Clarity on time-frame and resources needed
- Level of complexity - transferability/replicability
- Communication preferences
- Managing time differences/language differences
- Managing changes of personnel

Sharing knowledge on Clean Air

- Working through existing platforms i.e. local government associations
- Developing thematic hubs/networks
- Importance of Secretariat to develop partnerships between similar programmes
- Collating data

Providing expert review

For more information: www.cleanairasia.org
Localizing Global Agendas
Role of Local Governments in SDGs

Arief Mulya Ramadhian
Programme Development Specialist – UCLG ASPAC

Environmental Sustainable Cities
Tunis, Tunisia, 8-9 February 2017

Role of Local Government Advocacy

Building on the outcomes of Habitat II, UCLG and METROPOLIS came together, in the Founding Congress in Paris the three are set for a longstanding relation between UCLG habitat and local government.

In convened aiming at gathering all local and regional government organizations and their partners.

2004 Creation of UCLG

2006 Millennium Summit

2009 Rio+10

2010 Monterrey

2012 High Level Panel Post 2015

2013 The Global Taskforce of Local Regional Governments for Post 2015 and Habitat III

2015 UN General Assembly on Urban Development

2015 Habitat III

2015 Habitat III

2017 Global Compacts

2018 SDG Summit

2018 UN General Assembly

2019 Global Compact on Climate Change

2020 ILD Summit

2020 UCLG ASPAC

2020 Regional Assemblies

2020 World Urban Forum

The role of local governments can contribute to sustainable urban development in five main ways:

1. Fiscal Decentralization according to needs of subsidiarity is required to support these tasks.

2. Local economic development strategies

3. Local development from the bottom up to balanced systems of cities

4. Local governments can contribute to more effective and accountable international governance if we are ready on the ground and given a seat at the global table.

We Do at the Asia Pacific

UCLG

Rapid assessment to local government on the best way to communicate on SDGs - communication toolkits/strategy

Road Map Development on SD Goals (i.e. #8 on LED on Road: #11 on Supporting LGs in Participatory Public Space Improvement)

Capacity Buildings

 Ensuring efficient implementation of local and regional flagship projects included in the plans

Preparing Ready to Start the Implementation of DGs at the Sub-national Level

Defining how local and regional priorities can be integrated in participatory local and regional development plans

UCLG ASPAC

+7000 LOCAL GOVERNMENTS

+3.76 BILLION PEOPLE

+5 WW POPULATIONS

ABOUT UCLG ASPAC

Asia and the Pacific is the largest regional sector of UCLG, and it incorporates economically fast developing countries such as China, India, and Indonesia.

UCLG ASPAC LINKAGES TO

China +7000

India +3.76

Brazil +5

 mejen to target resources
vely, to foster participation and ie accountability.

Fiscal decentralization according to needs of subsidiarity is required to support these tasks.

Act locally to address global challenges and to manage the impact of global phenomena at local level (climate change adaptation, migration, the mediation of globalizing economic and cultural forces).

Local economic development strategies

Local development from the bottom up to balanced systems of cities

Local governments can contribute to more effective and accountable international governance if we are ready on the ground and given a seat at the global table.

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ASPAC Activities on Localizing Global Agendas

Map in Localizing SDGs

THE TOOLBOX FOR LOCALIZING THE SDGs

www.LocalizingTheSDGs.org
HOW TO GET INVOLVED?

An open process, each partner contributes according to its own resources, expertise and availability.

- Raising Awareness
- Diagnostics
- Strategies and Plans
- Monitoring and Evaluation
- Enabling institutional arrangement for SDGs implementation
- Matriarchal Governance
- Territorial / Multi-Stakeholder Approach
- Accountability
- Development Cooperation Effectiveness
- Capacity strengthening

www.LocalizingTheSDGs.org

YOU want to watch the video?

https://www.youtube.com/watch?v=Hirrqys5PRk&t=4s

Website: www.uclg-aspac.org

UCLG ASPAC - United Cities and Local Governments

@uclgaspac
Experiences and Lessons Learned from Implementing an Online Knowledge Platform: Asia Pacific Adaptation Network (APAN)

Augustine Kwan
Programme Manager (Knowledge Management and Outreach)
IGES Regional Centre
8 February 2017, Chiang Rai, Thailand

Introducing IGES and APAN

Who’s IGES?
• Non-profit policy research institute promoting sustainable development across the Asia-Pacific region
• Established in 1998, IGES is headquartered in Hayama, Japan and has branch offices and desks in Bangkok, Beijing, Kansai, Kitakyushu, New Delhi, and Tokyo
• IGES Regional Centre (Bangkok) – main arm to collaborate with local and international partners, including USAID, ADB, etc.

What’s APAN?
• Regional network of practitioners responding to the growing and urgent need for climate change adaptation
• Capacity building; knowledge management; forum organization
• Supported (financial and in-kind) by the Ministry of the Environment, Japan, USAID, UNEP and others

APAN Web Portal:
http://www.asiapacificadapt.net/

APAN Web Portal: Funding Structure

How’s the APAN Web Portal funded?
• USAID Adapt Asia-Pacific, a climate financing project, sees APAN as pillar for sustaining its outcomes, knowledge management activities, including website development/management, implementing Community of Practice activities
• Work done through IGES, with allocated, dedicated KM and web staff
• Clear work plans and regular, quarterly and annual, reporting to USAID/RDMA on KM activities

APAN Web Portal: Key Features

• Regularly update and maintain the APAN web portal with the latest adaptation news and publications
• Use of Climate Tagger on the APAN Web Portal to sort and streamline climate change adaptation information to better reach end-users.

Fostering a Community of Practice (CoP)

What is the APAN Exchange Series?
• Regular email-based discussions reaching over 800 practitioners.
• Developed by IGES, supported by USAID Adapt Asia-Pacific
• Effective and cost-effective CoP modality to engage governments and practitioners
• Getting responses directly in your email inbox is immediate and intimate
• Capture experience-based knowledge from practitioners
• Encourage discussion, interaction and learning

APAN Web Portal version
Fostering a Community of Practice (CoP)

How to ensure successful regional knowledge sharing?

- Be current and be touch with global events
  - Discussion on gender and climate change adaptation ran during International Women's Day in March 2016
- Run online discussions prior to face-to-face events
- Online communities don't emerge spontaneously; need to nurture, identify CoP 'champions' to initiate/stimulate discussion
- Summarize conversation and develop/share key messages and reports

What is the APAN live online chat?

- Connect experts with practitioners (national/local govt officials) 'live'
- Text-based (typing) accommodates low bandwidth internet connections

Knowledge Platforms: 9 Points to Think About

1. Being clear on your objectives
2. Identifying a distinctive niche
3. Narrowing down your audience
4. Understanding your audience
5. Generating great content (good content doesn't create itself)
6. Creating effective online communities (don't emerge spontaneously; time limit discussion)
7. Getting your staffing right
8. Clarifying governance arrangements
9. Creating a sustainable business model (what's your funding model; demonstrate value; sponsorship)

Source: "Planning a Successful Knowledge Platform: a 9-Point Checklist," Climate Knowledge Brokers Group, [https://www.youtube.com/watch?v=mccnI84GcRs](https://www.youtube.com/watch?v=mccnI84GcRs)
THEMATIC SESSION B

Good Practices, Experiences, and Successes from Cities in Asia

B2: Climate Action at the City Level:

Local Mitigation and Resilience Efforts
CLIMATE ACTION AT THE CITY LEVEL:
LOCAL MITIGATION AND RESILIENCE EFFORTS

- 80% of the planet’s population
- 80% global GDP
- 75% of world’s energy consumption, 80% CO2 emissions

CITIES AND CLIMATE CHANGE

INCREASING CLIMATE RISKS

- Heat wave
- Flash/surface flood
- Drought
- Extreme hot days
- Air-borne disease
- Coastal flood
- Extreme winter conditions
- Salt water intrusion
- Tornado
- Other extreme

COP21
Paris Agreement: compared to what it could have been, it’s a miracle

But Agreement won’t come into force until 2020, by which time global emissions must have peaked
An analysis of the contribution C40 cities can make to delivering the Paris Agreement objective of limiting global temperature rise to 1.5 degrees.

How cities will get the job done

• Presenting first significant pathway for relating the ambition of the Paris Agreement to action on the ground
• Ave per capita emissions across C40 cities would need to drop to around 2.9 tCO2e per capita by 2050
• From 2016 to 2050, over $3 trillion investment is required across all C40 cities
• DEADLINE 2020: ACTION TAKEN IN THE NEXT FOUR YEARS WILL DETERMINE IF IT IS POSSIBLE FOR CITIES TO GET ON THE TRAJECTORY REQUIRED TO MEET THE AMBITION OF THE PARIS AGREEMENT
• Mayors can deliver on climate just over half of the savings needed to put C40 cities on a 1.5-degree trajectory
• Wealthier, high-carbon cities must deliver the largest savings between 2017-2020
• Action to deliver structural changes from outside cities, must start to have a significant impact from 2023 at the latest
• If all cities with a population greater than 100,000 adopted the ambition for C40 cities set out in this report, they could save 863 GtCO2e globally by 2050.

CO-ORDINATED CITIES
Successful future cities will run on data

Rio Operations Centre: “I keep better thanks to it. The worst thing is not having the information, to not have the tools to act. But we do now.” (Mayor Paes)

• Prompted by fatal landslides
• Decreased emergency response times 30%
• Co-ordinates all service, including transport and waste

TOWARDS LOW CARBON FUTURE
A low carbon development pathway means faster rise in living standards and stronger economies

Thank you
Milag San Jose-Ballesteros
Regional Director for Asia - East, Southeast and Oceania
mballesteros@c40.org
FOLLOW US
Kitakyushu City’s Activities to address climate change (mitigation and adaptation)

City of Kitakyushu
Yuzo Yagai

Overcoming Severe Pollution: Kitakyushu's Experience

1960s

Today

Key Factors: Partnerships among Multi-Stakeholders

Residents

Residents observing a private company

Study session on air pollution measures with university professors

Partnership

Environmental supervision & environmental infrastructure

Local Government

Private Enterprises

Taking on the Challenge of a Resource Recycling Society

Kitakyushu Eco-Town Project

Japan's Largest Eco-Town
Approved 1997, Started operations 1998
No. business facilities: 29
No. research facilities: 16

- Investment ~66 billion yen
- Employees ~1,300
- CO2 Reduction 380 thousand tons a year
- Visitors ~1,500,000 (1998-October 2016)

R&D on recycling technologies for solar power systems

Automobile recycling

Collection/treatment of rare metals

Balance of environmental policies and economic policies in Kitakyushu City

Environmental pollution (Sulfur oxides) [(mg-SO3/100 cm²/day)]

Economic development (Manufactured product shipment values: 100 billion yen)

Source: “Survey on the Japanese Experience” by the World Bank

Environmental pollution was removed along with economic development.
Next-generation Energy Park
Formation of low-carbon society developing in each region

Kitakyushu Smart Community Development Project
Creating a new lifestyle with locally produced and locally consumed energy
Selected as one of four bases in Japan in April 2010

Continuous “Collection of Knowledge”
~Kitakyushu Science and Research Park~

Environment & Information

Climate Change Impact and Adaptation

2 State of Climate Change and Future Forecast in our City

3 Impacts of Climate Change and Major Adaptive Measures
Adaptation measures have been extracted based on the regional characteristics of our city, from the national “Climate Change Adaptation Plan”. Aiming to improve capacity through the “strengthening” of various adaptive measures together with a medium to long-term view.

- Promote introduction of high-temp.-resistant rice strains
- River projects (establish and maintain seawalls etc.)
- Erosion control projects (retaining walls etc.)
- Maintaining and securing an emergency medical system
- Surveys of mosquito habitats and viruses
- Providing infectious disease information to citizens

- Red tide measures
- Coastal projects (establish and maintain seawalls etc.)
- Disaster Prevention Guidebook development
- Heat stroke prevention awareness
- Infectious disease surveys
- Shimonoseki City tap water agreement etc.
Climate action at the city level: local mitigation and resilience efforts

8-9 February 2017
Chiang Rai, Thailand
Hanah Paik, Cities Programme Asia Pacific Lead

CDP’s mission

To transform the global economic system to prevent dangerous climate change and value our natural resources by putting relevant information at the heart of business, investment and policy decisions.

How we create change

Global environmental disclosure platform

CDP’s wider work

You can’t manage what you don’t measure.
70% increase since the Paris Agreement was adopted

Cities that disclose through CDP take more action

Cities that have disclosed to CDP for 3 years or more, report significantly higher levels of emissions measurement and management data, risk recognition and adaptation actions and opportunities.

CDP Cities in 2016...

31 cities in Asia and Oceania have a city-wide emissions reduction target

87% of cities view climate change as a risk to their city

72% of Asia and Oceania cities foresee risks to their water supply
THEMATIC SESSION C

Thailand Feature Sessions

C2: 3Rs and Waste Management in Thailand: Best Practices
"Committed to developing Non Din Daeng is a livable city for all."
Start… at Non din gaeng Subdistrict Municipality

Campaign on waste segregation in household Project

Miss Recycle Contest
Support, Training and instruction

Field trip

Share and Learn with the community (villager)

Analyze Community Problems

Weakness
1. Waste from other people
2. The villagers lack of knowledge about waste management

Strength
1. Strong leader
2. Strong associate network
3. Unity
Municipal solid waste about 210 kg/Day

Organic waste, 62.87%
Recycle waste, 31.16%
General waste, 5.79%
Hazardous waste, 0.18%

Composting

Compost bin for leaves and twigs in household

Enzyme Ionic Plasma

food scraps in the household can make enzyme ionic plasma
Waste Segregation

Segregation for recycle

The participation of many organizations.

Segregation for recycle

The participation of many organizations.
Nong Sakae Kuan’s Lifestyle on the sufficiency

Waste Management of Nong sakae kuan village

Waste Reduction at the Source
use cloth bags or baskets while shopping

Bring food for the monks by Pinto.

Breeding the angleworm to get rid of organic waste

Waste Banks
Grocery shop

Purchase waste Delivery

Offering waste Ceremony

Upcycle

Hazardous waste

Awards
Awards
Awareness Is Over

6 Challenges are likely to face when they practice MRV schemes:

1. Data
2. Technical Capacity
3. Institutional system
4. Funding
5. Human resources
6. Awareness

Consistently keeping track of Parties’ emissions and actions is key to build transparency and confidence in the climate regime. Furthermore, many instruments to combat climate change only function when reliable data is available.

Malang it is commonly known as “Education City”:

Elementary school (SD) = 269 schools
Junior high school (SMP) = 97 schools
Senior high school (SMA) = 44 schools
Vocational high school (SMK) = 51 schools
Religion Elementary school (MI) = 50 schools
Religion Junior High school (MTs) = 25 schools
Religion Senior High school (MA) = 15 schools
Total = 551 schools

More than 60 University and College

Waste, City Issue, Global Impact

\s and aste . anagement in . alang est ractices

Establishment of Environmental Cadres and Green Community Forum
Utilization of landfill gas for 488 Households
Composting and Urban Farming
Malang Waste Bank

5. Worm breeding to reduce waste in riverside settlements
6. Liquid Waste Management Installation
7. Green and Clean Village Kampoong Contest
Poverty, destroy everything

Waste and energy database challenge
- Environmental data inventory with 30 School,
- We are collecting waste and energy data on weekly based, transportation data every semester,
- Environmental data support Adiwiyata Program (Environmental School Award)
- Participatory approach (bottom up)
- Using eco-mapping process
  https://datachallenge.ecomappingpilotindonesia.org/

Waste and youth
https://www.youtube.com/watch?v=L3_j4KC1g0c

Waste for education bill

Waste for health insurance
https://www.changemakers.com/users/gamal-albinsaid

Thank you
Terima kasih
Matur Suwun
Using natural materials instead of plastics in community events

Zero Waste Funeral

Waste Composition Analysis
Green Cone for Food Waste

Donation of Recyclables by Elders

Source Separation

Safe Disposal of Hazardous Waste

Furniture from Secondary Materials
Craftsmanship

PM visits a home stay

Local products from bamboo
Organic Farm

Baan Pong Temple

Baan Pong School

Poster about waste management and recycling.
A Sharing on “Saint Joseph Thare School’s Zero Waste Management Project”

What have inspired you to join the Zero Waste School Project?

