



# Towards the Achievement of Decarbonization in the Region and Localization of the SDGs

Junichi Fujino (IGES)

LoCARNet 8<sup>th</sup> Annual Meeting Program  
November 8, 2019 Beijing

# 低炭素社会における家庭 —快適な居住空間と省エネの両立—

太陽の恵みを活かした  
家作り

太陽光発電

3400-6900万kW  
(日本の屋根の25%~47%に普及(現在は1%程度))  
さらに、超高効率太陽光発電  
(変換効率30%以上)、色素増感太陽電池

エコライフ実践のた  
めの環境教育

太陽熱温水器

普及率 20~60%  
(現在は8%程度)

環境負荷表示システム  
(家電・自動車 標準装備)

超高効率エアコン

成績係数(COP)=8,  
100%普及  
(注)成績係数とは消費電力  
1kW当たりの冷暖房能力(kW)

待機電力削減

33%削減, 100%普及

屋上緑化

高効率照明

【白熱灯→蛍光灯→インバー  
タ蛍光灯→LED照明等】

効率100%増加  
100%普及

高断熱住宅

暖房需要60%削減  
100%普及

燃料電池コジェネ

0~20%普及  
(現在は0%程度)

ヒートポンプ給湯

COP=5  
30~70%普及

お得で環境に役立つ  
情報の提供で  
人々の行動を  
より低炭素へ

高効率機器の開発・普及で  
少ないエネルギーで冷暖房・給湯需要を  
満たし安全・安心で快適な生活を

# Climate and SDGs

- Paris Agreement (Dec. 2015)
- 2 degree target (1.5 degree)
- 2030 Agenda (Sep. 2015)
- 17 goals, 169 targets



# Climate and SDGs

- Paris Agreement (Dec. 2015)
- 2 degree target (1.5 degree)
- Global review (Global Stocktake) by every 5 years
- Nationally Determined Contributions (NDCs)
- UNFCCC/COP
- 2030 Agenda (Sep. 2015)
- 17 goals, 169 targets
- Global review at UN General Assembly by every 4 years
- Voluntary National Reviews (VNRs)
- HLPF (High Level Political Forum)

Both Paris Agreement and 2030 Agenda have “Follow-up and Review” process for all countries!





# Voluntary National Reviews Database

As part of its follow-up and review mechanisms, the 2030 Agenda for Sustainable Development encourages member states to "conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led and country-driven" (paragraph 79). These national reviews are expected to serve as a basis for the regular reviews by the high-level political forum (HLPF), meeting under the auspices of ECOSOC. As stipulated in paragraph 84 of the 2030 Agenda, regular reviews by the HLPF are to be voluntary, state-led, undertaken by both developed and developing countries, and involve multiple stakeholders.

The voluntary national reviews (VNRs) aim to facilitate the sharing of experiences, including successes, challenges and lessons learned, with a view to accelerating the implementation of the 2030 Agenda. The VNRs also seek to strengthen policies and institutions of governments and to mobilize multi-stakeholder support and partnerships for the implementation of the Sustainable Development Goals.

This online review platform is dedicated to compiling information from countries participating in the voluntary national reviews of the High-level Political Forum on Sustainable Development ([scroll down](#)).





UNFCCC  
@UNFCCC

Cities account for more than 70% of global emissions & consume 2/3 of the world's energy. By 2050, 2/3 of all people will live in a city. To win the fight against [#ClimateChange](#), we must make the transition to sustainable, low-emission cities. 📌 <https://t.co/pmGExyNnXP>  
<https://t.co/y3XSDpAZyl>



31 October 2019

New York

## Secretary-General's Message on World Cities Day [scroll down for French]

More than half the world's population now lives in urban areas. By 2050, two thirds will do so. Much of what will be needed to house and serve this increasingly urban world has yet to be constructed, and even some new cities will need to be built. This brings enormous opportunities to develop and implement solutions that can address the climate crisis and pave the way toward a sustainable future.

Cities consume more than two-thirds of the world's energy, and account for more than 70 per cent of global carbon dioxide emissions. The choices that will be made on urban infrastructure in the coming decades – on urban planning, energy efficiency, power generation and transport – will have decisive influence on the emissions curve. Indeed, cities are where the climate battle will largely be won or lost.

But in addition to their enormous climate footprint, cities generate more than 80 per cent of global gross domestic product and, as centers of education and entrepreneurship, they are hubs of innovation and creativity, with young people often taking the lead.

From electric public transport to renewable energy and better waste management, many of the answers needed for the transition to a sustainable, low-emission future are already available. Cities around the world are turning them into a reality. It is encouraging to see this happening, but we need this vision to become the new norm. Now is the time for ambitious action.

World Cities Day comes at the end of "urban October", a month dedicated to raising awareness on urban challenges, successes and sustainability. As we conclude this period, let us commit to embracing innovation to ensure a better life for future generations and chart a path towards sustainable, inclusive urban development that benefits all.

# Climate Change and Land

An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

## Summary for Policymakers



A4.6. Both global warming and urbanisation can enhance warming in cities and their surroundings (heat island effect), especially during heat related events, including heat waves (high confidence). Night-time temperatures are more affected by this effect than daytime temperatures (high confidence). Increased urbanisation can also intensify extreme rainfall events over the city or downwind of urban areas (medium confidence). {2.5.1, 2.5.2, 2.5.3, 4.9.1, Cross-Chapter Box 4 in Chapter 2}

A6.5 Urban expansion is projected to lead to conversion of cropland leading to losses in food production (high confidence). This can result in additional risks to the food system. Strategies for reducing these impacts can include urban and peri-urban food production and management of urban expansion, as well as urban green infrastructure that can reduce climate risks in cities<sup>32</sup> (high confidence). {4.9.1, 5.5, 5.6, 6.3, 6.4, 7.5.6} (Figure SPM3)



# The Ocean and Cryosphere in a Changing Climate

This Summary for Policymakers was formally approved at the Second Joint Session of Working Groups I and II of the IPCC and accepted by the 51st Session of the IPCC, Principality of Monaco, 24th September 2019

## Summary for Policymakers



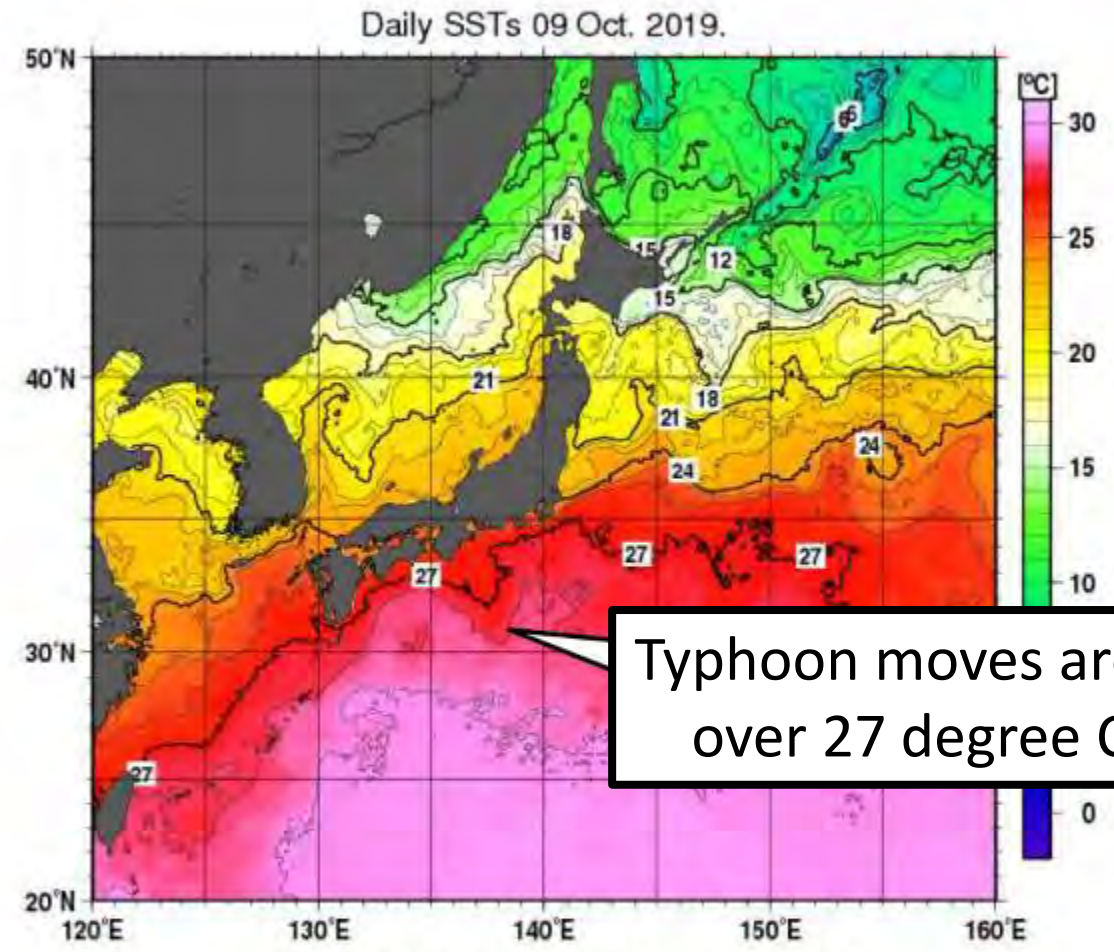
B3. Sea level continues to rise at an increasing rate. Extreme sea level events that are historically rare (once per century in the recent past) are projected to occur frequently (at least once per year) at many locations by 2050 in all RCP scenarios, especially in tropical regions (high confidence). The increasing frequency of high water levels can have severe impacts in many locations depending on exposure (high confidence). Sea level rise is projected to continue beyond 2100 in all RCP scenarios. For a high emissions scenario (RCP8.5), projections of global sea level rise by 2100 are greater than in AR5 due to a larger contribution from the Antarctic Ice Sheet (medium confidence). In coming centuries under RCP8.5, sea level rise is projected to exceed rates of several centimetres per year resulting in multi-metre rise (medium confidence), while for RCP2.6 sea level rise is projected to be limited to around 1m in 2300 (low confidence). Extreme sea levels and coastal hazards will be exacerbated by projected increases in tropical cyclone intensity and precipitation (high confidence).