1. One of His Majesty the King’s speeches in which he states that “… Protecting the environment is tantamount to saving our children’s future.”

1.1 One of His Majesty the King’s speeches in which he states that

1.2 One of our school’s visions which states that taking care of the environment

1.3 We realize that waste is an important factor that destroys the environment and we found out that in our school there are two main sources where waste come from:

Congregation of the Sisters of Saint Paul de Chartres, “Be All to All”

We have adopted and applied the King’s Philosophy (Sart Praracha) in our school waste management project.

Natural Source

Human Source
2. How does the school enforce waste management?

We use the King's Philosophy as a way to enforce waste management following 3 Rs Principles, in both dimension of academics and activities.

2.1 Academic Dimension:

Following His Majesty the King’s Philosophy to working, the school’s curriculum has integrated teaching and learning processes in all 8 subject groups.

Through brainstorming, we have developed step-by-step methods in making waste management easier and more self-manageable to the point that it has become a way of life. With patience and diligence, we started with small things and moved on to bigger ones. By being environmentally friendly with nature, we have let nature help itself: for example, covering the soil with dry grass and hay, using earthworms to get rid of natural wastes, and even using earthworm manure as fertilizer.

2 Activities Dimension: Following the Ministry of Education’s “Lessen Study Time, Add Learning By Doing Time” policy, students learn by doing in each of the 13 stations in our “King’s Philosophy Garden” (SuanSartPraracha).

Station 1 - Studying Herbs
Station 2 - Organic Farming

Station 3 - Feed the Soil and Let the Soil Feed the Plants

Station 4 - Growing Three Kinds of Plants

Station 5 - Sufficiency Economy Station

Station 6 - Fertilizers Using HRH Princess Sirinthorn's Formula and Application

Station 7 - Triple Waste Water Treatment Plant
Station 8 - Biogas or Organic Gas Station

Station 9 - Organic Water Study from Undesirable Dried Herbs

Station 10 - Growing Mushrooms

Station 11 - Feeding Earthworms to Get Rid of Organic Waste

Station 12 - Recycled Waste Bank

Station 13 - Charcoal Incinerator 200 Litres Station
Success Gained from Joining Zero Waste School Management Project: On the Personal Level:

- All school personnel gained knowledge and understanding of the importance of cooperation to urgently preserve the environment.
- All school personnel are united, understanding, compassionate and see the importance of their colleagues and well as respect their abilities.

Success Gained from Joining Zero Waste School Management Project: On the Personal Level:

- All school personnel have become service-minded and service-oriented. They care for the community more than they care for themselves.

Success Gained from Joining Zero Waste School Management Project: On the Personal Level:

- All school personnel are loyal to HM the King in a sustainable, stable, and firm way after having learned from the King’s Philosophy.

Success Gained from Joining Zero Waste School Management Project: On the Personal Level:

- All school personnel understand and practice the Sufficiency Economy well enough, to be used as their way of life now and in the future.

Place/Organization

The school has become a learning center that is visited by many organizations. Because of this, we have been able to extend and expand our knowledge and methods work on the environment and waste management, which has resulted in the sustainable preservation of the environment.

The school was awarded Her Royal Highness Prince Sirindhorn’s Trophy for Zero Waste School Project on the national level.
Social: The school is greatly acknowledged by many organizations, both far and near, as evidenced by requests for visits to the school, for school personnel to be guest speakers in other organizations, and for the school to share its Zero Waste Project.

Social: The school has received help and cooperation from both public and private sectors and organizations in sharing knowledge and has even received equipment from them.

The school has made other communities more aware of the importance of preserving the environment by getting rid of waste. This has been seen and affirmed from the many requests to visit our school.

4. Problems and Solutions
Thank you.
PLENARY 3

New Initiatives to Promote the SDGs and the 2030 Agenda on Sustainable Development
Thank You
Office of Natural Resources and Environmental Policy and Planning (ONEP)
http://www.onep.go.th/
TEL. 02-265-6500
Why SDGs is important for us?

- Ministry of Environment
  - Mainstreaming ENV to Development
  - Interlinkage – Multi benefit with stakeholders

- Local Government
  - Attractive Cities = Competitive Cities
  - National and International recognition

- Private sector
  - New social business
  - ESG investment
  - Sustainability of enterprises

2-1 National Implementation Framework

- SDGs Promotion Headquarters
  - Established in the Cabinet in May, 2016
  - Headed by Prime Minister
  - Attended by all Ministers
  - Stakeholder meeting for advice

- SDGs Implementation Guideline
  - Define Vision, Priority issues, Specific measures, Indicators, Follow-up mechanism etc.
  - Ensure coherence and inclusiveness of various measures by different Ministries.
  - Define roles of stakeholders including private sectors, consumers, academia for SDGs

SDGs Stakeholders’ Meeting organized by the MOEJ

- Key Objective
  1. Share pioneering practices among stakeholders
  2. Introduce the international trend to Stakeholders
  3. Disseminate best practices domestically and internationally

- Stakeholders’ meeting in Aug and Dec
  1. More than 400 audiences mainly from business
  2. Five global companies shared their activities
  3. Networking event for participants exchanged their views

SDGs’ activities in Japan

1. National Government
2. Citizen
3. Private sectors
4. Local Government
5. International
Private sector’s action for SDGs - Example 2: Sompo Japan (Insurance)

Weather Index Insurance for Southeast Asian farmers (SDGs Goal 2, 13, and 17)

Insurance product to reduce agricultural risk in Southeast Asia.

- Pay insurance amount when a weather index fulfills certain conditions without certificate of loss

- Reduce agriculture’s risks by climate change,
- Expand the concept of insurance, and saving
- Expand insurance market to farmers

SDGs’ activities in Japan

SDGs' activities in Japan

Cities’ Action for SDGs - Future Cities -

Future Cities selected by the Government (11 cities: 2011)

- Shimokawa Town
- Toyama City
- Kashiwara City
- City of Yokohama
- City of Kitakyushu
- Rikuzentakata City
- Sumita-cho, Ofunato City
- Iwamizawa City
- Ishinomaki City
- Minamisoma City
- (Disaster-hit regions)

- A variety of ambitious proposals towards a sustainable society

Cited from Presentation by Dr. Shuzo Murakami on 6th International Forum on the Future City Initiative

Cities’ Action for SDGs - Future Cities -

Future Cities selected by the Government (11 cities: 2011)

7. Japan’s Assistance Initiatives to address Climate Change

- The initiative on Japan’s major supports for the developing countries to address climate change in 2016

- Main Areas of Japanese Contribution
  - Mitigation • Diffusion of superior low-carbon-emission technology
  - Adaptation • Sharing of Japan's experiences and cases
  - Transparency • Human resource development for inventory enhancement
  - Fluorocarbons • Comprehensive measures for controlling emission of fluorocarbons
  - SDGs • Support for sustainable societies

Japan’s Assistance Initiatives to address Climate Change

Sustainable Development Goals (SDGs)
1. Feasibility study for JCM projects by city to city collaboration
2. International Cooperation for Realising ESCs
3. Regional 3R Forum in Asia and the Pacific
4. Science and Technology Research Partnership for Sustainable Development (SATREPS)
5. Monitoring national GHG emissions with satellite
6. Promoting international contribution by Climate Change Adaptation Measures of Water-Related Disasters
7. Support to promotion of forest conservation and sustainable forest management
ASEAN ESC Model Cities Year 3 Overview

**Background:**
Established with support by the Japan-ASEAN Integration Fund (JAIF), ASEAN ESC Model Cities is ASEAN’s platform of ‘frontrunner’ cities in 2011
- Implement innovative practices
- Improving local quality of life
- Contribute to national/global goals.

**Main activities:**
- Support training and seed funds for pilot projects in Model Cities to develop/scale up good practices
- Connect Model Cities to learn each other within countries and across ASEAN countries
- Recommend high-potential cities to additional project and training opportunities by other supporting organizations

Pilot Training Workshop on City Experiences
Waste Management for Low-Carbon, Resilient and Sustainable Cities
(9-13 January 2017, Kitakyushu City)

Peer-to-Peer learning for finding solutions applicable to local contexts

Lectures
- Collection, separation, recycling, treatment
- International financial/technical support
- Disaster waste
- Awareness & Education
- Waste and climate change

Site visits
- Incineration plant
- Garbage collection site
- Recycling center
- Semi-Aerobic Landfill
- Environmental museum

Sharing & discussions
- Japanese cities’ experiences
- Kitakyushu, Hiroshima, Minamata
- Participating cities and countries

Action Planning
- Balikpapan City
- Chiang Mai Province
- Mandalay City
- Thai Nguyen Province
- Quezon City
- Cambodia (MOE)
- Viet Nam (MONRE)

Next Steps to promote SDGs implementation...

1. Localize SDGs into the environment Plan and support to integrate environmental aspect into local development planning
2. Support to connect private sectors which actively engaged in SDGs to ESG investment
3. Support to develop and scale up good examples of SDGs projects which has multi benefits with multi stakeholders
4. Accelerate to share, plan, and act with Multi-level Stakeholders

Thank you for your attention
ADB’s Urban Development Operations to Promote SDGs and Sustainable Development

Eri Honda
Principal urban Development Specialist,
Asian Development Bank

Focus Areas

- **Inclusive Cities**: providing urban services and infrastructure for poor and vulnerable communities
- **Green Cities**: promoting urban environmental improvement, energy efficiency, and climate change resilience
- **Competitive Cities**: providing strategic physical and social infrastructure to foster economic growth

Linkage with SDG 8: Economic Growth and SDG 11: Livable Cities

ADB urban development projects are designed:
- as comprehensive urban development projects covering water, sanitation and wastewater, solid waste, road and drainage, flood, etc.
- to improve access to urban services, environmental conditions, and public health
- to attract business and investment, and tourist visits, thus increase employment opportunities
- to increase household income and reduce poverty

China: Guangxi Nanning Urban Environmental Upgrading Project

- Project components: flood, wastewater, solid waste, public park, and capacity development
- Public satisfaction with the urban environment increased based on surveys
- Incidence of dysentery reduced from 46 to 35 per 100,000 and diarrhea reduced from 52 to 46 per 100,000
- Number of tourists increased 1.3mil to 2.3 mil

Myanmar: Mandalay Urban Services Improvement Project

- Project components: water supply, wastewater and drainage, and capacity development
- HH with access to improved water supply increased from 19,000 to 124,000
- NRW reduced from 52% to 25%
- Direct wastewater discharge reduced from 85,000m³/day to 25,000m³/day
- Flood frequency reduced from 1 in 6 mos to 1 in 2 yrs
Transport and Climate Change in the ASEAN: Linking Regional Activities with SDGs
Julia Nagel, GIZ

ASEAN-German Technical Cooperation Project
“Energy Efficiency and Climate Change Mitigation in the Land Transport Sector”

Project concept (Phase II: 2016-2018)

Overall Goal
improve the conditions for the implementation of measures…
…to increase energy efficiency and reduce climate relevant emissions from the land transport sector…
…in the ASEAN region at the regional and national level

Activities & Topics
Capacity building, training, technical advice, research & data
Focus on fuel economy policies and measures, green freight and logistics, two- and three wheelers, including electrification
Support KLTSP implementation and related initiatives

How do you know if your transport systems become more sustainable?

Data & Indicators

Insufficient data for tracking progress towards sustainable transport at country and regional level

KLTSP Goal 2.3

Conclusion and discussion points

• Having a common understanding and similar definition of indicators is important – the tools can be different, but the analysis and interpretation of data is key.
• How can other countries and cities benefit from ASEAN’s approach and vice versa?
• When is progress actually progress?
Overview of JICA Operations

- Technical Cooperation
  - 572 technical cooperation projects ongoing (in 84 countries/regions)
  - 76 new Loan Aid projects, for which L/A commitments were signed (with 31 countries/regions and 1 organization)

- Multilateral Aid
  - (Financial contribution to international organizations)
  - Implementing agency of Japanese ODA for around 150 countries

- Loan Aid
  - 154 new Grant projects, for which G/As were signed (with 58 countries/regions)

- Disaster Relief
  - 15 times dispatched/provided to 9 countries/regions

- Citizen Participatory Cooperation
  - 1,198 Japan Overseas Cooperation Volunteers newly dispatched

Source: JICA Annual Report (2016)
1. Evidence-based Planning
Effective master plan starts with analysis based on a set of scientific data to capture a variety of aspects of urbanization. How to ensure “integrity”, balancing economic, social and environmental aspects of urbanization?

2. Integrated Planning
How to ensure stakeholder participation to capture their needs? How to prioritize and put them into the right sequencing?

3. Participatory Planning
How to ensure stakeholder participation to capture their needs? How to prioritize and put them into the right sequencing?

Key Challenges for Master Plan/Integrated Urban Development

**JICA’s Approach in Urban Development**

**Master Plan/Integrated Urban Development Plan**

**Urban Planning**

- Housing
- Industrial
- Tourism
- Water
- Culture
- Solid Waste
- Environment
- ICT
- Public Facilities

**Urban Development Projects**

- Urban Planning
- Urban management

**National Policy**

- Vision, Policy, Strategy
- Land Use Planning
- Transportation

**Regional Policy**

- Vision, Policy, Strategy
- Land Use Planning
- Transportation

**Vision, Policy, Strategy**

- Overall Picture
- Development
- Vision, Policy, Strategy
- Implementation Program

**To implement the MP**

- Implement the Projects
- Strengthen the Institutional Improvement

**Way Forward:** JICA will apply results of this study in a new program focusing on urban sustainability and will include in existing one. It will also continue to review and improve its policy to promote sustainable urban development.

**Towards Sustainable Cities “JICA’s New Challenge”**

A Research on Sustainable Cities in Developing Countries (JICA, 2015)

- For example, Goal 3: Good health and well-being, Goal 9: Industry, Innovation and infrastructure, Goal 13: Climate action, Goal 15: Life on Land, and Goal 17: Partnership for the Goals

**Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

11.1 Housing, basic services, upgrading slums
11.2 Sustainable transportation system
11.3 Capacity for participatory planning and management
11.4 World cultural and natural heritage
11.5 Disaster prevention
11.6 Environmental impact
11.7 Green and public spaces
11.8 Links between urban, peri-urban and rural areas
11.9 Disaster risk management
11.10 Sustainable and resilient buildings

Goal 11 is major target for Urban, but there are also other major targets with linking Urban.

**JICA Partnership Program**

Collaboration with Local Government, Community

- Yokohama City: The Project on Rehabilitation and Recovery from Tsunami, Tsunamis (Philippines)
- Kita Kyushu City: Capacity Building for Water Supply System (Cambodia)
- Manila: Rehabilitation of Metro Manila (Philippines)

**JICA Knowledge Co-Creation Program on transforming cities for sustainability – What’s the future city?**

From 2017 to 2019 (3 years program)

- To discuss required policies and actions on urban development to promote sustainable cities.
- To enhance the network on sustainable cities.
Thank you very much for your attention
OECD’S INITIATIVES TO SUPPORT CITIES AND LOCAL SDGs

Tadashi MATSUMOTO, Ph.D.
OECD, Regional Development Policy

Presentation at Plenary 3
The 8th HLS, 9 February 2017, Chiang Rai, Thailand

National Urban Policy Programme

• During the Habitat III Conference in Quito, Ecuador, UN-Habitat, OECD, and Cities Alliance launched the National Urban Policy Programme (NUPP).

• The NUPP aims to contribute to the implementation of the New Urban Agenda and other global agendas on cities including the Paris Agreement, Sendai Framework and Agenda 2030.

• The NUPP emphasizes the importance of collaboration among all stakeholders, particularly all levels of government, for designing, implementing and monitoring a NUP.

The Flagship NUPP activities

1. The Second International Conference on National Urban Policy (ICNUP2)
   - May 15-18, 2017 in Paris, France: co-hosted by UN-Habitat and OECD and supported by Cities Alliance.
   - The first opportunity following the Habitat III Conference and during the ongoing SDGs process, to consider, in a global forum, the role of National Urban Policy in the global urban agenda.

2. The Global State of NUP Report
   - The first edition of this report to be launched at ICNUP2, May 2017.

   - OECD collaborates with UN-Habitat to work in Viet Nam in 2017. Several reviews/diagnostics could be conducted every year, depending on the demand from countries → possible collaboration with AWGESC

4. Capacity Development Dialogues
   - These multi-level dialogues can create a space for policy dialogues among national and subnational governments on NUP.