Projected changes in waves and tides vary locally in whether they amplify or ameliorate these hazards (medium confidence). {Cross-Chapter Box 5 in Chapter 1; Cross-Chapter Box 8 in Chapter 3; 4.1; 4.2; 5.2.2, 6.3.1; Figures SPM.1, SPM.4, SPM.5}



# Sea temperature around Japan (Oct 9<sup>th</sup> 2019) Just before Typhoon Hagibis hit Japan

10月11日  
10時時点の資料



日本近海の海面水温(9日)

今後の予想を含めた最新の情報は、各地の気象台が発表した気象情報をご利用ください。  
(海面水温: [https://www.data.jma.go.jp/gmd/kaiyou/data/db/kaikyo/daily/sst\\_HQ.html](https://www.data.jma.go.jp/gmd/kaiyou/data/db/kaikyo/daily/sst_HQ.html))<sub>2</sub>

# Climate and SDGs, **and Cities**

Cities are places to be suffered by climate change  
and to accelerate actions!

- Paris Agreement (Dec. 2015)
- 2 degree target (1.5 degree)
- Global review (Global Stocktake) by every 5 years
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- 2030 Agenda (Sep. 2015)
- 17 goals, 169 targets
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**Locally** Determined Contributions (LDCs) !?



Voluntary **Local** Reviews (VLRs) !?



NDCs: National Determined Contributions



LDCs: Locally Determined Contributions

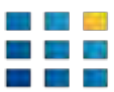


# AIM Local Low Carbon Society (LCS) Scenarios in Asia

- Quantitative scenario approach with AIM (Asia Pacific Integrated Model) has been applied to more than 20 regions in Asia, and LCS plans and roadmaps are developed for each region. [http://2050.nies.go.jp/LCS/index\\_j.html](http://2050.nies.go.jp/LCS/index_j.html)

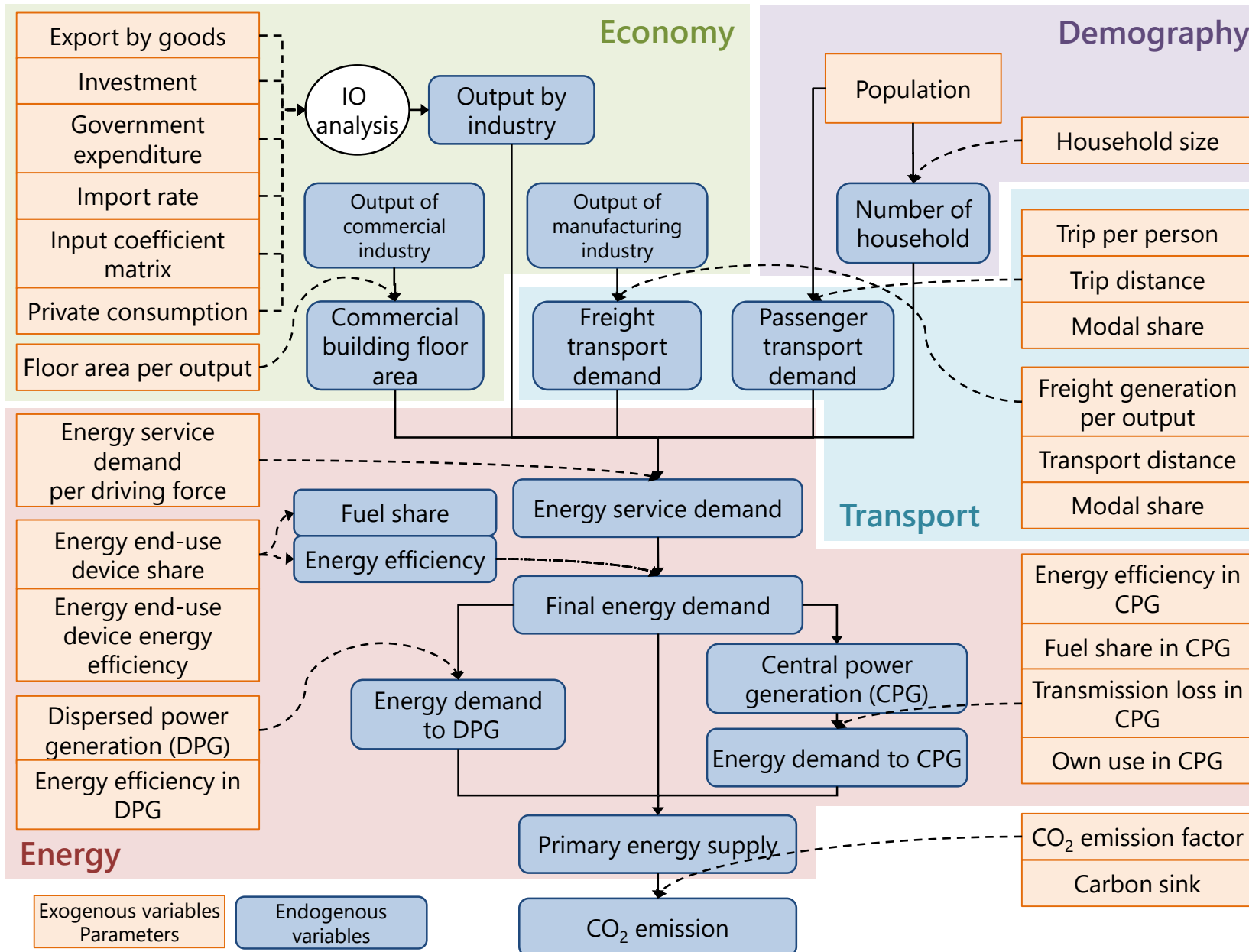






# Structure of AIM/ExSS

## Design of LCS Projects and Projection of Future Scenario

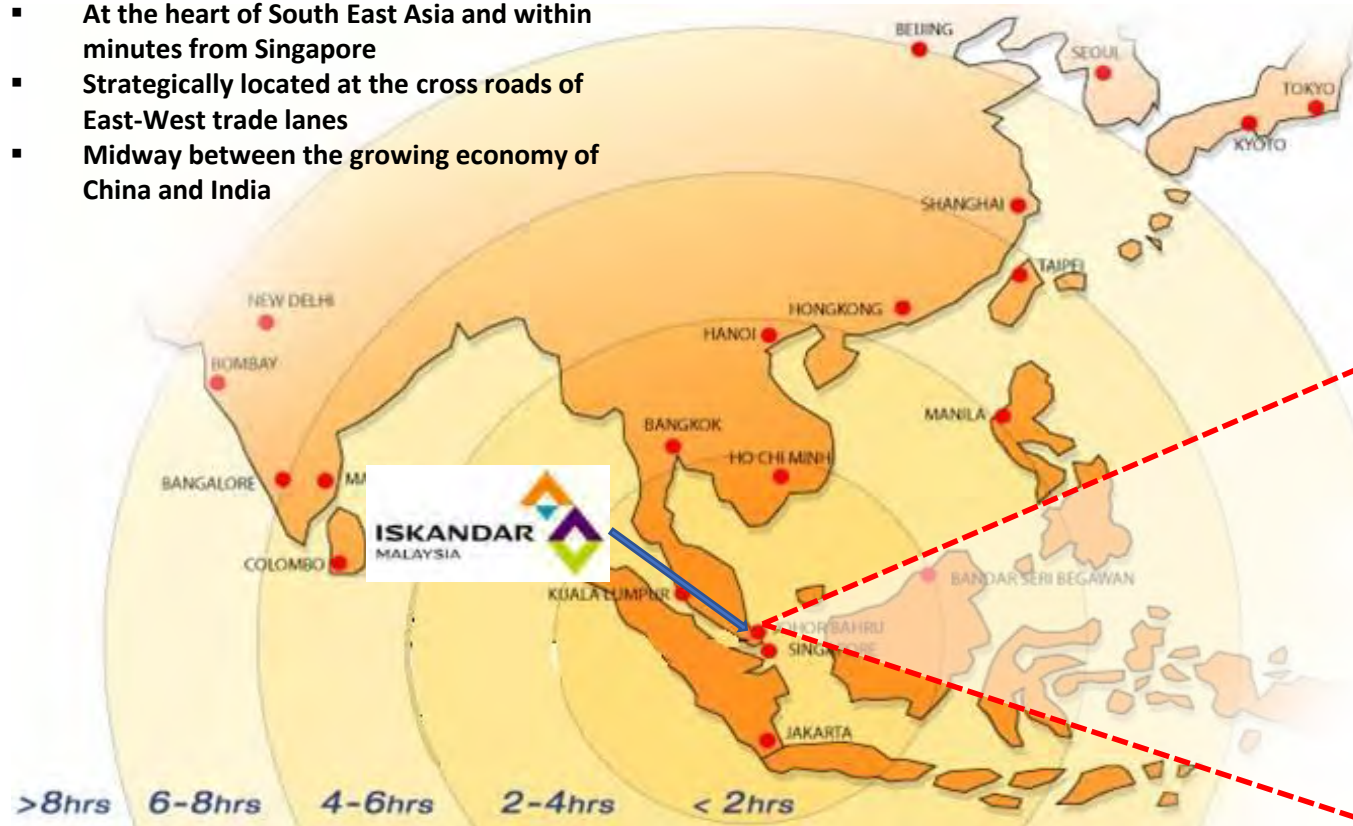


# Iskandar Malaysia Vision “Strong and Sustainable Metropolis of International Standing”

+

LCS scenario research  
(Low Carbon Society)  
by SATREPS (JST/JICA)  
scheme

- At the heart of South East Asia and within minutes from Singapore
- Strategically located at the cross roads of East-West trade lanes
- Midway between the growing economy of China and India



A	JB CITY CENTRE
	NUSAJAYA
B	WESTERN GATE DEVELOPMENT
C	EASTERN GATE DEVELOPMENT
	SENAI-SKUDAI
D	
E	



# Low Carbon Society Blueprint for Iskandar Malaysia 2025

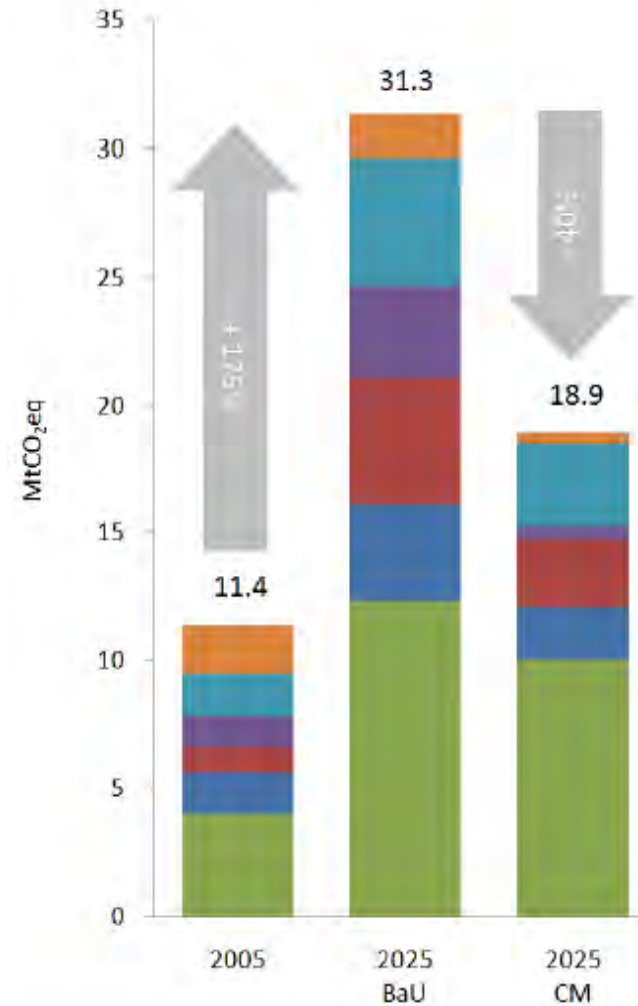
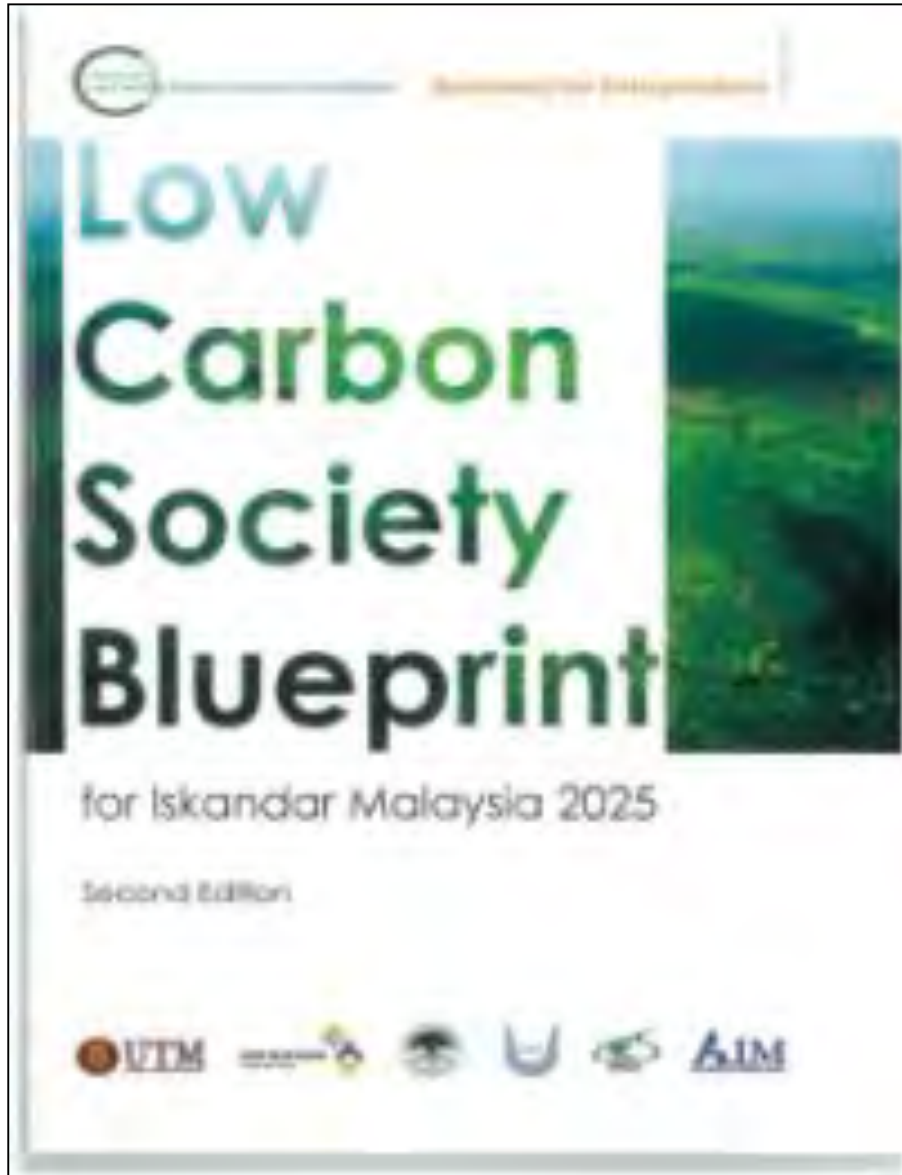


Figure 1: GHG emissions by sectors

	Action Names
1	Integrated Green Transportation
2	Green Industry
3	Low Carbon Urban Governance
4	Green Buildings & Construction
5	Green Energy System & Renewable Energy
6	Low Carbon Lifestyle
7	Community Engagement & Consensus Building
8	Walkable, Safe, Livable City Design
9	Smart Growth
10	Green and Blue Infrastructure & Rural Resources
11	Sustainable Waste Management
12	Clean Air Environment

12 action, 281 program

# Selected Climate Action Plans by UTM-LCARC In collaboration with IGES



2009-2018

# Selected City Climate Actions by UTM-LCARC

Iskandar Malaysia  
MBJB  
MBIP (then MPJBT)  
MPPG  
MPKu  
MDP  
(2009-2018, ongoing)