More OECD projects to support sustainable cities ...

- Urban green growth studies (country/city)
- Climate change and multi-level governance studies (country)
- Supporting SDGs implementation at the local level (country/city)
  - Improve the evidence base in areas where gaps are noteworthy, including developing indicators;
  - Support integrated planning & strategy at vertical & horizontal levels through tailored city or country reviews on SDGs;

The Flagship NUPP activities (cont’d)

2. The Second International Conference on National Urban Policy (ICNUP2)

   - OECD collaborates with UN-Habitat to work in Viet Nam in 2017. Several reviews/diagnostics could be conducted every year, depending on the demand from countries → possible collaboration with AWGESC

4. Capacity Development Dialogues
   - These multi-level dialogues can create a space for policy dialogues among national and subnational governments on NUP.

Engagement with the NUPP

UN Habitat, OECD and Cities Alliance propose a number of ways to engage with the NUPP:

1. Supporting the Flagship NUPP activities
2. Leading or supporting NUPP’s five work streams (Knowledge, Capacity Development, Country Support, Monitoring and Advocacy)
3. Joining the NUPP Partners Network
4. Liaising with the NUPP to identify countries in need
5. Any other ideas for engagement are welcome!
THANK YOU!

tadashi.matsumoto@oecd.org
Urbanisation and Sustainable Development

- Urbanisation is not a passive outcome of development, but a **creator of value**.

- Urbanisation is a **tool** for development (integration)
  - Agenda 2030 into National Development Plan
  - NUA – practical tools and means of implementation

- The quality of urbanisation is a major driver of cities’ value and productive capacity.

**Bad urbanisation**

- Urban Divide – Inequality – social exclusion

- Density declining – Urban Sprawl / Unplanned growth

---

Vulnerability - natural buffer

---

**Towards Habitat IV – 2036?**

- Habitat III - the first major UN global summit after the adoption of

**Habitat III Inclusive Preparatory Process of 2 Years! (150,000)**

- **5 Regional Meetings**
- **6 Thematic Meetings**
- **10 Policy Units**
- **22 Issue Papers**
- **3 Preparatory Committee Meetings**
- **Informal Consultative Meetings and Hearings**

**New Urban Agenda**

An action-oriented document which sets global standards of achievement in sustainable urban development, by readdressing the way cities and human settlements are planned, designed, financed, developed, governed, and managed, through cooperation with committed partners, relevant stakeholders, and urban actors at all levels of government as well as the private sector and in supporting the implementation of the 2030 Agenda.
Urbanisation and Sustainable Development

- Urbanisation is not a passive outcome of development, but a **creator of value**.
- Urbanisation is a **tool** for development
- The quality of urbanisation is a major driver of cities’ value and productive capacity.

Why ASEAN Cities important?

- 300m. → 507mi. (2050) 10% of the WUP – consumption patterns.
- ASEAN 40% Muslim societies - peace loving people and peace loving nations.
- ASEAN cities have been the agent for migrants integration.
- Harnessing our cultural diversity has been the strength and key to the peace and stability in ASEAN cities.

Why ASEAN Cities important?

- ASEAN cities will be more connected through building Asian Highway and transboudry shinkansen or high speed trains, so that we grow together.
- ASEAN economic integration accelerated free trade, where goods, labour, services, capitals are feely moved trunsboudy transbouday ever.
- ASEAN urbanisation have been led by dynamic youth – hub for innovations, IT, technological advancement, entrepreneurship and local aspiration.
- **SEE YOU in KL @WUF9!**

Gracias - QUITO!
THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS AND NEW URBAN AGENDA IN MALAYSIA: PROMOTING SUSTAINABLE CITIES AND COMMUNITY WELLBEING

DR. DOLBANI MIJAN
DIRECTOR GENERAL OF PLANMalaysia
Ministry of Urban Wellbeing, Housing and Local Government
8-9 February 2017
Le Meridien Chiang Rai, Thailand

AGENDA 2030 SDGs : NEW URBAN AGENDA

The theme of the Eleventh Malaysia Plan (11MP) is...
"Anchoring growth on people"

The theme of the Sustainable Development Goal (SDG) is...
"Leaving no one behind"

NEW URBAN AGENDA AND NATIONAL POLICIES

NATIONAL URBAN POLICY
- URBAN LEGISLATION RULES & REGULATION
- URBAN PLANNING & DESIGN
- URBAN ECONOMY & MUNICIPAL FINANCE
- PLANNED CITY EXTENSIONS /PLANNED URBAN RENEWALS

COMMITMENT OF NEW URBAN AGENDA

1. Provide basic services for all citizens
2. Ensure that all citizens have access to equal opportunities and face no discrimination
3. Promote measures that support cleaner cities
4. Strengthen resilience in cities to reduce the risk and the impact of disasters
5. Take action to address climate change by reducing their greenhouse gas emissions
6. Improve connectivity and support innovative and green initiatives
7. Promote safe, accessible and green public spaces

11TH MALAYSIA PLAN 2016-2020
Thrust 1: Dynamic Urban and Rural Growth
Thrust 2: Spatial Sustainability and Resilience to Climate Change
Thrust 3: Establishing An Inclusive And Livable Community

NATIONAL PHYSICAL PLAN 2016-2020
Principle 1: Good Urban Governance
Principle 2: Livable City
Principle 3: Competitive Urban Economy
Principle 4: Inclusive and Equitable City
Principle 5: Green Development And Environment
ROAD MAP OF NEW URBAN AGENDA 2036

Item C2: Environmentally Sustainable City
Goal 11: Make cities inclusive, safe, resilient and sustainable

HABITAT III
2016
H 3
Quito

2020
12th MP
NPP 4

2025
13th MP
NPP 5

2026
NPP 3

2030
14th MP
NPP 6

2035
15th MP
NPP 7

2036
NUP 4

SDGs 2030

HABITAT IV
H 4

NEW URBAN AGENDA
13th MP
14th MP
15th MP

2026 2035
2026 2036

THANK YOU

PLANMalaysia
Ministry of Urban Wellbeing, Housing and Local Government
Unit 50-12-1, Wisma UOA Damansara,
50, Jalan Dungun, Damansara Heights,
50490 Kuala Lumpur.
Tel: 03-2081 6170 Fax: 03-2094 1170
https://habitat3.org/the-new-urban-agenda/
THEMATIC SESSION A

New Initiatives, Theories and Frameworks from Development Partners

A3: Key Considerations for Localising the SDGs
**Example 1**

**Urban form**

The 8th HLS, 9 February 2017, Chiang Rai, Thailand

Tadashi Matsumoto, Ph.D.

- Population by age
- Population (level and growth)
- Patents application
- GDP per worker
- GDP per capita (level and change)

**Rationale for engaging cities and regions**

- SDGs were not designed specifically for or by cities and regions, but...
- ... most underlying policies and investments are shared across levels of government!
- The role of cities and regions goes much beyond making SDGs happen in practice...
- ... it is about using them as a tool to (re)think sustainability & well-being at local level
- MDGs lessons show important regional disparities in the achievement of universal goals
- Need for territorial indicators to appraise them and design place-based responses

**Example 2**

**Population database (for FUAs above 500,000 inhab.)**

OECD Action Plan for SDGs: Next Steps

- **Mainstream** the SDGs into current and forthcoming work and outputs, especially OECD reviews and Policy Dialogues;
- **Improve the evidence** base in areas where gaps are noteworthy, including developing indicators;
- **Support integrated planning & strategy** at vertical & horizontal levels through indicators; gaps are noteworthy, including developing base in areas where OECD reviews and Policy Dialogues; forthcoming work and outputs, especially the SDGs into current and vertical & horizontal levels through indicators;
- **Engage with global stakeholders** and non-members, in follow-up to Habitat III and at vertical & horizontal levels through indicators; gaps are noteworthy, including developing base in areas where OECD reviews and Policy Dialogues; forthcoming work and outputs, especially the SDGs into current and vertical & horizontal levels through indicators;

**Example 3**

**Well-being indicators available for all OECD regions**

Data can be accessed at: www.oecdregionalwellbeing.com or on http://stats.oecd.org

People's well-being composed of many dimensions

**Main features:**

- Measures well-being where people live
- Focus on outcomes rather than output
- Multidimensionality (11 dimensions: material conditions and quality of life)
- Focus on distributions of outcomes
- Assess how well-being changes over time (about 1 decade)

Short list of headline indicators

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Regional headline indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Mean household disposable income</td>
</tr>
<tr>
<td>Jobs</td>
<td>Employment rate</td>
</tr>
<tr>
<td>Housing</td>
<td>Number of rooms per person</td>
</tr>
<tr>
<td>Health status</td>
<td>Life expectancy at birth</td>
</tr>
<tr>
<td>Education and skills</td>
<td>Educational attainment</td>
</tr>
<tr>
<td>Environmental quality</td>
<td>Population exposure to air quality (PM2.5)</td>
</tr>
<tr>
<td>Security</td>
<td>Household risk</td>
</tr>
<tr>
<td>Civil engagement</td>
<td>Voter turnout</td>
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<tr>
<td>Accessibility to services</td>
<td>Broadband connection</td>
</tr>
<tr>
<td>Community</td>
<td>Perceived social support network</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>Life satisfaction</td>
</tr>
</tbody>
</table>
Example 4
National Urban Policy Programme (NUPP)

- Launched at Habitat III Conference in Quito, the NUPP aims to contribute to the implementation of the New Urban Agenda and other global agendas on cities including *Agenda 2030*.
- A National Urban Policy (NUP) could include frameworks on how SDGs related to cities could be localised, and how the localised goals/targets are implemented and monitored.

Three key considerations

- What are your city’s/country’s three key urban sustainability goals which reflects the local contexts?
- What efforts does your city/country do, in order to improve evidence base for urban sustainability? What are challenges/gaps in monitoring local SDGs?
- How do you work horizontally with neighbouring cities and across other levels of government (central/local) for sustainable urban development? How do you engage other stakeholder engagement?
Key considerations for localizing SDGs

1. Incentives for the mayors/cities
   - Awards
   - Investment projects
   - Sustainable indicators as performance evaluation

**VIET NAM**

**Ha Long City**
The 1st ASEAN ESC AWARD 2008

**Da Nang City**
The 2nd ASEAN ESC AWARD 2011

**Environmental Protection in Da Nang**
**Hue City**
The 3rd ASEAN ESC AWARD 2014

**Clean Beach in Ha long**

**Da Lat City**
The 2nd Certificate Recognition of ASEAN ESC 2014

**Environmental Protection in Hue**

**Environmental Protection in Da Lat**

**Can Tho City**
Nomination to The 3rd Certificate Recognition of ASEAN ESC 2017
Environmental Protection in Can Tho

Key considerations for localizing SDGs

2. Demand/requests from local citizens
3. National enabling policy

Thank you for your attention
8th East Asia Summit High-Level Seminar on Sustainable Cities

Key Considerations for Localising the SDGs

9 February 2017

Mr. Thit Sinn
Committee Member
Mandalay City Development Committee
Mandalay, Myanmar.

Policy & Laws and Rules

- Environmental Policy (1994)
- Constitution (2008)
- Environmental Conservation Law (2012)
- Environmental Conservation Rules (2014)
- EIA Procedures (2015)
- MIC Law & Rules & Notification (2013)
- SEZ law (2014)
- Relevant Sectoral Laws and Rules

Environmental Policy 1994

- To harmony and balance between these through the integration of environmental considerations into the development process to enhance the quality of the life of all its citizens.
- It is the responsibility of the State and every citizen to preserve its natural resources in the interest of present and future generation.
- Environmental protection should always be the primary objective in seeking development.
Localizing SDGs

- On ground - as policies, laws and regulations on environmental concerns went down farther & farther away from ‘up’, more and more of its essences of cross-national/global effects were lost. It became localized in other ways. Local community hardly paid attention on it as cross-national/global concerns.
- At top - in align with global norms. At middle – faced with insufficiencies & could not translate it properly. At grass-root - not perceived as global concerns.
- The problem - not simply lied in single context. It is multifactorial/multidimensional & could not be addressed by single or a few agencies alone.

Localizing SDGs

- For MCDC - National Gov. of Myanmar had not yet promoted SDGs to Mdy City. But key stakeholders from Mandalay were made aware of SDGs by Environmental Conservation Department, MoNREC.
- Tradition of MCDC – focused on infrastructure development / practiced regulatory mechanism/ enjoyed tangible/visible outcomes.
- In case of localizing SDGs, the role of MCDC is ‘contribution from common platform’.
- Working together with various stakeholders in various contexts in various ways of relationship is vital.
- Trade-offs will have to take place mainly at local/operational level.

Localizing SDGs

- Although environmental & sustainability had been properly prioritized in development context, hierarchical placement of different sectors on the basis of nation development will have to determine trade-offs.
- The corruption should be taken account as a factor whenever/wherever regulatory mechanism is to be applied, particularly in weak governance structure.
- Community should be alerted with three dimensions of sustainability. And then they should be put at centre in every cases of balancing and trade-offs.
- Community must be proactive. They should be in being-motivated state that they are responsible to global concerns, and so they are pleased with what they do.
- “Raise level of motivation among community.”
Key considerations for localising SDGs

9 February 2017
Chiang Rai, Thailand
Hanah Paik, Cities Programme Asia Pacific Lead

To transform the global economic system to prevent dangerous climate change and value our natural resources by putting relevant information at the heart of business, investment and policy decisions.

CDP’s mission

How we create change

Global environmental disclosure platform

You can’t manage what you don’t measure.

CDP’s wider work
Cities that disclose through CDP take more action

Percentage of cities taking action by number of years reporting to CDP

Cities that have disclosed to CDP for 3 years or more, report significantly higher levels of emissions measurement and management data, risk recognition and adaptation actions and opportunities.

SDG 11 - Cities

Data points in CDP Cities questionnaire aligns with 5 of SDG11’s 10 targets:
- Air quality
- Green space
- Planning
- Climate resilience
- Green buildings

<table>
<thead>
<tr>
<th>SDG target</th>
<th># of aligned questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.b (integrated policies – mitigation, adaptation, resilience)</td>
<td>31</td>
</tr>
<tr>
<td>13.2 (integrate climate change measures to national policies)</td>
<td>30</td>
</tr>
<tr>
<td>6.5 (implement water resources management)</td>
<td>3</td>
</tr>
<tr>
<td>7.2 (increase the share of renewable energy)</td>
<td>1</td>
</tr>
</tbody>
</table>

CDP disclosure and the SDGs

CDP Cities in 2016…

Thank you!
Questions?
hanah.paik@cdp.net
cities@cdp.net
THEMATIC SESSION B

Good Practices, Experiences, and Successes from Cities in Asia

B3: Transit-Oriented Development and Land Value Capture
Transit-Oriented Development and Land Value Capture in China

Daizong Liu
Director of Sustainable Cities
WRI China

Contents

1 Challenges
2 How to promote TOD
3 Land Value Capture

Challenges

Climate Change

China: the largest emitter in the world

Energy-related CO₂ emissions of China were 22% of the global total in 2014, and will be 16.5 Gt in 2030.

Coal production, the largest contributor to CO₂, has been dropping and the trend will continue due to the economy slowdown.

Climate Change

China: the largest emitter in the world
Challenges

Transport emissions reduction

Transport CO₂ emissions in China

This contribution of transport sector has been increasing. By 2030, it will be 32% of total CO₂ emissions.

AirPollutions

Transport counts for more than 31% of PM2.5 Emissions in Beijing.

Challenges

Transport contributes to air pollutants

Main global transport pollutants

SO₂, NOₓ, PM₂.₅

Transport emitted PM₂.₅ in urban China

Transport 

Industrial production

Dust

Other

Coal combustion

CO, VOC

City Countryside

Today 1.7B Chinese live in cities.

City

By 2030 1.05 Billion Chinese will live in cities.

Urbanization

SHANGHAI

Challenges

Air Pollutions

In China, welfare losses related to air pollution were equivalent to 10% of national GDP in 2013.

5.5 million lives were lost in 2013 because of air pollution. $5 trillion aggregate cost associated with air pollution-related premature deaths worldwide in 2013.