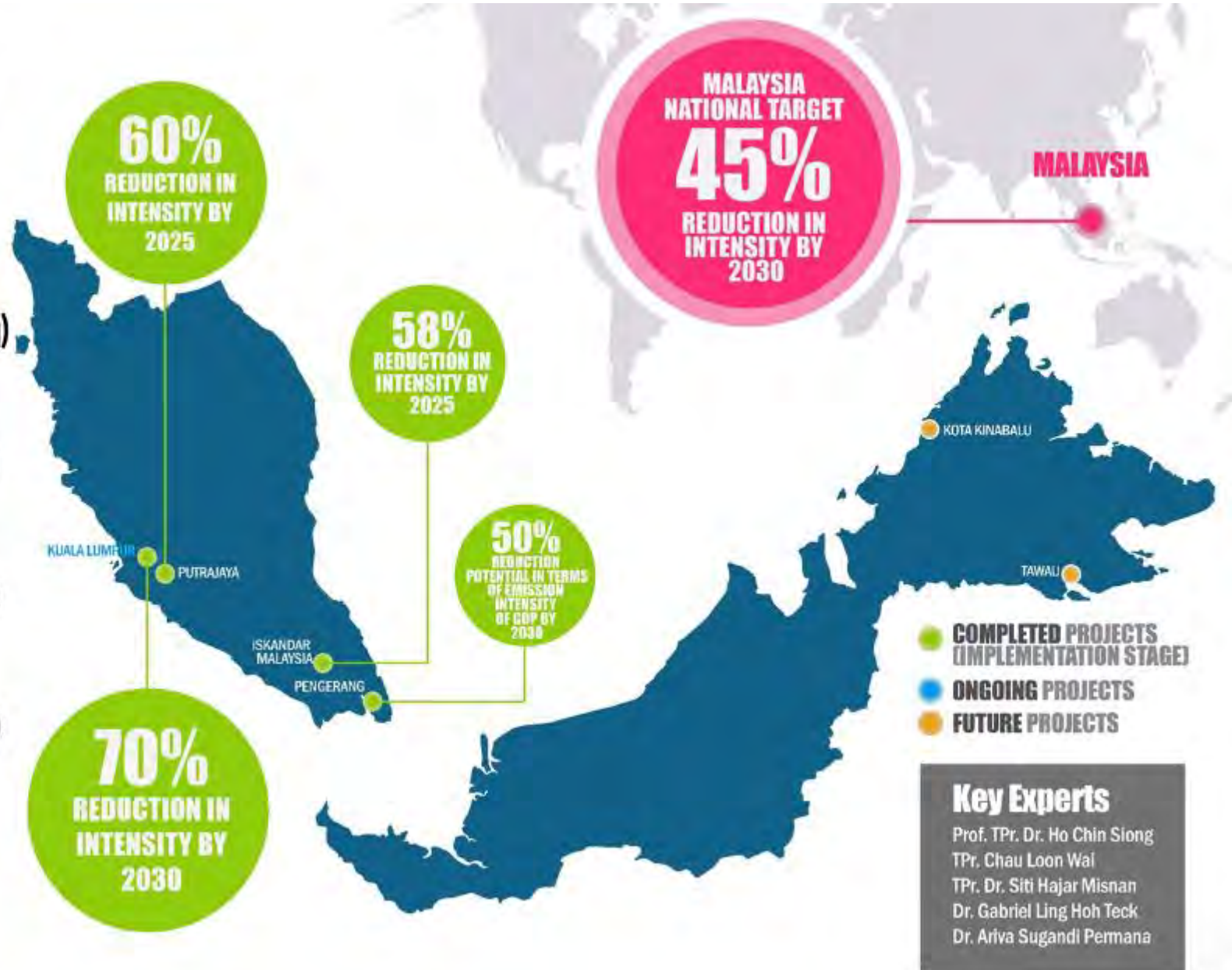
Putrajaya  
(2011-2013, ongoing)

Kuala Lumpur  
(2016-2017, ongoing)

Pengerang  
(2017-2018, ongoing)

Kota Kinabalu  
Tawau

(Coming soon?)



## Key Experts

Prof. TPr. Dr. Ho Chin Siong  
TPr. Chau Loon Wal  
TPr. Dr. Siti Hajar Misnan  
Dr. Gabriel Ling Hoh Teck  
Dr. Ariva Sugandi Permana





Kuala Lumpur aims to reduce the City's carbon emissions intensity of GDP by **70% by 2030**, (based on the 2010 level) without compromising its vision and economic growth targets.

# City to city collaboration between Kuala Lumpur and Tokyo

Tokyo is a giant energy consumer (around 700 PJ in 2012). Mitigation actions in the building sector take an important role to achieve their declared target for climate change actions.

Tokyo has developed measures for both existing and new buildings as well as Tokyo Metropolitan Government (TMG) properties. (eg. Cap & Trade Scheme, CO2 emission reporting program, Green building program)

Kuala Lumpur and Tokyo started their collaboration on the building sector as of June 2019.



Kickoff ceremony in DBKL (June 2019)



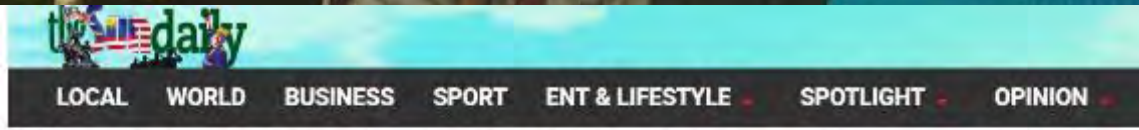
Discussions in Japan on energy saving measures (July 2019)



Aug 23 2019 in KL

Junichi Fujino is 😊 feeling thankful with Setifu Di Sana and 5 others at The hall, biro Pelancongan KL. August 24 at 2:02 PM · Kuala Lumpur, Malaysia

T2KL LCS (Tokyo to Kuala Lumpur Low Carbon System) seminar (Aug 23) hosted by Mayor of Kuala Lumpur, Dato' Hisham, successfully completed. IGES coordinates (soft) technology transfer program from TMG (Tokyo Metropolitan Government) to KLCH (Kuala Lumpur City Hall) that aims to conduct energy saving and renewable energy program on around 2000 public buildings/facilities in collaboration with UTM (University Technology Malaysia) and SEDA (Sustainable Energy Development Authority), funded by MOEJ (Ministry of the Environment Japan). TMG has already conducted this program on around 4200 public buildings/facilities in Tokyo!



# KL and Tokyo looking into low carbon society collaboration

23 AUG 2019 / 19:54 H



Media Coverage by Malaysian "the sun daily" on 24<sup>th</sup> Aug 2019





# LOW CARBON SOCIETY SCENARIO SEMARANG 2030

Preliminary Research



The phenomenon of climate change in the last few decades has become one of the strategic issues for all over the world, including Indonesia. At the G-20 meeting in Pittsburgh and COP15 in Copenhagen, Indonesia is committed to taking part in reducing greenhouse gases (GHG) by 26% with domestic resources and 41% with international assistance in 2020. The commitments are then followed up by the formulation of Presidential Regulation No. 61/2011 and No. 71/2014 concerning the realization of GEF activities. This study

applied for the projection of carbon dioxide ( $\text{CO}_2$ ) emission and design of LCS scenario. This preliminary research is focused on energy-related  $\text{CO}_2$  emission.

Semarang City's  $\text{CO}_2$  emission is estimated to be 2.823  $\text{ktCO}_2\text{e}$  in 2015 based on collected data. The passenger transport sector is a sector emitting the largest  $\text{CO}_2$  in Semarang City. This sector accounts for more than half of the total emission.

# Collaborative work with Semarang and IGES/AIM team

## Objective

- Support developing and accelerating a climate change action plan in Semarang by quantitative analysis with integrated modeling approach
- Capacity building and knowledge transfer of Low Carbon Society (LCS) scenario development and implementation

## Research Team

### Semarang City

#### Local Government



**Development Planning Agency  
(Bappeda)**

#### University



**Diponegoro University**



### AIM team, Japan



**Ministry of Environment  
Japan**



**Institute for Global  
Environmental Strategies**



**National Institute for  
Environmental Studies, Japan**

#### Consulting firm



**E-Konzal Co. Ltd.**



**Mizuho Information and  
Research Institute, Inc.**



# August 2017 in Semarang In occasion of ICENIS 2017



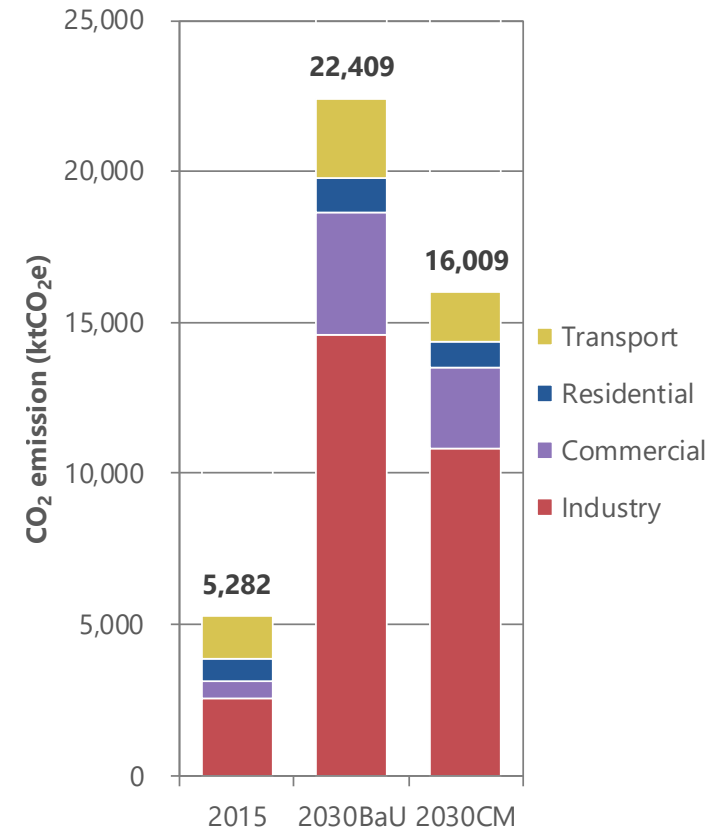


# Carbon emission by AIM

- CO<sub>2</sub> emission in BaU scenario will amount to 4.2 times as much as 2015.
- In CM scenario, CO<sub>2</sub> emission can be reduced by 29%.
- The passenger transport sector and the commercial sector will lead emission reduction.
- Semarang City has a potential to reduce CO<sub>2</sub> emission corresponding to INDC of Indonesia

CO<sub>2</sub> emission by sector

	2015	2030 BaU	2030 CM	BaU /2015	CM /BaU
<b>CO<sub>2</sub> emission (ktCO<sub>2</sub>e)</b>	<b>5,282</b>	<b>22,409</b>	<b>16,009</b>	<b>4.24</b>	<b>0.71</b>
Industry	2,524	14,577	10,826	5.77	0.74
Commercial	571	4,042	2,665	7.08	0.66
Residential	748	1,174	862	1.57	0.73
Passenger transport	1,438	2,616	1,656	1.82	0.63
<b>CO<sub>2</sub> emission per GDP (tCO<sub>2</sub>e/bil.Rp)</b>	<b>39.4</b>	<b>26.9</b>	<b>19.2</b>	<b>0.68</b>	<b>0.71</b>
<b>CO<sub>2</sub> emission per capita (tCO<sub>2</sub>e/person)</b>	<b>3.3</b>	<b>10.9</b>	<b>7.8</b>	<b>3.29</b>	<b>0.71</b>





Abstract  
The Semarang City Government has been working to reduce greenhouse gas (GHG) emissions since 2011. This research on the low carbon society (LCS) scenario for Semarang City are carried out aiming to contribution to promoting climate change actions and policies in the city. This study is one of the outcomes of the collaboration among Municipality of Semarang, Diponegoro University and Asia-Pacific Integrated Model (AIM) team in Japan. Two kinds of scenarios, namely Business as Usual (BaU) scenario and Countermeasure (CM) scenario, are prepared to analyze reduction potential of CO2 emission in future. In BaU scenario, it is assumed that there is no policy or technology intervention to reduce carbon emission, while attempt to reduce carbon emission is assumed in CM scenario. In the CM scenario, Semarang City Government will promote five LCS actions and implement various LCS projects belonged to the actions. One of the action named "Sustainable Transport", which promotes energy efficient vehicle and modal shift, will contribute to the reduction of 4,220 ktCO2e. These actions and projects help Semarang City to reduce

Downloads

**Topics:** Low-Carbon Societies  
**Region/Country:** Indonesia  
**Language:** English

## Low Carbon Society Scenario Semarang 2030

**Author:** Bambang HARYONQ Mochamad FARHAN Muhammad Luthfi Eko NUGROHQ Maryono , Satria UTAMA Hadiyanto , Tomoki EHARA Junichi FUJINO , Sudarmanto Budi NUGROHO , and Kazuya FUJIWARA  
**Copyright:** Institute for Global Environmental Strategies | 2017-11

Following up the Presidential Regulation 61/2011 and 71/2011, Semarang City as one of the cities in Indonesia has a liability in the GHG reduction activities. This research on the low carbon society (LCS) scenario for Semarang City are carried out aiming to contribution to promoting climate change actions and policies in the city. This study is one of the outcomes of the collaboration among Municipality of Semarang, Diponegoro University and Asia-Pacific Integrated Model (AIM) team in Japan. Two kinds of scenarios, namely Business as Usual (BaU) scenario and Countermeasure (CM) scenario, are prepared to analyze reduction potential of CO2 emission in future. In BaU scenario, it is assumed that there is no policy or technology intervention to reduce carbon emission, while attempt to reduce carbon emission is assumed in CM scenario. In the CM scenario, Semarang City Government will promote five LCS actions and implement various LCS projects belonged to the actions. One of the action named "Sustainable Transport", which promotes energy efficient vehicle and modal shift, will contribute to the reduction of 4,220 ktCO2e. These actions and projects help Semarang City to reduce



Nov 13, 2017

@Bonn, COP23

NIES/IGES/UTM/MHIR/E-konzal  
COP23 Japan Pavilion Side Event

# Make Asian Cities as Low Carbon Champions

- supporting city-to city collaboration  
among Japanese and Asian cities-

UTM/IGES



Date: 17:30-18:15, Nov 13 (Mon), 2017  
Venue: Japan Pavilion, Bonn



Fujino/Ma'am Techie/Toyama/UTM/IRDA/Tokyo/HCMC/ex-Tokyo



**IRDA, Kota Kinabalu,  
Malaysia** 

**Semarang  
Indonesia** 

**Toyama  
Japan** 

低炭素社会形成に向けた  
**都市間連携**  
フォーラム

入場無料  
申込不要

環境と国際連携をテーマとした基調講演をはじめ、イスカンダル地域開発庁（マレーシア）、スマラン市（インドネシア）などを招いたパネルディスカッションを開催し、これからの都市の果たすべき役割の討議

平成29年12月14日(木)  
9時00分～11時00分

議場  
会議室

(IGES)



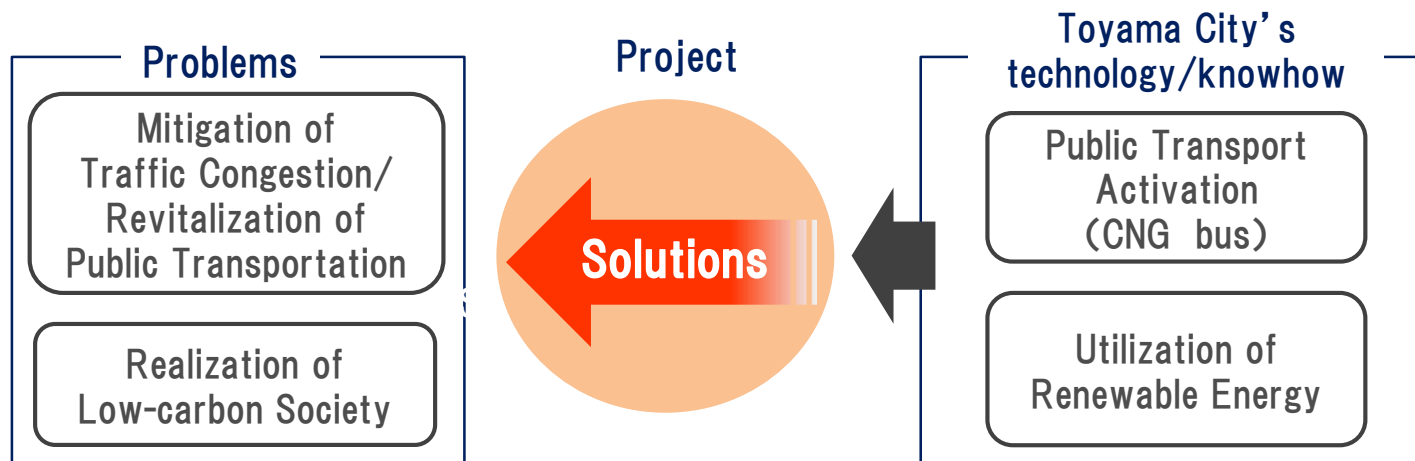
Dec 14, 2017  
@Toyama

**Mayor Hendrar  
Semarang**

# City to City Collaboration (Semarang)

## ©Semarang, Republic of Indonesia

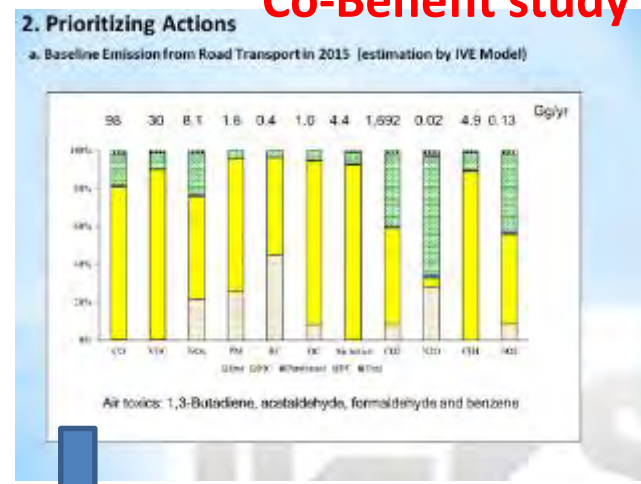
Toyama City and Semarang City selected as “Resilient Cities of 100RC” by the Rockefeller Foundation are deepening friendship as a result of “Resilient City Summit in Toyama” held in 2016. This year we will conduct a survey project to apply the knowledge and expertise of Toyama City and city enterprises, aiming at promoting low carbonization in Semarang City. This JCM(Joint Crediting Mechanism) project is the first collaborative project among 100 RCs in Asia.





# Science-Based Policy Decision Making Process

## Co-Benefit study

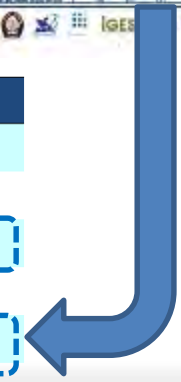
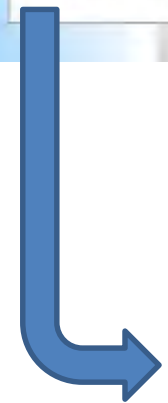


## AIM LCS study



## AIM LCS + International Vehicle Emission (IVE) Model

No	Project	Emission reduction (ktCO <sub>2</sub> e)
1	Promotion of eco-driving with digital tachographs	7.2
2	Wide-range traffic control	28.8
3	<b>Expansion of frequencies and routes of bus and BRT</b>	<b>96.2</b>
4	<b>Development of public transportation like railway and MRT</b>	<b>98.6</b>
5	<b>Shift to CNG bus</b>	<b>6.1</b>
6	Introduction of electric motorbikes	61.5
7	Promotion of energy-efficient vehicles (cars for passenger)	452.3
8	Promotion of energy-efficient vehicles (motorbikes)	86.7
9	Promotion of energy-efficient vehicles (trucks)	112.8
<b>Total</b>		<b>950.1</b>