City Countryside

By 2030, 1.05 Billion Chinese will live in cities.

Source: CAA, 2016; Song, 2014; World Bank (2015)
1 Challenges
Urbanization

Challenges Urbanization

CHONGQING

SHANGHAI NEW YORK

Challenges Urbanization

1 Challenges Urbanization

From Car-Oriented to Transit-Oriented Developments

The development of Copenhagen’s city corridor from 1973 when they applied the Transit Oriented Planning.

Challenges From Car-Oriented to Transit-Oriented Developments

FINGERS PLAN COPENHAGEN

How to promote TOD

Photo by Flickr/123518088@N04

CURITIBA

WORLD RESOURCES INSTITUTE

WORLD RESOURCES INSTITUTE

2 How to promote TOD

Page 172 of 262
Impacts

Target:
To expand the "transit metropolis" pilots from 36 cities to 100 by 2020 through supporting the National "Transit Metropolis" Program in the 13FYP (2016-2020), so as to scale up to all 660 Chinese cities by 2030. It is envisaged that 180 million tonnes of CO2 emissions will be avoided in this approach.

Partners:
Ministry of Transport, local transport and planning authorities, etc.

Impacts:
- Direct emissions impact resulting from the increased green transport mode share: By 2030, the CO2 mitigation will be 180 million tonnes for 660 Chinese cities.
- Mode share of green transport increases to 80%-90% by 2030.
- One billion urban inhabitants benefitted inclusive, accessible, and sustainable urban form and transport system by 2030.

Activities

Land Value Capture and Rail + Property Joint Development
The capital cost of urban rail transit system requires 1.5 trillion RMB investments between 2015-2020, and the pricing of the urban rail transit system alone cannot make the end meet.


Land Value Capture

Hong Kong Subway System

Shenzhen Subway System

Thanks!
Reducing Chaos and Creating Public Spaces for the People: Insights into the Yangon Urban Planning Process

Prof. Dr. Aung Myint Maw
Assistant-chief Engineer
Yangon City
Myanmar

Growth of City Area, Land Use Changes & Urban Sprawl

1950-86 sq.km., pop.-1 mill.
1974-210sq.km., pop.-2 mill.
1995-592sq.km., pop.-3 mill.

YCDC Area: 794.43 sq.km.
Population: 5.14 million

Present Land Use of Greater Yangon

Industrial Structure

- The industrial structure in Myanmar was composed of primary sector (36%) secondary sector (20%) and tertiary sector (18%)
- That of Yangon Region was composed of primary sector (8%) secondary sector (37%) and tertiary sector (24%)

Central Business District (CBD) Area

- Population density is over 365.5 persons/ha in CBD
- 40% of total employment have to go and work to CBD everyday
- If a secondary CBD is established, population density, overcrowded markets and traffic congestion etc. in the CBD will be reduced.
CBD Area Development

Commercial complex are necessary to be constructed in center of Yangon expecting to minimize the development gap within the city.

Housing Sector

- In the last 20 years, inhumane housing units were built in thousands.
- These residential areas had no children’s playground, car parking, proper waste disposal systems
- From 2004-2005 to 2009-2010 during 5 years altogether 36,000 apartments, averaging 7200 were built annually.
- The average increase of the households per year is about 26,000 and so the increase of the households is 3.5 times more than the completion of apartments

Housing Sector Development

YCDC have planned affordable housing projects in the new sub-urban area of the city.

Urban Development Programme for Greater Yangon

- Strategic Urban Development Plan of the Greater Yangon
- Improvement of Water Supply Sewerage and Drainage System
- Comprehensive Urban Transport Plan
- Solid Waste Management
- Power Supply Sector
- Thilawa Special Economic Zone Development

Future Urban Structure

- The CBD is likely to accommodate more urban functions, however, it should shift outwards to avoid over concentration in CBD.
- Thilawa SEZ and Port might be of utmost importance in accelerating the economic growth for not only Greater Yangon but also Myanmar.
- Thanlyin and Kyauktan shall be developed much further in the future. Also Dala and Twantay has large potentials for urban development.

Sub-center with Green Isle System

- Aims at decentralizing urban center.
- Sub-centers will be created around 10-15 km radius area from CBD.
- Controls urban expansion by creating outer green belt.
- Outer ring road will be provided.
- Future urbanization along the outer ring road in the next step of development of the sub-centers growth belt will be promoted namely “Outer Ring Growth Belt.”
Industrial Function

- In Yangon 24 industrial zones are currently under operating with a total area of 5,105 ha, which include some unused lands inside them.
- Labor population of secondary sector is estimated to increase by 554 thousands from present to 2040.
- Not only Thalwa SEZ but also 700 ha of additional new industrial zones will be necessary.

Green and Water Function

- There are basically no agricultural areas that must be preserved in the future.
- Green areas should be conserved mainly on "North-South Green Axis".
- Large-scale new parks should be also created, especially along the outer ring growth belt.
- Hlawga nature protected areas must play the most important even in the future.

Future Land Use Map

Future Urban Structure and Land Use of Greater Yangon

Thank you for your kind attention
Sustainable Transportation and Metropolitan Regions

Toyama City

- Toyama is the capital city of Toyama Prefecture. Located at the center of the prefecture, it has been designated one of Japan’s "Core Cities" and is a bustling city on the Sea of Japan.
- Toyama’s topography varies from 3m at sea level to 3,000m at the crest of the Japan Alps.
- The population is about 450,000. The total area is about 1,340 km² (479 sq miles).
- Major industries include Hi-Tech, Pharmaceuticals, Robotics, Banking and Hydroelectric Power.
- The National Government has designated Toyama an "Environmental Future City" and "Environmental Model City" and it is the only Japanese city selected for the United Nations SE4ALL initiative and the only Japanese city selected by the Rockefeller 100 Resilient Cities program.

Toyama: Shocks and Stresses

Shocks
- Flooding
- Land slides
- Earthquakes
- Infrastructure Failure

Stresses
- Aging & Declining Population
- Aging Infrastructure
- Lack of Economic Resilience
- Environmental Degradation
- Education deficiencies

Aging Demographics, Increasing Costs, Decreasing Revenue

Steps to Creating a Compact City of the Future

Our goal, first announced in 2007, is to create a sustainable, compact future city which addresses the needs of our decreasing and aging society.

Three Pillars of Toyama’s Compact City Strategy

1. Revitalizing public transport
2. Encouraging residents and business to relocate to zones along public transport lines and building city cultural facilities along these lines.
3. Revitalizing the city center
Beginning with Japan's first complete LRT network, we are modifying the current life style of over dependence on automobiles to create a town with every city amenity within walking distance.

**Passenger Use Results for Toyama LRT**

- **Weekdays**: 2.1 times as many passengers as before; **Weekends**: 3.5 times as many passengers using the new service.
- **Reduced environmental load**
  - Car: 11.5%
  - New passengers: 20.5%
  - Taxi: 3.5%
  - Bicycle: 4.6%
  - Walking: 2.8%
  - JR Toyama Port Line: 46.7%
  - Bus: 13.3%

**Connecting the Bullet Train with North & South Loop Trams**

The new shinkansen "bullet train" station was elevated so tram lines can connect below the trains.

**City Center and Public Transportation Residence Zones**

- **Residence Encouragement Zones**
  - **City Center Zone**
    - 436 hectares in the urban core of the city
  - **Public Transportation Line Zones**
    - 3,387 hectares
    - Rail and tram line zones are within a 500 meter radius of rail and tram lines
    - Bus stop zones are within a 300 meter radius of bus stops

In 2015, 32% of the population is living in the residence encouragement zones, a 4% increase over 2005.
1. The total population of Toyama City has been decreasing, like the rest of Japan.
2. The population shift back into Toyama helps offset the decreasing birth to death ratio.
3. This results in a lower rate of population decrease in Toyama City compared to Toyama Prefecture and to Japan as a whole.

Demographic Changes in Toyama City Residents January 1, 2014 to January 1, 2015

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Change</th>
<th>Rate of Change(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>126,163,576</td>
<td>-271,058</td>
<td>-0.21</td>
</tr>
<tr>
<td>Toyama Prefecture</td>
<td>1,072,631</td>
<td>-6,061</td>
<td>-0.56</td>
</tr>
<tr>
<td>Toyama City</td>
<td>414,723</td>
<td>-684</td>
<td>-0.16</td>
</tr>
</tbody>
</table>

Births Deaths Number of people moving in Number of people moving out Population Change
3,285 4,500 11,342 10,692 -585

Birth/death decrease = 1,235 Population shift increase = 650


Birth/death decrease = 1,235 Population shift increase = 650

Urban Renewal: Stimulating Private Investment

Parking Structure
All Weather Event space
Shopping Complex
Commercial and Residential Building

City Tram Loop Line

Urban Renewal: Stimulating Private Investment

Projected population shift totals
Green = Total city population
Red = % of population in city center and along transportation corridors

#1 Population shift back into the city center

#2 Population shift to transportation corridors

Shifting Population through Compact City Policies

1. Average land value in Toyama Prefecture has declined steadily since 1993.
2. Residential land value in Toyama City increased 0.4% in 2016.
3. Commercial land value in Toyama City increased 0.7% in 2016.
4. Commercial land value increased from 3.3% up to 7.5% around Toyama Station and in the City Center.

Causes of the Land Value Increase

- Redevelopment in the Toyama Station Area
- Inauguration of the Hokuriku Shinkansen
- Revitalization by the Private Sector
- Establishing Residence Encouragement Zones
- Convenience of living in the City Center and affordable housing

Increasing Area

City Train Line

Land Value Increases
Comprehensive Policies for Resilience

Each Compact City policy is formulated and implemented to address multiple resilience issues.

Example: Revitalizing Public Transportation

- Reducing CO2
- Improving Accessibility for Elderly People
- Increasing Public Transportation Ridership
- Revitalizing the City Center
- Reducing City Budget Costs
- Encouraging Tourism

Thank you!
Improving public bus services and Non-Motorised transport in Bangkok

Thematic sessions B3: Sustainable Transportation and Metropolitan

Gessarin Gunthawong
Project Technical Officer
ASEAN-German technical cooperation project
“Energy Efficiency and Climate Change Mitigation in the Land Transport Sector in the ASEAN Region”

09 February 2017
Le Meridian Chiang Rai, Thailand

GIZ and Sustainable Transport

Transport Policy Advisory Services

- supports developing cities through the
- dissemination of best practice, policy advice and capacity building
- rich information platform, expert dialogues, advisory services.
- capacity building in sustainable urban transport
- open platform to announce its non-commercial trainings
- training related documents in the area of sustainable urban transport.
- guide for sustainable mobility and green logistics solutions from Germany.
- platform for exchanging knowledge, expertise, experiences
- network of information from academia, businesses, civil society and associations.
- comprehensive information on fuel prices and regulation available to a
wide audience, thereby enabling a more transparent and efficient
policymaking.

GIZ and Sustainable Transport

The Programme “Cities, Environment and Transport”

Hosted by
Thailand 2016-2018
€ 3.5 mill. - 5 countries
TFWG
EU Co-financing: Sustainable Freight and Logistics in the GMS Region

ASEAN Regional Level

TCC
National Level
SMMR
Subnational / MetReg Level

Sustainable Mobility in Metropolitan Regions

2016-2018
€ 3.5 mill. - 5 countries
LTWG
AWGESC

GIZ and Sustainable Transport

About GIZ
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
GmbH –
German International Cooperation

- GIZ’s purpose is to promote international cooperation for sustainable development –
supporting the objectives of the German Government
- Operations in 130 countries and employs 17,000 staff
Main Activities of TCC in Thailand

- Transport NAMA development
- Policy Gaps analysis study
- Fuel Efficiency policy study
- Stocktaking Report

Improving public bus services and Non-Motorised transport in Bangkok

- Pedestrian barriers
- Biking Barriers
- Motorcycle taxi and Tuk-Tuk stats
Problems of taking public bus in Bangkok

Greenhouse gas emission from Land transport

"Transportation of a person in one year with 12,000 kilometers will emit greenhouse gas approximately"

2.5
1
0.6
0.4
1 ton CO₂

Aims and scope of work:

1. Optimise the bus system and its management,
2. Shift access modes to public transport stations and other short trips from motorised to non-motorised transport
3. Increase public transport ridership by improving the connectivity between NMT, BRT and rail-based public transport

Implementation in Bangkok and Metropolitan Area and other cities in Thailand

"Two phases: 2016 – 2020 with international support, and full-scale implementation from 2021 to 2025"
Pilot area for the development of good walking and cycling neighborhood

Phahonyothin 7 (Soi Ari)

— lanes for the improvement of bike lane and sidewalk
— Bike rack
— Pun Pun station

Example designed for the geographical development of Soi Ari

Before NAMA implementation

After NAMA implementation

The design of bus routes and infrastructure for public transport connectivity
New BMTA’s buses which is compatible to environmentally friendly fuel

Integrated ticket

Benefits of NAMA in Transport sector

• Health, due to better air quality and exercise
• Liveability, due to better walkability, less disruption by cars and noise
• Reduced congestion
• Better accessibility for all citizens including poor and aged
• Resource efficiency and reduced oil consumption
• Economic: less need to build roads
• Greenhouse gas emission reduction
• Transformational change

Current Mode Split (Baseline)

Means of passenger transport (after NAMA implementation)

Improving public bus services and Non-Motorised transport in Bangkok

Current modal split

Modal split after t-NAMA

Preliminary calculations based on conservative assumptions indicate an emission reduction potential in the range of 0.3 – 0.7 MtCO2 per year in 2025.

Co2 Reduction
Expected greenhouse gas emission reduction (rough calculation)

<table>
<thead>
<tr>
<th>Activities for greenhouse gas emission reduction</th>
<th>The estimated greenhouse gas emission reduction in 2030* (million ton CO2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Urban Public Transport Connectivity by Non-Motorised Transport (NMT)</td>
<td>0.05 – 0.3</td>
</tr>
<tr>
<td>2) Public transport management</td>
<td>0.1 - 0.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.1 – 1.0</strong></td>
</tr>
</tbody>
</table>

* The estimated figures are obtained from rough calculation, studies are required for more accurate estimation.

Conclusion
- This concept can be replicated to new construction public transit lines in the future.
- Need the improvement in all aspects: Infrastructure, Regulator and planning and Information and communication.
- Need cooperation from various stakeholders.
- Need increase public awareness on the need of public transport improvement.
- Need planning to have an interchange station: 52 stations.
- Need cooperation from various stakeholders.
- Need to raise public awareness to people.