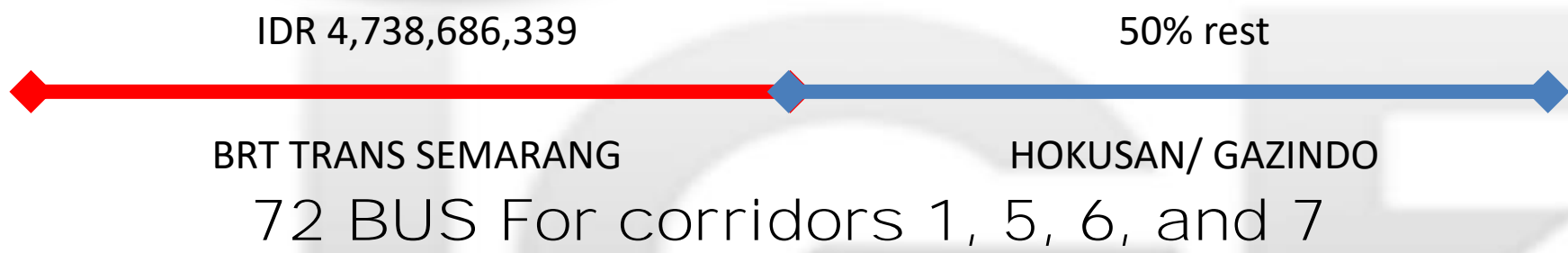
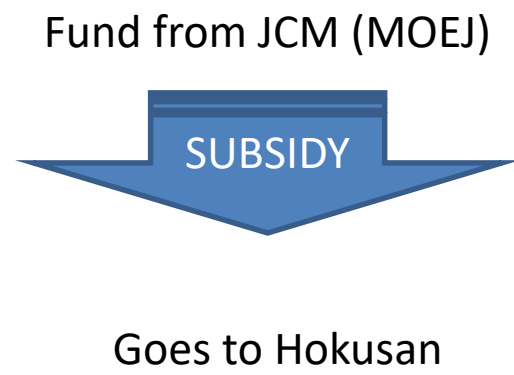
# Translating Policy Research into Projects

## Blending Resources and Multiple Partnership for JCM Model Project

### City Budget



### JCM Subsidy



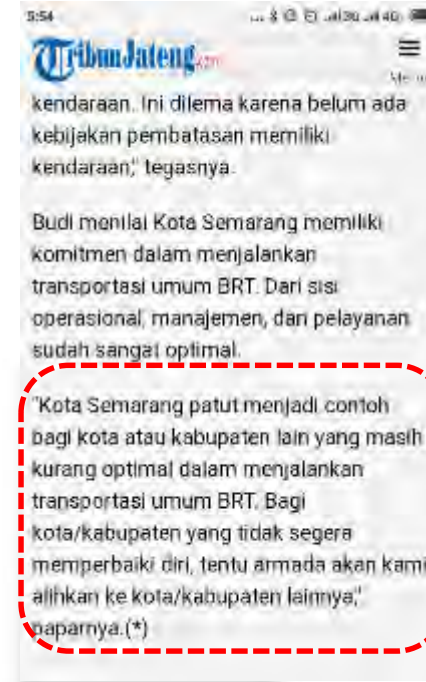


# Best practices in Indonesia and Asia

## A. Award by National Government for the achievement to Increase Ridership of Trans Semarang (December, 2018)



## B. Become a Role model for other Indonesian cities: Joint commitment to develop urban public transport improvement program (Signed on 9 January, 2019 – organized by MOT)



VNRs: Voluntary National Reviews



VLRs: Voluntary Local Reviews

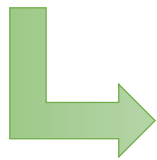




# Follow-up and Review Process of SDGs (2030 Agenda)



- [North and Central Asia Forum on Implementation of the Sustainable Development Goals](#), 3-4 September 2018, Tbilisi, Georgia
- [North-East Asian Multi-stakeholder Forum on Sustainable Development Goals](#), 5-6 September 2018, Ulaanbaatar, Mongolia
- [South East Asia Forum on Implementation of the Sustainable Development Goals](#), 11-12 September 2018, Bangkok, Thailand
- [South and South West Asia Forum on Implementation of the Sustainable Development Goals](#), 4-5 October 2018, New Delhi, India
- [Pacific Forum on Implementation of the Sustainable Development Goals](#), (followed by VNR workshop), 24-25 September 2018, Nadi, Fiji



27-29 March 2019,  
Bangkok, Thailand

10-18 July 2019 – High Level Political Forum (HLPF)  
24-25 September 2019 – HLPF (Head of States Level)



# World First VLR Report to HLPF2018



Sustainable Development Goals Report on Cities  
 - Launch of SDG City Reports on Shimokawa, Toyama, and Kitakyushu



**ISAP2018/ICLEI Cafe**

# HLPF2018 Special Event Local and Regional Governments' Forum



Emilia  
SG, UCLG

Parks  
President  
UCLG

Bernadia  
UCLG  
ASPAC



## HLPF2018 Japan Side Event

- |             |                        |                     |               |                     |                  |                |                   |                  |
|-------------|------------------------|---------------------|---------------|---------------------|------------------|----------------|-------------------|------------------|
| Fujino IGES | Okamoto Cabinet Office | Bernadia UCLG ASPAC | Katinka ESCAP | Kitahashi Kitakyush | Takemoto UNU-IAS | Takahashi MOEJ | Rafael UN-HABITAT | Kanie Keio Univ. |
|-------------|------------------------|---------------------|---------------|---------------------|------------------|----------------|-------------------|------------------|



# IGES launched 3 Voluntary Local Review (VLR) report at HLPF2018 with 3 Japanese local governments



Shimokawa Town  
the Sustainable Development Goals Report

—The Shimokawa Challenge—  
Bringing people and nature into the future—

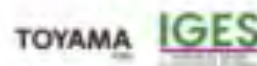
2018



Toyama City  
the Sustainable Development Goals Report

—Concord City Planning based on Public-Private Transport Network—

2018



Kitakyushu City  
the Sustainable Development Goals Report

—Raising a trusted Green Growth City  
with true wealth and prosperity, contributing to the world—

2018



Shimokawa Town, Hokkaido

Toyama City, Toyama

Kitakyushu City, Fukuoka<sup>2</sup>

# Identify relationship between local measures and SDGs

Table 3 Objectives and Measures of the Shimokawa Fifth Comprehensive Plan (FY2011-2018) against 17 SDGs

Basic objective	Measures	SDGs																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Create a community where people are vibrant and in good health (community welfare and medical services)	Community health and welfare	■		■		■			■	■	■	■					■	■
	Health and medical services		■	■		■					■							
	Support for the elderly			■					■		■							■
	Parenting support	■	■	■		■			■		■							■
	Support for persons with disabilities			■					■		■							■
Cultivate human resources by developing their character, potential, and positive qualities	School education	■		■	■				■	■	■	■				■		■
	Lifelong learning and sports			■	■							■						
	Culture and the arts			■	■							■						
Create safe, secure, and comfortable living conditions	Land utilization and urban districts											■			■			
	Landscaping and parks											■			■			
	Housing							■				■	■	■				
	Roads and bridges											■						
	Measures to cope with snow and extreme cold									■		■						
	Waterworks			■			■					■						
	Sewage system			■			■					■						
	Public transportation			■							■	■						
	Environmental conservation						■	■				■	■	■		■		■
	Traffic safety, crime prevention, and consumer living											■						■
	Fire prevention and emergency rescue			■														■
	Disaster prevention											■						■
	Digitization									■								



# Citizens joined sessions to understand SDGs and developed own Shimokawa SDGs

# Shimokawa Vision 2030

## SDG FutureCity Subcommittee activities (September 2017 through April 2018)

September 2017	Session 1	SDG Subcommittee procedures
October 2017	Session 2	The concept of "connection"
November 2017	Session 3	What we want more of and less of in Shimokawa by 2030, and what we absolutely want to see happen by then
December 2017	Session 4	Linking the 17 SDGs to those elements
January 2018	Session 5	Best-case and worst-case scenarios for Shimokawa under the 17 SDGs
February 2018	Session 6-8	Create loop diagram
	Session 9	Supplement loop diagram, use it to discuss a vision (written draft) and concrete actions (leverage points, activities, projects)
March 2018	Session 10	Discuss concrete actions
	Session 11	Discuss progress management indicators
	Session 12	Discuss vision/ideals (draft)
April 2018	Session 13	Solidify vision, taking public feedback into account