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For more information, please visit
www.TransportandClimateChange.org

Gessarin.Gunthawong@giz.de
A Case of Eco-Transportation System In Korea

Gyesoo Jung

Korea Environment Corporation

What We Do

Climate & Air
- GHG reduction policy support
- Reinforcement of capacity for climate change response
- Management of ambient air quality & environment
- Management of vehicle environment

Environmental Health
- Promotion of lifestyle environmental, service
- Promotion of environmental public health service
- Management of Hazardous Material
- Prevention of reduction of pollutants discharge

Environmental Infrastructure
- Installation support of aquatic ecology restoration and water treatment facility
- Installation and operation of water and sewage facility
- Installation and support of environmental energy recovery facility
- Expansion of international business

Water & Soil
- Water and sewage policy support
- Soil and underground water management
- Water pollution management and control

Resources Recirculation
- Resource circulation program
- Operation and management of resource circulation system
- Waste management

Distances = 10km

Problems & Troubleshooting

Problems
- Lack of parking areas & Public transportation
- Traffic Jam & car accidents
- Increase of Air pollution and Carbon emission

Setting environment
- Designation of Car-free street around main tourism sites
- Construction of Parking area at outer side
- Establishment of Public transportation system

Korea Environment Corporation

Who We Are

Establishment
January 1st, 2010

Classified
Government-affiliated Organization

Organization
5 headquarter head offices,
6 local regional headquarters,
2 overseas offices(China, Vietnam)

Human Resource
About 3,000 staff members / environmental experts

Mission
Contribution to the development of eco-friendly nation by improving environment and promoting resources circulation

Vision
Green Environment Creator for Nature and Humanity

Damyang County

Introduction
- 4th ESC in Korea for demonstration
- Aimed to Eco city, and designated to Slow city
- Famous tourism site: Bamboo, Meta sequoia trees, Classical literature

Meta sequoia Road
Gwanbangerim Forest

Juknokwon
(Bamboo Garden)
Mt. Chabol
Mt. Geumseung Fortress

Eco-friendly Public Transportation System

Introduction of Electricity bus
- Electricity bus: Unique Design, Convenience (Wi-fi, Charge, Information)
- Infrastructure: Charging station, Bus stops

Original Exterior
For kids
Interior
**Eco-friendly Public Transportation System**

- **Smart bus stop**
  - Information: Realtime bus location, news, search by internet
  - Convenience: Wi-fi, Charge, Automated Light control
  - Safety: CCTV, Emergency bell
  - Energy Saving: Renewable energy, LED light

**Expected Results**

- **Environment**
  - Emission Reduction of air pollutants & carbon

- **Traffic**
  - Reduction of Traffic Jam, illegal parking, and car accidents
  - Increase of accessibility to main tourism sites for residents & tourists

- **Local Society**
  - Promotion, more tourists
  - Improvement of eco-friendly image & Local economy

**Eco-friendly Public Transportation System**

- **Public bike system**
  - Located at every bus stop
  - Rent & return at any bus stop
  - Creation of exclusive way for bikes

THANK YOU

gsjung@keco.or.kr

Korea Environment Corporation
THEMATIC SESSION C

Thailand Feature Sessions

C3: The Power of Public Participation in Green City Development: Policy and Implementation
The Power of Public Participation in Green City Development - Policy & Implementation

Mr. Sakol Thinagul
Director General
Department of Environmental Quality Promotion

February 9, 2017 at Main Hall,
Le Méridien Chiang Rai Resort, Thailand

Sustainable Economy Philosophy
Summary of the SEP

The Middle Path

- His Majesty King Bhumibol Adulyadej

“Economic development must be done step by step. It should begin with the strengthening of our economic foundation, by assuring that the majority if not the whole population has enough to live on...Once reason progress has been achieved, we should then embark on the next steps, by pursuing more advanced levels of economic development.”

Make cities and human settlements inclusive, safe, resilient and sustainable

Thailand Environmentally Green City

Process for Implementation

1. Natural resources and biodiversity
2. Pollution control and management
3. Environmental friendly lifestyle and consumption
4. Man-made environment
5. Learning organization and good governance

Promoting public participation
Developing tools for monitoring and evaluation
Upgrading regional and international
Creating Promotion of Public Participation

Stage 4
Transfer knowledge and network building

Stage 3
Find out knowledge/lesson learned to improve

Stage 2
Implementation

Engage community through local agenda participation process

Developing Tools for Monitoring and Evaluating

Thailand Environmentally Green City Indicators

1. Natural resources and biodiversity
   - Natural resources and biodiversity in the city are used and maintained a good ecosystem.

2. Pollution control and management
   - Solid waste are managed thoroughly and properly.
   - Wastewater, air pollution, and other forms of pollution are managed properly.

3. Environmental friendly lifestyle and consumption
   - Including alternative energy is used efficiently.
   - Consumption, consumption, and source are eco-friendly.

4. Man-made environment
   - Green area is developed to be utilized for leisure activities.
   - City's landscape is picturesque in accordance to the city's conditions.
   - Local wisdom and environment are conserved and inherited.

5. Learning organization and good governance
   - Organizations are capable of environmental work.
   - Municipal offices follow management plans of green office.
   - Associates and environmental network participation.

Evaluation process

- Develop Green city indicators
- Capacity Building Training & Coaching
- Experience Sharing
- Evaluate the following:
  - Documents
  - Site visit
- Give certificate and awards

Certificate and Awarding

What have we done so far

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<td>Krabi Municipality</td>
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<td>Mosque</td>
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<td>76</td>
<td>48</td>
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<tr>
<td>Reduction</td>
<td>2004 - 2013 = 718</td>
<td>160</td>
<td>24</td>
<td>49</td>
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</table>
Upgrading to Regional and International

Coaching and team building
Upgrading learning center
Knowledge transferring and networking
Extend and Promoting Thailand ESC model to regional and international

The Promotion of Environmentally Friendly Production, Service and Consumption

Production Service Consumption

Green Production/OTOP

- Project began since 2005 in text Sa-paper small entrepreneur. Until there are almost 900 entrepreneurs joined the project and won Green Production Awards around 400.
- Develop the criteria for local environmentally friendly products, clothes, textile, basketwork, and ceramic ware.
- Benefits for the entrepreneurs: reduction, less pollution, selling opportunity from consumers concerning environmentally friendly products.

-- Upcycle and Upcycle Carbon Footprint

Upcycling is the process of converting waste materials or useless products into new materials or products of better quality or for better environmental value.
2014-2015, there were 112 products passed the Upcycling Criteria.
2016, developed Upcycle into Upcycle Carbon Footprint and 19 products passed the Criteria.

Green Hotel

- Green hotels are lodging properties that implement environmentally friendly practices and programs save water and energy while reducing solid waste. The goal for green lodging properties is to minimize their impact on the environment.
- Support the Green Procurement for public agencies.
- 2013-2016 hold 179 hotels passed the green hotels criteria.

Green Office

The purpose is to change behavior to environmental concerning green lodging properties.
2013-2016 hold 184 green offices.
Green Temple/Mosque

elop criteria for religious places: temples and mosques for develop best-practice of environmental-concerned temples and mosque temples and 20 mosques passed the green criteria in 2016.

Eco School

The project aims to support and promote Eco-School Learning Centres to be models for other neighborin schools and to work as networking, effectively.

Zero Waste

Activities:
1. Contest for Zero-Waste School and Community Awa
2. Set up Zero Waste Learning Centre

Key for Success

The power of participation is an important key mechanism to achieve all development goals.

Thailand Environmentally Sustainable Cities

Knowledge management
Upgrade to the model cities
Create network
Public participation building
Learning process facilitation
Develop standard measurement tools
Lesson learning for project improvement
Disseminate
8 main implementation strategies
GREEN AND CLEAN CITY

12 Communities

Community planning by using SWOT analysis

Green Area in the municipality Park

Measure the circumference of the tree at 1.3 m. above the ground
Only the tree with 14 cm of circumference or above
height of tree measure by clinometer

Trees Registration by the community

Clean city
Reduce Reuse Recycle (3 R)

Registered tree will specified
- Type of the tree
- The diameter and height of the tree
- Location

Garbage Bank at School
Community Committee promotes the campaign of 3R

Information of 3R

Price lists of recycle garbage

The meeting to clarify on Cooperation of using biodegradable plastic bag

Environmental products
Academic cooperation project from Lampang Higher Education Institutions, Lampang agencies, and development partners in order to drive the community development of the local self-management as participatory integration

“Nakhon Lampang Model”

The objectives are

1. To join forces to drive social development and resource management in the basin as integration.
2. To create a mutual learning process and to boost an action development plan in the local and provincial levels.
3. To be the model of provincial community development by using the social classroom to change society and the nation.

There are two important problems to drive the local self-management of project "Nakhon Lampang Model"

1) Person
A worker in the community-driven local communities often lack confidence in themselves.

2) Team work
The team is not in the same direction.
The discovery of identity
- Acceptance of the identity of the individual is leading to hearing each other, appreciate himself and his teammates because we are working with people having dignity, thoughtfulness, to have emotions like love, hate, and a variety of spiritual knowledge and know information not the same. Therefore, we need to honor and sincerity without domination and direction. “Coaching and Mentoring”
The skills needed to work together.
- To practice listening skills, the brief issue, knowing self emotion, to learn not to look at who is wrong, but can see where is wrong and work together to find a solution to achieve goals. “Collective Leaders”

Development is the key to success.
1) Clarifying goals, processes, and procedures; if can do clearly it will affect the residents to understand and cooperate seriously.
2) To encourage people to participate in a discussion group and comment is important to everyone to get involved, to be ownership issues and enjoy thinking- talking together.
3) Using two speakers in the community role, one person talks while the other one writes. It will help make brainstorming get good results with clear content and processes to talk without interruption.

The “Nakhon Lampang Model”

- To prepare the community speakers to share the role and duty of each other is the most important step of the process before the event and concludes the lessons at the end of the event to complement the learning team, encouraging one another, do not blame the mistakes, aim for the best of the past by now. It is a process that will enhance the interoperability of the community. That will lead to success in times to come.
The Greener Cities Partnership
A Joint UN-Habitat and UN-Environment Initiative

GREENER CITIES: BACKGROUND AND RATIONALE

- Over 50% of the global population now lives in cities and it is expected that 70% of humanity will be urban by 2030.
- As cities lose density and intensify sprawl, they lock themselves into unsustainable land use patterns.

Objectives of this cooperation:
- Mainstream the environmental perspective into urban policy-making
- Incorporate urban perspectives into environmental policy-making
- Highlight the local-global linkages of environmental issues

URBAN AREAS CONSUMPTION AND PRODUCTION

By some estimates, urban areas:
- Consume 75% of the earth’s natural resources
- Produce 60% of global GHG emissions
- Produce 50% of global waste

Recognizing the importance of urban issues in the global environmental agenda, UN-Environment and UN-Habitat have joined forces in a Partnership on Greener Cities.

Timeline of Collaboration:
- Sustainable Cities Programme, 1990 – 2008
- Greener Cities Partnership, 2014 – present

Deeply thematic → Too strategic → GCP better harmonizes the synergies of UN-Habitat & UN-Environment
THE 2030 AGENDA & GREENER CITIES PARTNERSHIP

MODE OF IMPLEMENTATION OF THE PARTNERSHIP

1. Resilient & Resource-Efficient Cities
   - Better understanding of how resource efficiency impacts the resilience of cities
   - Political support for innovative initiatives for resilient, resource efficient cities with the participation of a broad range of stakeholders
   - City-level ecosystem adaptation, integrated resource flows, planned city extensions that help contain urban sprawl

2. Sustainable Transport & Mobility
   - Bus rapid transport (BRT) and non-motorized transport (NMT) facilities, two-wheelers and electric mobility
   - Contribute to the transport components and policies of selected countries’ climate strategies
   - Establish a forum for promoting sustainable transport in Africa, Asia and Latin America, and support the development of an action plan for sustainable transport in selected countries

3. Waste & Waste Water Management
   - Integrated waste management (IWM) strategies that include both solid waste and waste water management
   - Global monitoring of IWM strategies, comprehensive waste strategy, including capacity building activities
   - System to disseminate knowledge produced from the strategy development and planning

NEW URBAN AGENDA & GREENER CITIES PARTNERSHIP

How is the Partnership embedded in the NUA?

63. We recognize that cities and human settlements face unprecedented threats from unsustainable consumption and production patterns, loss of biodiversity, pressure on ecosystems, pollution, and natural and man-made disasters, and climate change and its related risks, undermining the efforts to [...] achieve sustainable development.

65. We commit to facilitate the sustainable management of natural resources in cities and human settlements in a manner that protects and improves the urban ecosystem and environmental services, reduces greenhouse gas emissions and air pollution, and promotes disaster risk reduction and management. [...] through environmentally sound urban and territorial planning, infrastructure, and basic services.

72. We commit to long-term urban and territorial planning processes and spatial development practices that incorporate integrated water resources planning and management, considering the urban-rural continuum at the local and territorial scales, and including the participation of relevant stakeholders and communities.

OUTLOOK FOR THE GREENER CITIES PARTNERSHIP

More areas for collaboration include:

- Monitoring and reporting on urban environmental SDG indicators
- Financing for Greener Cities
- Environmental challenges of island / coastal cities
- Green public space in cities
- Urban air quality monitoring
- Urban environmental justice / governance
- Participatory approaches to urban environmental planning

EXAMPLES OF RECENT COLLABORATION

Monitoring Urban Environmental SDG Indicators in Qazvin, Iran
- This project will monitor the city’s most pressing environmental issues
- UN-Habitat and UN-Environment are providing their technical expertise in a variety of areas
- Indicators to be monitored include: water quality, water usage efficiency, reducing the use of potable water for non-drinking purposes, wastewater management, public transport and preservation of natural heritage such as orchards and greenbelts

Greenbelt development in Chengdu, China
- UN-Habitat and UN-Environment are providing their planning and environmental expertise to the city’s greenbelt re-development plan
- Develop a master plan for the 198 km² urban greenbelt and help design the wetlands, bicycle paths, leisure walks, sport and recreation facilities, resulting in better ecological protection and promoting sustainable lifestyles and tourism

More areas for collaboration include:

- Monitoring and reporting on urban environmental SDG indicators
- Financing for Greener Cities
- Environmental challenges of island / coastal cities
- Green public space in cities
- Urban air quality monitoring
- Urban environmental justice / governance
- Participatory approaches to urban environmental planning
Governance Sandwich

Governments, Local Authority

Secure Tenure Policy (upgrading, resettlements)

Protection

Enable

GOVERNANCE

Empowerment of Individuals

Empowerment of Communities

EMPOWERMENT

Vulnerable People (Refugees, IDPs, Squatters)

People’s Process

STEP 1 Socialization

STEP 2 Community Mobilization and Organisation

STEP 3 Community Mapping and Land Adjustment

STEP 4 Community Action Planning

STEP 5 Community Contracting

STEP 6 Community Implementation

STEP 7 Community Monitoring

Un-HABITAT’s People’s Process

Mobilization and Organization of the Communities as CDCs: The Strength of the People

Obtaining Local Government recognition for CDCs: The Legitimacy of the People

Creating to the institutional platform for CDC to engage with Local Government: The Voice of the People

Community Action Planning: Planning by the most affected People

Community Contracting: The job is done by the People

Community Monitoring: Checked and accounted for by the People

Community Banking: Financial strength of the People

Peoples Process – NOT “Community Participation”

How do we bring people into the center of the process?

By bringing People (NOT “beneficiaries”) to the Center of:

- Decision making
- Action
- Responsibility

Through their processes:

- CDC (community Organisations)
- CAP (Community Action Planning)
- CC (Community Contracting)

Community Action Planning: Partnership for Urban Poverty Reduction – Phase II Supported by HSF

Community Mobilization & Organization

- Establish Groups of 10-15 families

- Elect office bearers and set up a Community Development Councils (CDCs) representing approximately 20

Authorities: Recognize Community Development Councils
Establishing Community Based Organizations (CBOs)

Women and youth play a major role

- Community Identifies problems and prioritize them
- Propose solutions
- Negotiate solutions and arrive at the most appropriate considering trade-offs
- Cost them including community contributions

Community Action Planning

Authorities: Integration into city plans and granting of tenure

Preparing Community Action Plans

Communities identify their priority needs

CAP PROCESS

1. Social mapping: The resources and opportunities
2. Identification: Issues/ problems
3. Prioritization: issues/ problems
4. Formulation: strategies
5. Options and trade-offs
6. Planning for implementation
7. Implementation and monitoring: Internal and external

Community Contracting

- Award Contract to Communities NOT to outside contractors
- Employment created, skills developed and remains within communities, stimulate local economy and entrepreneurs
- Increased ownership and respect amongst community members
- Lower cost, better quality, faster, increased transparency
- Authorities: Funding for housing and infrastructure

Community Contracting

CBOs in charge of construction
Community Action in the Reconstruction process

Empowering each other

Community Contracts – Benefit to People

<table>
<thead>
<tr>
<th></th>
<th>Conventional Contracts</th>
<th>Community Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Outside professionals</td>
<td>Communities</td>
</tr>
<tr>
<td>Design</td>
<td>Outside professionals; Designs may not reflect peoples needs</td>
<td>Communities and Professionals – community needs reflected</td>
</tr>
<tr>
<td>Materials</td>
<td>Often imported</td>
<td>Locally available, stimulating local economy</td>
</tr>
<tr>
<td>Physical Works</td>
<td>Outside professionals</td>
<td>Communities – learn how to maintain</td>
</tr>
<tr>
<td>Labour inputs</td>
<td>Outsiders – no community contributions</td>
<td>Community provides labour, lands etc., stimulating local economy</td>
</tr>
<tr>
<td>Investments, Skills</td>
<td>Goes outside communities</td>
<td>Remain in communities</td>
</tr>
<tr>
<td>Quality of Works</td>
<td>Chance of being inferior</td>
<td>Good – their own</td>
</tr>
<tr>
<td>Costs and Profit Margin</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Feeling of Ownership</td>
<td>Little ownership</td>
<td>High ownership</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Low satisfaction</td>
<td>High satisfaction</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Ask for help from outsiders</td>
<td>Community can maintain</td>
</tr>
</tbody>
</table>

Community Monitoring

Community members control the implementation, checks, monitors and report to authorities

Authorities: Incorporation into city data

Implementation and monitoring

Community Banking

- Bringing communities to work together around their savings and credit
- Meeting people’s immediate needs, livelihood and credit needs
- Establishing city level housing funds

Risk Mitigation and Awareness

Learning for actions
Participatory Urban Planning

Space for local community leaders in city planning

Hazard Mapping

Localization of global tools

Community Validation of DRR Planning

Integrating local knowledge with scientific data

Pakistan: Post Earthquake Projects

Silvester Bridge: Upstream: before 2002

Lunawa

Lunawa Lake Catchment

LEI&CDP Project area

Location Map
Sylvester Bridge Upstream- Ratmalana: After 2010

Downstream Upstream Continuum

- Institutional Capacity/Reform (Organisational/Managerial)
- Capacity Building
- Financial/Human Resources
- Technical support
- Regulatory Framework

Communities with Strong Immune System

Fight the Virus!