# Vision -> Comprehensive Plan -> Projects with institutional arrangement

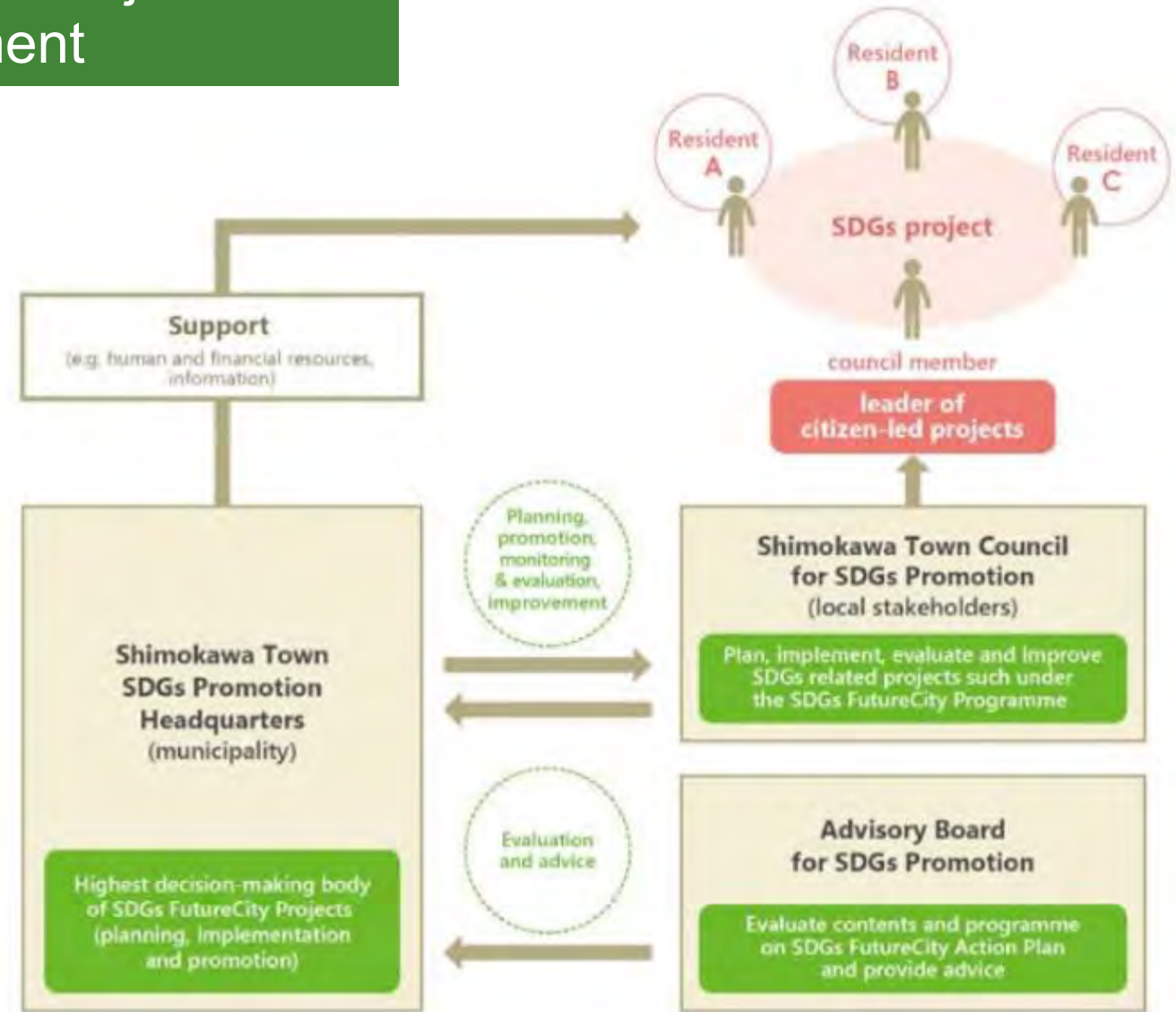


Fig. 8 Institutional arrangement to promote SDGs in Shimokawa



VNR (Voluntary National Review)

-> VLR (Voluntary Local Review)

World's first VLR online platform

VLR Lab

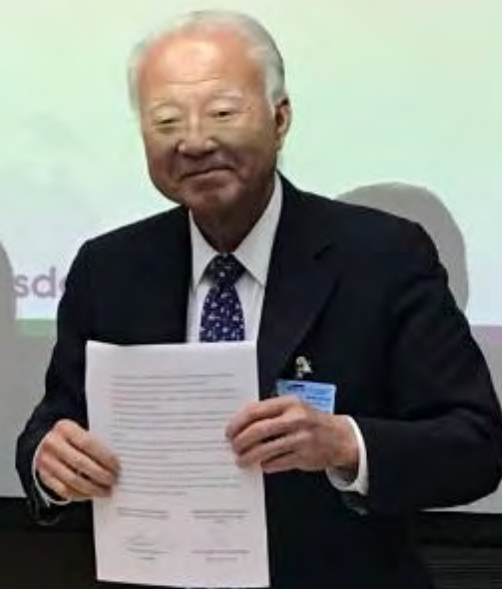


Google "VLR Lab"

<https://iges.or.jp/en/projects/vlr>



UCLG ASPAC SG



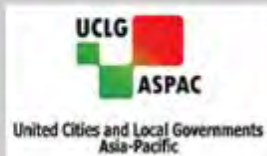
IGES President



World's first VLR online platform

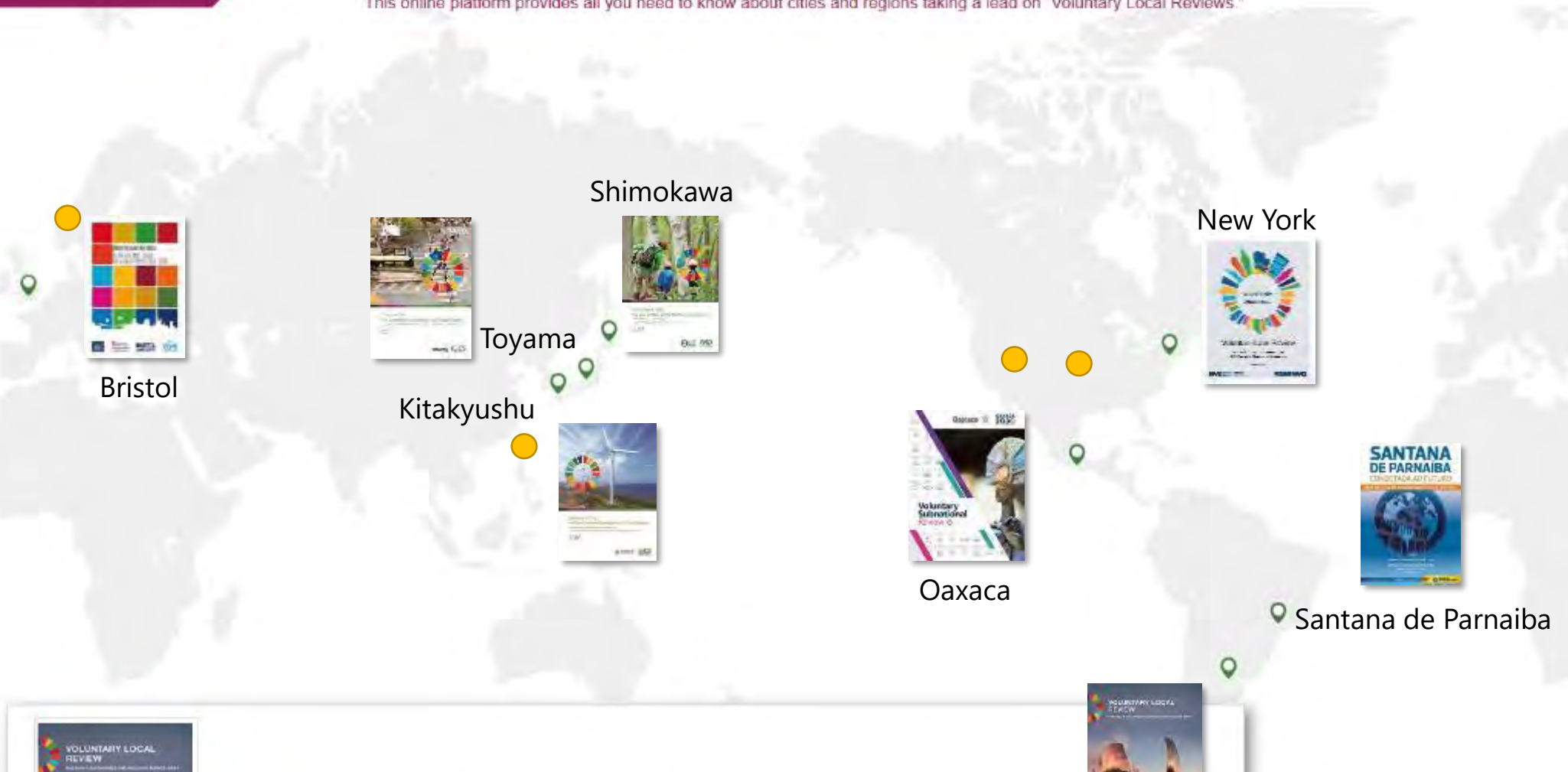
# VLR Lab

An Initiative Supported by





This online platform provides all you need to know about cities and regions taking a lead on "Voluntary Local Reviews."



<https://www.iges.or.jp/en/sdgs/vlr/index.html>

Buenos Aires

# NDCs: National Determined Contributions

LDCs: Locally Determined Contributions

+

VLRs: Voluntary Local Reviews

VNRs: Voluntary National Reviews



# Joint Communiqué

## The 20<sup>th</sup> Tripartite Environment Ministers Meeting among China, Japan and Korea

23-24 June 2018, Suzhou, China



21. The Ministers welcomed the preparatory work done to date and agreed on launching the joint research on cities towards decarbonization and sustainable development in 2018.