- Criminal - Exploitation
- Poverty
- Drug
- HIV/AIDS - Disease
- Eviction
- Disaster - War/Conflict
- Land Mine
THEMATIC SESSION A

New Initiatives, Theories and Frameworks from Development Partners

A4: The New Urban Agenda:

Outcomes and Takeaway
**IT’S ABOUT BANJARMASIN**

Banjarmasin is a capital city of South Kalimantan.
- Wide: 98,46 km²
- Population: 720,000 people
- It has 5 subdistricts and 52 villages
- It's about 0.16 m under the water
- Marsh area structure
- And have so many rivers
- So it's called a thousand rivers city

**THE POLICIES OF IMPLEMENTATION**

- Green Open Space
- Increase of Waste Management
- Increase of Urban Sanization
- Plastic Bag Reduction
- Urban Empowerment
- Healthy Town Competition
- Controlling of Pollutant
- Waste Bank Socialization
- Waste Bank Competition

**SUSTAINABLE DEVELOPMENT OF ENVIRONMENT**

**GREEN OPEN SPACE**

**INCREASE OF WASTE MANAGEMENT**
INCREASE OF URBAN SANITATION

TOILET DESIGN COMPETITION

FREE TOILET

PLASTIC BAG REDUCTION

Say NO to PLASTIC BAGS

DIET KANTONG PLASTIK

SERTIFICATION OF ADIWiyata COMPETITION

URBAN EMPOWERMENT

Stop Waste

WASTE BANK SOCIALIZATION

CONTROLLING OF POLLUTAN

HAZARDOUS AND TOXIC SUBSTANCES WASTE

INCINERATOR CHECK

Water Control

Healthy Town Competition

Stop Waste Control

Emission Exam
WASTE BANK COMPETITION

BANJARMASIN GOVERNMENT HOLDS WASTE BANK COMPETITION EVERY YEAR Divided in 4 CATEGORIES (WHITE, BLUE, SILVER DAN GOLD) BASED ON THE NUMBER OF CUSTOMERS AND INCOME

WASTE PRODUCED IN BANJARMASIN

THE POTENTIAL OF WASTE PRODUCTION IS ABOUT 600 TON/DAY

ORGANIC 56%
NON ORGANIC 44%

WASTE MANAGEMENT

60 UNIT TRUCKS FOR BRING WASTE TO LANDFILL / DAY

ILLUSTRATION

TOTAL OF NON ORGANIC WASTE PRODUCTION IN BANJARMASIN IS 44 % PLASTIC 17% AND PAPER 11% FROM 18.000 TON/MONTH IS 5.040 TONS/MONTH, SO BANJARMASIN HAS 150 WASTE BANKS AND EACH 1 UNIT OF WASTE BANK CAN ONLY REDUCE 1 TON/MONTH AND THEN TOTAL OF WASTE REDUCTION IS 150 TONS/MONTH

BANJARMASIN STILL HAS 4.890 TON/MONTH

AND NOW THE POLICY IS TO INCREASE WASTE BANK IN BANJARMASIN TO REACH THE GOAL BANJARMASIN HOPE TO HAS 500 WASTE BANKS THAT CAN REDUCE 5 TON/MONTH

EMPOWERMENT OF WASTE BANK

SINCE 2012-2016, BANJARMASIN HAS 150 WASTE BANKS

EACH WASTE BANK IS MINIMALIZED ABLE TO REDUCE WASTE ABOUT 1 TON/MONTH WITH INCOME IS ABOUT Rp. 2.5 MILLION/ MONTH

OUTCOMES AND TAKEAWAY

IN 2017 BANJARMASIN GOVERNMENT EMPOWERS PEOPLE TO MAKE 50 UNITS WASTE BANK AROUND THEM BANJARMASIN GETS $12.500 FROM THE IGES

MONITORING & EVALUATION 10%
SOCIALIZATION 42,21%
TUTOR 14,47%
WASTE BANK LAUNCHING 32,32 %

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3 IMPORTANT AND INNOVATIVE POINTS

- Healthy Town Competition
- Urban Empowerment
- Waste Bank Competition
- Low Education
- Increase People’s Education
- Low Cares of Environment
- Increase People’s Cares
- Low Income
- Increase People’s Income

THANK YOU
TERIMA KASIH
Support for Japanese Local Governments For Environmentally Sustainable Cities

February 9th, 2017
Hiroaki MATSUMOTO
Ministry of the Environment, Japan (MOEJ)

Local Action Plans against Global Warming

- Informational support: guidelines for formulating an action plan (under revision in line with the National Plan)
- Financial support: subsidies & equities

- Prefectures & cities (pop. above 200K) which developed their area-wide plans

List of Seminars Organized in FY 2015

- How to implement PDCA cycle regarding the action plan
- How to formulate an action plan
- Group discussions to share ingenuity in setting up an action plan,
- - Local Governments should show the best practice in their own areas.

Guide to Small/Large Cities

- National Plan against Global Warming (Cabinet Decision in May 2016)
- • Mid-term target: -26% by 2030 (compared to 2013, 25.4% compared to 2005)
- • Long-term target: -80% by 2050
- • Various measures to deal with climate change by local governments illustrated

Training Opportunities for Local Government Staff

- Guideline for Local Action Plans
  - How to formulate an action plan
  - How to calculate area-wide GHG emissions
  - How to implement PDCA cycle regarding the action plan

Renewed Guidelines for Local Action Plans will be made public by the end of March 2017

Tokushima Climate Change Provisions "The Three Pillars"

- Paris agreement shows a clear picture of future society the whole world should be aimed for.
- Act against Global Warming amended and its National Plan developed in May 2016.
- Importance regarding roles of local governments has been increasing.

Current Situation on major actions against Global Warming

- Development of balanced compact and resilient model cities.
- Strengthening Management System in Local Governments to reduce GHG emissions
- Business plans and conducting F/S for developing compact and resilient model cities.
- Support several local governments in preparing their business plans and conducting F/S for developing compact and resilient model cities.
Urbanisation and Sustainable Development

- Urbanisation is not a passive outcome of development, but a **creator of value**.
- Urbanisation is a **tool** for development (integration)
  - Agenda 2030 into National Development Plan
  - NUA – practical tools and means of implementation
- The quality of urbanisation is a major driver of cities’ value and productive capacity.

Bad urbanisation

- Urban Divide – Inequality – social exclusion
- Density declining – Urban Sprawl / Unplanned growth

Vulnerability - natural buffer

*Figure 8. Average Built-up Area Densities in Three World Regions*

Towards Habitat IV – 2036?

- Habitat III - the first major UN global summit after the adoption of Habitat II in 1996.

Habitat III Inclusive Preparatory Process of 2 Years! (150,000)

- 5 Regional Meetings
- 6 Thematic Meetings
- 10 Policy Units
- 22 Issue Papers
- 10 Policy Papers
- Informal Consultative Meetings and Hearings
New Urban Agenda

An action-oriented document which sets global standards of achievement in sustainable urban development, by readdressing the way cities and human settlements are planned, designed, financed, developed, governed, and managed, through cooperation with committed partners, relevant stakeholders, and urban actors at all levels of government as well as the private sector and in supporting the implementation of the 2030 Agenda.

The New Urban Agenda (the outcome of Habitat III)

• QUITO DECLARATION ON SUSTAINABLE CITIES AND HUMAN SETTLEMENTS FOR ALL
  • Our shared vision
  • Our principles and commitments
  • Call for Action

• QUITO IMPLEMENTATION PLAN FOR THE NEW URBAN AGENDA
  • A. THE TRANSFORMATIVE COMMITMENTS FOR SUSTAINABLE URBAN DEVELOPMENT
  • SUSTAINABLE URBAN DEVELOPMENT FOR SOCIAL INCLUSION AND ENDING POVERTY
  • SUSTAINABLE AND INCLUSIVE URBAN PROSPERITY AND OPPORTUNITIES FOR ALL
  • ENVIRONMENTALLY SUSTAINABLE AND RESILIENT URBAN DEVELOPMENT
  • B. EFFECTIVE IMPLEMENTATION
  • BUILDING THE URBAN GOVERNANCE STRUCTURE: ESTABLISHING A SUPPORTIVE FRAMEWORK
  • PLANNING AND MANAGING URBAN SPATIAL DEVELOPMENT
  • MEANS OF IMPLEMENTATION
  • C. FOLLOW-UP AND REVIEW

Habitat Agenda 1996 << New Urban Agenda 2016

1996: Adequate shelter for all (urban poverty, slums) and sustainable human settlements development in an urbanizing world

Some new approaches of the HA special attention to the needs and contributions of women, children, youth and vulnerable social groups recognition of some role of the local government and the civil society in shaping urbanization importance of capacity building

2016: Sustainable urban development: the future of urbanization: Five pillars:

✓ National Urban Policy
✓ Rules and Regulations
✓ Urban Planning and Design
✓ Financing urbanisation
✓ Local implementation of NUA

New impetus in the NUA

• From Problems to tools for SD
• Integrating, holistic
• Climate change, Resilience
• Municipal finance
• Urban planning & design
• Urban legislation
• LG and CS central, Youth, Women
• Innovations, IT
Urbanisation and Sustainable Development

• Urbanisation is not a passive outcome of development, but a **creator of value**.

• Urbanisation is a **tool** for development.

• The quality of urbanisation is a major driver of cities’ value and productive capacity.

Why ASEAN Cities important?

• 300m. \( \rightarrow \) 507mi. (2050) 10% of the WUP – consumption patterns.

• ASEAN 40% Muslim societies - peace loving people and peace loving nations.

• ASEAN cities have been the agent for migrants integration.

• Harnessing our cultural diversity has been the strength and key to the peace and stability in ASEAN cities.

Why ASEAN Cities important?

• ASEAN cities will be more connected through building Asian Highway and transboudry shinkansen or high speed trains, so that we grow together.

• ASEAN economic integration accelerated free trade, where goods, labour, services, capitals are feely moved transboudy transbouday ever.

• ASEAN urbanisation have been led by dynamic youth – hub for innovations, IT, technological advancement, entrepreneurship and local aspiration.

• SEE YOU in KL @WUF9!
The New Urban Agenda

What can Local Governments do?

Uly Ramadhian
Development Specialist – ASPAC

at the HLS on Environmental Sustainable Cities
Rai, 8-10 February 2017

ABOUT UCLG ASPAC

Asia and the Pacific is the largest regional section of UCLG, and it incorporates economically fast developing countries such as China, India, and Indonesia

SDGs and NUAs Linkage

roundwork for governance and management structures that emphasize inclusive, anticipatory decision-making as a basis for resilient, inclusive, safe and sustainable cities and human settlements

Strengthening governance from the bottom up and developing a new, collaborative relationship among governments at all levels, civil society, the private sector and citizens will be instrumental in ensuring effective and responsive urban development and capable and accountable institutions in all human settlements

Action 1: (MANAGE RELATIONSHIPS)

Build a stronger and accountable local and regional government to drive inclusive and sustainable development

Relationship between each layer of governance (local, regional, national)

The role of intermediary cities

Action 2: (OWNERSHIP)

Strengthen strategic planning; ensuring a strong vision for city and human settlement development

Flexible integrated planning and policies that boost greater participation and ownership by local communities

Local governments must be empowered and have the necessary resources and data to play a stronger role through social policies, housing rights, secure tenure, and development and land use planning
**Action 3: (INCLUSION) Renew the social contract, putting the Right to the City at the heart of urban agenda**

Local governments are in a unique position to promote autonomous citizen participation in the management of local affairs, particularly the inclusion and empowerment of women in local public life. They can also facilitate the participation of young people, minorities, immigrants, migrants and other marginalized groups.

By supporting democratic debate and multi-stakeholder dialogue, local and regional governments can define and implement policies and strategies to tackle different forms of exclusion and reduce inequalities.

**Action 4: (EXPLORE) Unlock the potential of territories to promote sustainable local economic and environmental policies to protect our planet**

Local and regional governments can mobilize local actors and seize the opportunities in cities and regions to boost economic development and environmental sustainability.

**Action 5: (CREATIVE) Rethinking local financial system in order to make cities sustainable**

Local governments must have access to adequate funding to deliver their mandates.

Sub-national fiscal policies (local revenues and transfers, coupled with equalization mechanisms) should guarantee local and regional governments the means to assume their responsibilities and to deliver to citizens.

Local governments should be strengthened with adequate fiscal powers to mobilize part of the wealth created within their territory, through diversified taxation and land added-value capture mechanisms.

**Action 6: (RESILIENT) Build local and regional governments capacities in risks and crisis management process**

Local governments can contribute to the crisis management with appropriate actions to create a continuum between emergency relief and reconstruction planning toward sustainable development.

With adequate support from international community, they can facilitate the reconciliation process in countries facing regular conflicts, facilitate access to basic services, help to assess and plan to reduce risks and vulnerability, fostering the development of resilient territories.

**Action 7: (PARTNERSHIP) Building the spirit of solidarity**

Through this cooperation, the links between local and regional governments are strengthened and citizens gain shared values and understanding of the importance of peace, human dignity and respect for one another.

Local and regional governments should share expertise on how to address global challenges (climate change, peace-building, development cooperation) and to manage the impact of global phenomena at the local level (the integration of migrants, the mediation of globalizing economic and the promotion of cultural cooperation).
THANK YOU!

Arief Mulya Ramadhian
Programme Development Specialist –
UCLG ASPAC
programme2@uclg-aspac.org
United Cities and Local Governments Asia Pacific
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THEMATIC SESSION B

Good Practices, Experiences, and Successes from Cities in Asia

B4: Tourism, Public Engagement and Green Education
Tourism, Public Engagement and Green Education

Mrs. Kayomne Keopaseuth
Head Office, Luang Prabang Urban Development and Administration Authority
09 February 2017

Construct Luang Prabang to be green, clean and beautiful, and ensure safe and prosperous living environment with the world heritage in the core.

Area: 761.406 Km2
Population: 86,338
Village: 114
Household: 16,683

Luang Prabang City:
- Capital of Luang Prabang district and province
- Central transportation, education, tourism, economy, etc for the northern region of Laos

TOURISM
- World Heritage Site since 1995
- Totally 228 tourism sites within the province

URBAN DEVELOPMENT
- Urban Development Master Plan to protect and preserve the world heritage site from:
  - Economic development
  - Population growth
  - Tourism development
  - Urban infrastructure expansion

Environmental Challenges

Social and economic development
- Population growth
- Tourist growth
- Service and employee increases
- Infrastructure expansion, etc.

Environmental deterioration
- Wastewater discharge
- Solid waste generation
- Traffic congestion
- Natural space decrease, etc.

Solid waste growth
- Increase solid waste generation
- Short dumping-site use age
- Require more costs and advanced technologies

WASTEWATER

Local Institutions

1. Urban Development and Administration Authority
2. Department of Natural Resources and Environment
3. Department of Public Work and Transports
4. World Heritage Office
5. Private sectors

Sources: Department of Information, Culture and Tourism
**LPPE Project**
- To reduce pollution and strengthen orderliness in the city
- Inexpensive and environmentally friendly

**E-Bus Project**
- Public training and awareness
- Promoted of 3Rs (Reuse-Reduce-Recycle)
- Improved waste collection and transportation systems
- Improved disposal site for long operation
- Created vision and strategies on urban environmental sustainability

**Green Education & Public Participation**
- Green School Program (supported by The Asia Foundation)
  - Educate and awareness teachers and students on implementation of waste management cycle (3Rs)
  - Gathering people from schools, hotels, guesthouses, restaurants, government offices, tourists, etc. to clean garbage in the streets and riverbanks in every month or prior to important events.

**PADUL Project**
- Developed strategy for urban drainage and sewage system development and management
- Created master plan (short term, medium term and long term plans) for managing and developing urban drainage and sewage systems
  - Public training and awareness
  - Construction of Decentralized wastewater treatment solutions (DEWATS) in The Health College
- Year-3 (2016-2017)
  - Regional, national and local workshops on ESC and SDGs
  - Construction of public toilet linked DEWATS in the Night Market

**Solutions:**
- Increase international cooperation
- Promote public-private partnership
- Enhance capacity building and awareness
- Improve urban management regulations
The City Council is determined to:

- Safeguard heritage area with a history and heritage of universal value
- Increase participation and awareness of local communities and stakeholders in heritage preservation
- Ensuring a conducive environment and maintained effectively
- Enhance the image of Melaka City as a UNESCO World Heritage City as well as improving the living standards of the local communities

Melaka

Visit Historic Melaka Means Visit Malaysia

Area: 1,650 SQ KM
State Capital: Melaka Historic City
Districts: 3 (Alor Gajah, Jasin and Central Melaka)
Local Authorities: 4
Population: 850,000
GDP per capita: USD 9,506
No. of Tourist: 15 million (2016)
Labor Force: 375,000
Unemployment Rate: 0.7%
Institute of Higher Learning: 49
Total No. of Student: 92,000

Melaka World Heritage City
SUNGAI MELAKA (MELAKA RIVER) IS AN IMPORTANT COMPONENT OF THE HERITAGE AREA AND THE CITY

Commercial Benefits:

a. Local Business (direct benefit) - Increase in Melaka River Cruise ridership by 30,700% (2006: 3,290, 2015: 1,010,964); over RM8,000,000 in revenue

b. Tourism (fringe benefit) - Increase in inbound tourists by 309% (2006: 5,097,832, 2015: 15,736,859); over RM12,000,000,000 in tourist spending

c. Local Council (fringe benefit) - Increase in trader license by 164% (2008: 761, 2015: 1250)

d. Employment (direct benefit) - Creation of the Melaka River and Coastal Development Corporation; 104 new jobs created (on administration and management of the river alone)

e. Real Estate (direct benefit) - Increase in real estate value by 349% (2008: 310psf, 2015: RM1,100psf)

f. Investment (indirect benefit) - RM6.86b (RM4.79b Local, RM2.07b Foreign)

g. Indicators (indirect benefit) - Gross Domestic Product (GDP) 5.0% - 6.0%; 47.1% Services (RM14.2b), 38.9% Manufacturing (RM11.7b)
MELAKA HISTORIC CITY COUNCIL
INTERNATIONAL & NATIONAL LEVEL AWARDS AND RECOGNITIONS

Malaysia Sustainable City Award 2007 - 2016

ASEAN SUSTAINABLE CITY AWARD 2013

PRIME MINISTER INNOVATION AWARD 2016

THANK YOU
Brief Profile of Dipolog City

“Experience Dipolog” Tourism Program
- Sites and Activities-based Tourism
- Public Engagement, Green Education
  plus Continuing Development/Innovations
- The “Dipolog Proposal”:
  ASEAN ESC Eco-Tourism Circuit

Dipolog City
Confidently Beautiful

8th EAST ASIA SUMMIT HIGH-LEVEL SEMINAR ON SUSTAINABLE CITIES
8-9 February 2017 | Le Meridien Chiang Rai Resort, Thailand

DIPOLOG CITY
PHILIPPINES

We are a fast-growing city of
136,000 people

Strategic location makes the city as the
Gateway to Zamboanga Peninsula
& ideal hub for logistics, trade,
investment & tourism

Dipolog’s total land area is only
13,628 has. (predominantly agricultural)

SWIGAPORE 2030 VISION
positions Dipolog’s future as a
self-sufficient and progressive city

DIPOLOG CITY AT A GLANCE

2.06% annual growth
999 persons/sq. km.
67% of City in urban area

Experience Dipolog

Welcome experience DIPOLOG CITY

Options that build memories...
344-hectare ecological reserve

Sungkitaaw Falls

Majestic view over Mt. Linabo

Linabo Peak

Sicayab Beach
Activities-based Tourism
- Cultural and Heritage Tourism
- Sports and Recreation Tourism
- Eco-Tourism & Adventures

Culture and Heritage

Sports & Recreation

Dipolog, the center of Outdoor Sports of the South by 2020

Solar Boat Sunset Eco-Tour

Page 232 of 262
Tourism is a key economic driver

Tourism is about people and experiences

Initiatives to involve the public and community:
• Most Tourist Friendly Village
• Model Village on Ecological Solid Waste Management (Ordinance 123)
• Livelihood Development for the Communities thru DIPOLLOG’S BEST
• Training Local Tour Guides

Public Engagement and Green Education

Initiatives on Green Education:
• Enforcement of Ordinance No. 123 (on Sanitation)
• Urban Gardens in Schools and Communities
• Natural Farming System Demonstration and Training
• Eco-Schools Program

Dipolog City’s tourism receipts (from tourist expenditures) grew from US$ 12M+ in 2013 to US$ 16M+ in 2015.
Public natural resource conservation efforts

- Reforestation
- Mangrove planting
- Close fishing season
- Sea turtle release

The Future: Transforming the City Government Center

Sustainable Design + Heritage Protection/Conservation
Solar Power and Improved Energy Efficiency
Rainwater Harvesting and Reuse
Green Public Space
Catalyst to Impact Urban Agenda and Redesign of the City Center

Ongoing Development: Dipolog ESC Eco-Learning Center (DPL Boulevard)
Proposed: Dipolog Organic/Nature Farming School (Diwan)

Ongoing Research/Studies

- Appropriate Waste-to-Energy Technology
- Utilizing Dipolog River as alternative transport route
- Establishing man-made lakes as runoff/rainwater catch basins to prevent flooding

SAWADEE! MABUHAY!

Dipolog City
Confidently Beautiful

ESC MODEL CITIES
TOURISM CIRCUIT

8th EAST ASIA SUMMIT HIGH-LEVEL SEMINAR ON SUSTAINABLE CITIES
8-9 February 2017 | Le Méridien Chiang Rai Resort, Thailand
Tourism, Public Engagement and Green Education

Mayor: Ms. Penpuk Rattanakumfu
Koh Kha Municipality
Lampang Province, Thailand

Koh Kha Municipality
The livable and resilient city on the contexts of Tourism, Public engagement and Green education

Located northern part of Thailand
Type a medium city with a semi-urban style
Land Areas (Sq. Km) Population Households
4.78 4,763 2,245

The model of “citizen voice for city development” as an open forum for the public hearing in city development activity as well as self-finding on social capital and local wisdom including public participation in city development.

Koh Kha
Creating a livable city with environmental sustainability by Public participation

A Collaborative City for the Balance Happiness in Community within Sustainability development

Sustainable Tourist development
Using Resource Sustainable
Managing Diversity
Integrating Tourism into Planning
Marketing Tourism Responsibility
Consulting Stakeholders and the Public
Supporting Local Economy
Working Local Conservation
Reducing Over-consumption and Waste
Undertaking Research

The livable and impressive city including economic, social, political, and environment by the participation of every part in the society

Learning city
People think, act, decision by themselves
Public mind
Public engagement
Civil society
Social capital

The livable city
Created the participation
sustainable management
citizen voice for city development”

To work with transparency and accountability create the public’s trust and participation of local people. Driving Kohkha into the livable city by the forces of all parties in society.
Concepts and Strategy: Public Engagement

Environmentally Sustainable Management Activities
City Model: Public engagement and Green education

- Self-sufficiency economy model household.
- Organic Agricultural and Local rice
- Livable house.
- Garden house.

Environmentally Sustainable Management Activities
City Model: Public engagement and Green education

- Earthworm farming for organic waste disposal.
- Zero bath shop
- Household waste management
- Water pollution detective.
- Community forest

Separate waste at every household reduce waste from 10 ton/day to 2.72 ton/day

Change to environmental friendly lifestyle
Home grown organic plantation at least 7 types per household
Organic Agriculture to food security and healthy city

The ways of Kokha
- Self-finding on social capital and local wisdom
- Public participation And Public awareness
- Sustainable development
- The livable and resiliency city on the contexts of Tourism, Public engagement and Green education

Public participation
- Area based management
- Water pollution detective
- Organic Agricultural and Local rice
- Livable house.
- Garden house.

Livable house.
Garden house.

The livable and resiliency city on the contexts of Tourism, Public engagement and Green education
Real happiness of people

Thank you
Tourism Public Engagement and Green Education

Krabi Municipality
Krabi Province, Thailand
Deputy Mayor: Mr. Channarong Leelaburanapong

Part 1

The city's physical

Krabi Municipality is located in the southern of Thailand, with an area of 19 square kilometers. With a population of 31,610 people. There are 14 communities, 12 educational institutions, 6 learning models of the environment and learning base and environmental sustainable cities of ASEAN.

Part 2

The city’s physical

Surrounded by mountains, mangrove forests and rivers. In the North, it is covered by the mountains. In the East, West and South, it is composed of the Krabi River with 7 kms in length, which divided into 3 types of the water; sea water, fresh water and brackish water. With an area of 12,650 acres of mangrove Rhizophora forest, more than 60 abundant mangrove trees.

Krabi River wetlands is recorded in Ramsar side as internationally 1,100 and the 4th of Thailand.

Krabi has the biodiversity that are recorded in major areas for conservation. Because these areas are the homeland of more than 221 exodus birds. Reasonably, pave the way to be the learning center of environment sustainable model and environment sustainable base of ASEAN.

Part 3

Ecotourism development

The development of eco-tourism, the process to promote the art, culture, history and the sculptures that are the museums without the wall like the Mud Crab Sculpture (the landmark of Krabi town), the sculpture of Andaman Music that shows the unity and the abundance of Krabi, the Sculpture of Ancient Human, Sea Eagle, Sabre-Toothed Tiger, Elephant Holding Swords and Krabi Historical Wall that tells about the history of Krabi.
The Vision

Krabi lively town, loyey people. Service Center, the way to eco-tourism, history, art and culture into the quality (Q-City). People-centered towards development, attend to environment sustainable base of ASEAN with Q-City of 6 points; clean city, safety, healthy, green city, quality tourism and wealthy.

Green Area

Krabi municipality has the green areas that are divided into 2 sections namely; a natural public recreation, relaxation and exercise.

The number of 556 acres and man-made green area with an area of 12 acres. Developing green area is for the recreation tourism (Tree Top) tourism that is environmentally friendly to be as a public park.

To develop the park “Preuk sa Sawan” with the green area of 250 acres to be as the learning and planting source.

Collect, maintain and expand the plants to be pruksa all their benefits, also linking the livelihood of the people and developing the eco-tourism and adventure, nearby Andaman coast.

Tourism

Krabi tourist town, 1 of the 4th top in Thailand, located on the southwest, closed to Andaman with the beautiful scenery of islands which is the 2nd top ranking of islands in Krabi with 154 islands.
Part 7
Tourism / Green Education

The culture, history, art, museums without walls enhance the tourism development. The sculptures tell the history of the Krabi town with rich of biodiversity areas to development of eco-tourism.

Part 8
Tourism / Green Education

Cultural tourism history. Under the concept, Art people create cities. Andaman Cultural Learning Center Learning is to study the arts, culture, history. And is linked to incubator core, natural resources and the environment.

Part 8
Tourism / Green Education

Andaman Art Museum

- Building Gallery Andaman
- Seedlings Andaman school as a learning center that nurture young people
- Andaman bead museum used for a show about the history
- Natural plant bead pattern to modify the ancient beads.
Part 9

Tourism/ Green Education

“Preuk Sa Sawan” Park has an area of 250 acres with an abundance of green area. Moreover, it has been developed into the eco-tourism and adventure place. Also it is a learning area for the visitors and the young people to study and conserve the nature.

Part 10

Tourism Public Engagement

Tourism Development televised on “Roi Mue Sand Muang”, the popular TV program as the model to the Sustainable Environment by the people.

Project to promote the tourism, the unified community

“Center for food safety, where to buy souvenirs of our community and promoting healthy foot massage.”

Part 11

Tourism Public Engagement

Tourism Development televised on “Roi Mue Sand Muang”, the popular TV program as the model to the Sustainable Environment by the people.

Project to promote the tourism, the unified community

Local bus trip

Part 12

Tourism Public Engagement

Tourism Development televised on “Roi Mue Sand Muang”, the popular TV program as the model to the Sustainable Environment by the people.

Project to promote the tourism, the unified community

Trading Community
Tourism Development televised on “Roi Mue Sand Muang”, the popular TV program as the model to the Sustainable Environment by the people. Project to promote the tourism, the unified community Creating Accessibility to the tourism water site

Tourism Development televised on “Roi Mue Sand Muang”, the popular TV program as the model to the Sustainable Environment by the people. Project to promote the tourism, the unified community Floating Market, Muang Krabi

To foster the sustainable into the future, by giving priority to:
1. the participation of the citizens in the community by bring out the strength of the community and the potential to design and to manage as the tourist attractions.
2. Project “the model of Sustainable Environmental Management” that Krabi municipality is supported by IGES to run this learning process and for the 4 sources of the eco-tourism. It is to develop and conserve the natural resources and environment for the mangrove eco-tourism.

As the town Krabi is 1 of the 6th in Thailand and only one in the south of Thailand of Organization of international cooperation of Japan (Japan International Cooperation Agency– JICA), that is considered as "Development of people, the youth and the tourists".
THEMATIC SESSION C

Thailand Feature Sessions

C4: The Power of Public Participation in Green City Development: Scaling Up of Good Models
Livable City on the Context of Low-carbon Society: Blueprint of Change Model Local Government

Presented by Dr. Harin Sachdev
Faculty of Environment and Resource Studies, Mahidol University
February 8th – 9th, 2017, Le Méridien Chiang Rai Resort, Chiang Rai, Thailand

Module 1: Conception and sustainable agenda
- The concept of a long-range livability strategy, including LCS, is essentially a sustainable policy and management approach that aligns with the needs of low-carbon living. The module setup local government and key organizations to evolve their new economic and social reality, characterized by locally anchored and contextually relevant sustainable policies and management approaches.
- The process emphasizes the importance of understanding the whole, including geographical values added, through the field trip survey, the method identifies geographically significant questions (primary and secondary), which frame an inquiry. The process describes local's characteristics of place and how natural resources and environments are perceived and valued differently. It explains interconnections between communities, places and environments and describes how they plan to change in future.

Module 2: Project scope
- Project scope concerns on the linkage of municipal's natural resources and environments background and managerial approaches. The process synthesizes the main dimensions of local government sustainable policy and management that linkage and co-existence with their managerial context from module 1 e.g. self-sufficiency economy, choice of local embedded cultural values and practices.

Module 3: Stakeholders
- Stakeholders, the module embraces all local government networks and support institutions (e.g., local communities and relevance networks, central government, social organizations, NGOs, formal and informal academics institutions, youth, and corporate sectors) that are linked in LCS strategy discussions. They are taking into account as actors and key players' position, roles, policies, and strategies interests. Together, the process of visualizing common and specific goals needed to initiate and implement low-carbon objective(s) on local communities and relevance networks, central government, government networks, and support institutions (e.g., local sustainable development and as a result, a major role of a municipality sustainable cities).

Module 4: Evaluation module
- Evaluation module contributes to the assessment processes of the different evidence of sustainable criteria of communities. Key highlights are on the priority, issues, and values that govern decision-making process and to provide the assessment of two sub-modules, as follows:
  - The method frames and setup standard or benchmarking key indicators through the links between different aspects of local community and their related key agencies sustainable agenda linked with module 2), and
  - The process helps local government to identify the level of achievement of a LCS, including each individual in their communities in which is linked to local sustainable contexts and the International Sustainable Development Goals (SDGs).

Module 5: Generating useful knowledge
- Generating useful knowledge: The ongoing community dialogue is designed to produce useful knowledge to help all those involved in the process. This module provides those local government and key agencies who participate in the process with immediate access to new ideas and perspectives which help them re-evaluate their current strategies formulation and management aspects.
  - Accessing relevant knowledge: The process explores different mechanisms and ecological thinking, and how to be effective in sharing complex ideas and changing the thinking of large groups of people. Concepts, theoretical, and aggregate are debated (The Earth Environmental World Clock ideology, spaceship and carrying capacity, carbon footprint, environmentally behavior etc.) emphasizing on problems formulation ensures a focus on the collection and development of relevant knowledge of LCS and livable city.
  - Understanding the whole: The module focuses on bringing local and scientific knowledge systems to together. The process describes local’s characteristics of place and how natural resources and environments are perceived and valued differently. It explains interconnections between communities, places and environments and describes how they plan to change in future.

The Main Concept
Philosophical, theoretical and Applicable Framework
An Integration of Vertical and Horizontal Sustainable Contexts

The Future Success Stories
Best practices for Local Government Sustainable Cities Development and as a Role Model of Municipality Sustainable Cities

Output
- Blueprint of Change

Outcomes
- Long range livability strategy options in the form of LCS

Module 5: Generating useful knowledge:
- Methods and tools concern on the all and capability requires of local government and key related agencies on the achievement of the projects and activities concerned. In doing this, methods and tools are employing for collecting and managing data and information describing the current and gaps of knowledge and future situations and key activities, e.g., field trip survey, video and power point presentation, participatory workshop, deep dialogue, group discussion and key informant interview, as following sub-modules details.
- Geographical values added: Through the field trip survey, the method identifies geographically significant questions (primary and secondary sources) to frame an inquiry. The process describes local’s characteristics of place and how natural resources and environments are perceived and valued differently. It explains interconnections between communities, places and environments and describes how they plan to change in future.
Module 6: Revisit the Model Framework:

The module provides the ongoing community dialogue to revisit and produce useful knowledge all those methodological and methods applied involved in the study process. The aims is to provide local government and key agencies who participants in the process on how to access to new ideas and alternatives perspectives which help them re-evaluate their sustainable policy and action plans.

Thank you

The Future We Want
A water secure world is achievable

A story of FutureCity: Thai Contexts

Cities emerge from the present and future: Human-Social – Environment System Interaction

- Liveability, wellness, livelihoods and wealth
- Culture and diversity
- Social inclusion/exclusion
- Economics Ideology and Social Values
- Peace and crime
- Demographics, e.g., ageing population
- Identity
- Systems of governance (power and legal)

Thailand future challenges and opportunities

<table>
<thead>
<tr>
<th>Drivers and Factors</th>
<th>Strategy Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demography - ageing population</td>
<td>What is a successful city?</td>
</tr>
<tr>
<td>Economic competitiveness</td>
<td>How do cities grow and develop?</td>
</tr>
<tr>
<td>Governance</td>
<td>Can we make cities more sustainable?</td>
</tr>
<tr>
<td>Climate change Low and post carbon society</td>
<td>What are the options for city governance?</td>
</tr>
<tr>
<td>Technology</td>
<td>How will city ambitions relate to national frameworks?</td>
</tr>
<tr>
<td>Sustainability – energy, waste</td>
<td></td>
</tr>
<tr>
<td>Resilience / Ecological Capitals and Human livelihoods</td>
<td></td>
</tr>
<tr>
<td>Local and international Cooperation</td>
<td></td>
</tr>
<tr>
<td>Law and regulation (local and Inter)</td>
<td></td>
</tr>
</tbody>
</table>
Urban biodiversity interpreted in policies/practices related to public green spaces and parks?

Where we are in SDGs?

Economic dimension
- Self-support lifestyle
- Community food security

Sustainable Development

Environment dimension
- Natural resources based and biodiversity conservation

Social Dimension
- Caring Society
- Local Wisdom Promotion

Increase green area

OUTCOMES

ECONOMICS

ECOLOGY

POLITICS

CULTURE

Background of the SDGs

Social aspect of sustainable development (equity and equality)

SDGs’ unfinished tasks

Challenges raised by the limits of the Earth System

OUTCOMES

Environmental dimension
- Sustainability of ecosystem and biodiversity along the coastline
- Better City Landscape

Sustainable Development

Social Dimension
- Sustainability of local fisherman livelihood

Sustainable Development Goals

Innovation and game-changing ESC practices/policies Local and Regional

Conservation aquatic resources by releasing fish into natural waters and Public water constantly.

Development Tourism area of Por Mon Dang Shrine became The Learning Center of history.

Waste management, recycling

Organic waste management

Innovation and game-changing ESC practices/policies Local and Regional

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SDGs’ unfinished tasks

Challenges raised by the limits of the Earth System

Social aspect of sustainable development (equity and equality)

Innovation and game-changing ESC practices/policies Local and Regional

Conservative Tours learning center
Cultural and Park learning center
Wetland conservation
Green Areas
Prepare Local course about resource and environmental management
Promoting Eco-Friendly Lifestyle with environmental
Ecotourism
Artisanal fishery
Pollution and Waste management efficiency
Samui Together Green
“รวมพลังสีเขียว เพื่อสมุยยั่งยืน”

by

Samui – Thailand's third largest island, lies in the Gulf of Thailand

228 km²
lation >65,000
grant 200,000
st 2,000,000/year

ical weather
aged temperature 29 °C with
est averaged temperature 37 °C in April and May
est averaged temperature 21 °C in December and January

Toward Green Island - Koh Samui

Green Island - Samui (Island)
Green Beaches (pilot beach)
Green Hotels
Greener Choice Hotels
Greener Beaches
Samui Greener Destination (Our)
Samui Togetherness Green (Our PA)

ecom Island - Samui

Special Buildings
and Resorts ~25,000 rooms, residence

2.8% beaches
3.5% low land

1. 54% mountain and hilly area in the central part and uninhabitable
2. 33% plane area
3. 8% beaches
4. 5% low land

Towards Green Island - Koh Samui

Projects and activities…..

- Low Carbon School Project
- Green Awareness Rally
- Capacity and awareness building on the green cart and green label requirements for hotels
- A Based Environmental Management - pilot beach
Green Awareness Rally

“we want to go green”

What’s NEXT?

“I heard YOU”

Let’s Do It…
- develop your own green
- set up green unit/team

ART from…
hotel sector
cause…they are
major income earner
be good driving force

Greener Choice Hotels

Green Awareness Rally

14 Green Learning Centers
hotels, houses, schools,
local shops

Activity Participants…
16 Health Volunteers
18 Student
60 others

Green Hotels

Capacity and Awareness Building
on the green cart and
green label requirements for hotels

Green Hotels

Greener Beach
pilot beach

Together Green
launched in this time (year 2014)

This Project under the Thailand-Europe
Union Policy Dialogues Support Facility
(PDSF), a project funded by the Europe
Union

YES !!!
“we want
go green

capacity and awareness building
on the green cart and
green label requirements for hotels

Capacity and Awareness Building
on the green cart and
green label requirements for hotels

Training for
international certificates
4 green cart
18 green hotels,
operated by DEQP
3 hotel forward

Green Hospitals

Samul Together Green

Page 249 of 262
Capacity and Awareness Building on the green cart and green label requirements for hotels.

Training for application of domestic and international certificates.

Green HOTELS

CSR

Greener Community

Area Based Environmental Management

Working Together

Sharing Knowledge

Challenging each other

Green Beaches

Bophut

~ 20 hotels, resort, villa
~ 1,500 hotel rooms
~ 100 Restaurants and shops
1 school
1 temple
1 fresh market
1 shopping mall

Area Based Environmental Management

Learning to make fertilizer from grease trap scum and yogurt.

Low Carbon School Project

with THA Green Hotels Network to support the school.
thank you
ขอบคุณค่ะ
Power of Public Participation in Green Sustainable City Development: Scaling Up of Good Practices

ARNAN C. PANALIGAN
Mayor, Calapan City, Philippines

8th East Asia Summit High Level Seminar on Sustainable Cities
09 February 2017, Chiang Rai, Thailand

Calapan is the capital of the province of Oriental Mindoro with a total land area of 250.06 square kilometers.
- Population: 133,893
- Pop. Growth Rate: 1.6%.

Located in the northeastern part on the island of Mindoro, 130 km south of the capital of the Philippines, Manila and 28 nautical miles south of Batangas province.
- Comprised of 62 political divisions or barangays: 22 are urban and 40 are rural.

MIMAROPA’s Premier Center of Investments and Agro Industry

2016-2026

Located in the northeastern part on the island of Mindoro, 130 km south of the capital of the Philippines, Manila and 28 nautical miles south of Batangas province.

Comprised of 62 political divisions or barangays: 22 are urban and 40 are rural.

Barangay GREEN Initiatives

Barangay Eco Champions

Encourage commitment of local communities in building a green environment
- Solid waste segregation at source.
- Tree planting activities for the Barangay Forest Parks

Mangrove Forest Conservation and Development

The City of Calapan has instituted public partnerships for the establishment of Mangrove forest to:
- Initiate local eco-tourism development
- Improve carbon sequestration
- Establish a learning hub for ecological management
- Engage locals with the local government’s sustainable goals.

Conservation and Protected Areas

Establishment of Marine Protected Areas

The 258 hectares Marine Protected Areas of Calapan City protects the coastal waters and marine resources.
Environmental Education and Governance

The Search for the Most Eco-Friendly and Progressive, Responsive and Outstanding School

The program is aimed to create a significant impact specifically on the students in promoting environmental awareness and sustainable management.

Eco Savers Club Program

Students are taught proper solid waste segregation to recover materials that can be sold to accredited "junk shops" of the local government.

Other Local Partnerships and Initiatives

- Policies and Ordinances
- Organizing and accreditation of local "junk shop" operators and local Fisher folks
- Earth Hour Celebration
- Brick production from 'with potential type of wastes' like plastic bags
- River Rehabilitation Program
- Urban Backyard Gardening
- Tree Planting and Tree Parenting initiatives

Maraming Salamat, Mabuhay!
Sustainable Tourism
Case study
Koh Samui..Green Hotel & Green Network to Green Island
by
Mrs. Jultamart Tongphuak
Secretary of Thai Hotel Association, Southern East Coast
And Committee of The Green Island Foundation
And Green Network with Samui Municipality

Samui Municipality start green network in 2005
by
had connection to some green hotel (by hotel policy)

THA Green & Samui Municipality
analysis the problems
- Garbage
- Waste water
- More chemical
- More Energy consumption, electric, water, gasoline
- Air pollution
- Lack of Awareness

July 2007 – big meeting with many hotels for present the green procedure
And inspect at some green hotel

Green Procedure
By THA Green & Samui Municipality
1. environmental presentation, training
2. garbage management (separation, reduction, reform, recycle product)
3. EM - effective micro organism fermentation from leftover fruit, vegetable
4. Compost (by leftover food + leave, organic garden)
5. energy saving (electric, water, gasoline)
6. green purchasing
7. less pollution
8. Corporate Social Responsibility - CSR

How to promote the power of public participation?
- policy
  Owner or GM must be stick in environment
- Set the green team
  team leader and participation must be manager
- procedure
  Set up Green Procedure
  garbage separation, EM, compost, organic garden, recycle product or etc.
- action
  Spot check, audit, evaluate
How to set green project in your hotel?

- Summary report
  - Pros & Cons, weakness
  - Reduce cost per year
  - Revenue from sale recycle garbage
  - Next project

Green Procedure

1. Garbage Separation
2. Garbage Reduction
   - Use cloth bag or basket substituting plastic bag
3. Organic waste transformation
   - Leftover food + leave compost
   - Fruit & vegetable scrap
   - Raw fish scrap
   - EM for cleaning, Wastewater treatment
   - EM for plant hormone

Garbage Reduction – reduce plastic
- Cloth bag for room amenity and glass bottle (reuse)
- Ceramic bottle (refill)
- Use white cloth protect dust substitute plastic bag
**EM (Effective Microorganisms) – substitute chemical**

Less chemical → use bio product

**Organic garden**

use bio compost & EM → organic menu

**Water Saving**

- Sign in room
- For turning off the tap
- For towel
- For bed sheet

**Water Saving**

- Sticker & water saver faucet
- Saving flush toilet
- Placing rock or water bottle in flushing toilet

**Energy saving**

- Sticker for awareness
- Change to energy saving bulb
Hot water from condensing air (heat exchange)

Bio Gas
From leftover

Solar hot water

Bio Diesel

Green Purchasing

CSR

Grand Opening of Low Carbon School Project
at Wat Klang School
(by Centara Grand And Chaba Cabana)
Benefit to be Green Hotel

• reduce cost - fertilizer, organic veggi, handicraft, etc
• reduce electric and water cost
• reduce CO₂ emission – reduce global warming effect
• more awareness
• CSR – cooperate social responsibility

• one of the selling point

Greener Designation - Samui

The success stories
Green hotel network , Samui = 40 hotels
Green Leaf Certificate = 20 hotels
by Greenleaf Foundation
Greener Choice = 50 hotels (by Municipality)
Green Room = 5 hotels (pilot project)
by Energy Ministry
Green Hotels Standard = 20 hotels
by DEQP (Department of Environment Quality Promotion)
Green Globe Standard = 2 hotels

TAT will support for Road Show
(TAT - Tourism Authority of Thailand)

Carbon emission calculation from each activity in hotel

<table>
<thead>
<tr>
<th>activity</th>
<th>unit</th>
<th>Factor (kg CO₂e / unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>electric</td>
<td>kw-h</td>
<td>0.5610</td>
</tr>
<tr>
<td>diesel</td>
<td>l</td>
<td>2.7446</td>
</tr>
<tr>
<td>benzene</td>
<td>l</td>
<td>2.1896</td>
</tr>
<tr>
<td>LPG</td>
<td>kg</td>
<td>3.11</td>
</tr>
<tr>
<td>Sent to incinerator</td>
<td>ton</td>
<td>41 g NO₂ (≈ 310 of CO₂)</td>
</tr>
<tr>
<td>Aluminum can</td>
<td>kg</td>
<td>-3.70</td>
</tr>
<tr>
<td>glass</td>
<td>kg</td>
<td>-0.08</td>
</tr>
<tr>
<td>paper</td>
<td>kg</td>
<td>-0.80</td>
</tr>
<tr>
<td>Plastic</td>
<td>kg</td>
<td>-0.42</td>
</tr>
</tbody>
</table>

We can calculate CO₂ emission = 50 – 100 kg CO₂e / room

Keep record ➔ set % reduce ➔ Low Carbon destination

Green Network

Thanks you
Welcome To ...
Phangkhon, Thailand

Presented by

Mr. Surachai Khunchaiyaphum
Chief Municipal Clerk of Phangkhon Municipality

General Information of Phangkhon Municipality
population 6,708
Passive population about 1,500 – 2,000
Household 3,639 (November 2016)

Area 6.66 sq. km.
- Center of Education
- Variety of Ethnic
- Center of water source

Waste Management

1. Supporting of Municipality
   1.1 Policy and Planning
   1.2 Budget Supporting and Material
   1.3 Assignment /Board of Work
   1.4 Awareness and Promotion

Awareness and Promotion

Supporting of Municipality
contest of the rubbish tree
Waste Management

2. Community Participation
   2.1 community participation
   2.2 municipal participation
   2.3 Organizations Participation
   2.4 Community and Organizations continuous Participation

3. Zero Waste community Activities
   3.1 Use 3Rs
   3.2 Organic Waste management
   3.3 Recycle management
   3.4 Waste management
   3.5 Hazardous Waste management

Bio-gas & Compost Project

- Growing Vegetable
- The Hazardous waste exchange rate
- Bio-gas
- Composting
4. Outcome
4.1 Knowledge and conscious mind
4.2 Reuse
4.3 Reduce
4.4 Learning Center
4.5 Community and Organizations continuous Participation

Philosophy
“Sufficient economy”
5. Waste management
- Under sustainable municipal green government
- Sufficiency Ideology
- Local community participation

OUR Future pathways
- Local identity and values
- Moving from waste management to the greener city
- As the role cultural model on waste management

3Rs
“Reduce Reuse Recycle”
The end

Thank you for your attention