<https://www.env.go.jp/press/files/jp/109425.pdf>

# Japan-China Climate Policy Research Workshop 2017



**Date: Two days during 6th-7th September 2017**

**Venue: China People's Palace, Beijing**

**Host: Ministry of the Environment, Japan (MOEJ)**

**Co-organizers: Institute for Global Environmental Strategies (IGES)**

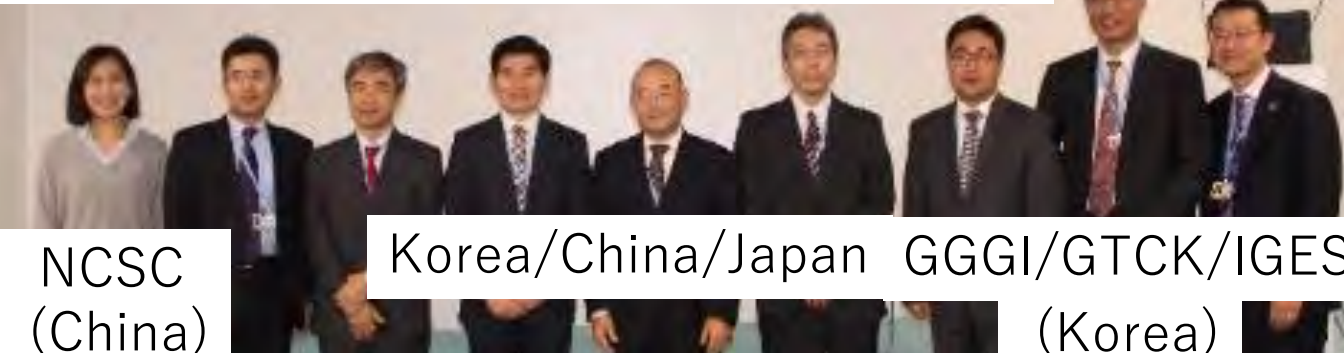
**Energy Research Institute of the National Development and Reform Commission (ERI)**



# China-Japan-Korea Joint Research on Cities towards Decarbonization and Sustainable Development

1. Start as CJK ministers' climate initiative at COP22, and then IGES is appointed as focal research institute to coordinate city program,
2. IGES organized 1) city session in Japan-China Climate Policy Research Workshop in Sep 2017, Beijing, 2) COP23 side event in Nov 2017, Bonn, in collaboration with NCSC, KEI under leadership of MOEJ, MEE, MOEK,
3. IGES conducted 1) analyze best local climate actions in Japan (Nagano pref., Yokohama city, Toyama city), 2) organize joint research WS in Beijing on 14 Oct, 3) organize COP24 official side event in Katowice on Dec 2018, 4) propose next two years project, in collaboration with NCSC, KEI, supported by each government.

COP23 side event on Nov 10, 2017, Bonn



## City Case Studies

# Case studies of each 3 cities in CJK

China		
Zhenjiang City 	Wuhan City 	Shenzhen City 
Japan		
Nagano Prefecture 	Yokohama City 	Toyama City 
Korea		
Gwangju City 	Jeju Province 	Suwon City 

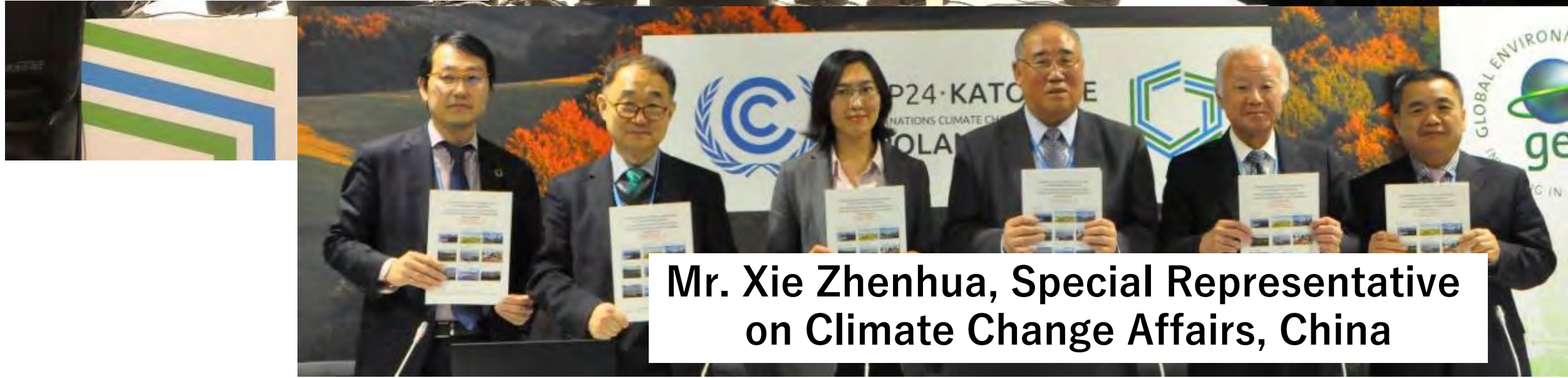


**UNFCCC COP24 official side event on City Champions from Asia:  
China-Japan-Korea Joint Climate Research Initiative towards Zero Carbon  
organized by IGES/NIES/UTM on 11<sup>th</sup> Dec 2018, Katowice, Poland**



**Mr. Cho Myung-rae  
Minister of Environment,  
Republic of Korea**

**Mr. Yoshiaki Harada,  
Minister of the Environment, Japan**



**Mr. Xie Zhenhua, Special Representative  
on Climate Change Affairs, China**

# Our plan to produce outputs during 3 years

- Summarize Best practices of CJK cities,
  - Extract key essences and develop methodologies,
  - Make real projects in the cities,
- by Case studies, Handbooks, Pilot projects, etc



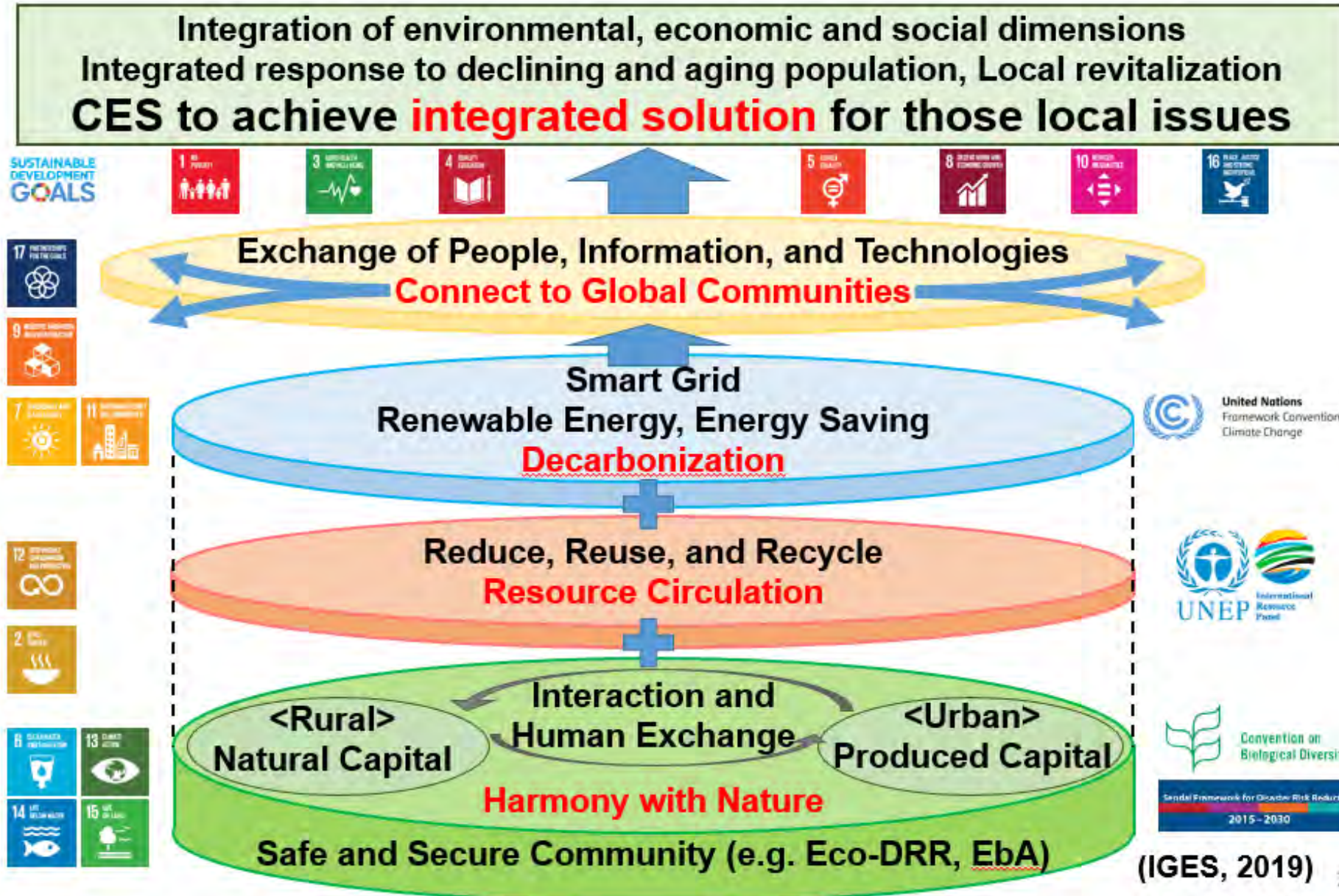
Main results  
of 2<sup>nd</sup> year

“City Climate Action Report”

“Good Practices towards decarbonization and sustainable city”



# Regional / Local Circulating and Ecological Sphere (CES)



# Climate and SDGs, **and Cities**

Cities are places to be suffered by climate change  
and to accelerate actions!

- Paris Agreement (Dec. 2015)
- 2 degree target (1.5 degree)
- Global review (Global Stocktake) by every 5 years
- Nationally Determined Contributions (NDCs)
- 2030 Agenda (Sep. 2015)
- 17 goals, 169 targets
- Global review at UN General Assembly by every 4 years
- Voluntary National Reviews (VNRs)



**Locally** Determined Contributions (LDCs) !?



Voluntary **Local** Reviews (VLRs) !?



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**Locally** Determined Contributions (LDCs) !



Voluntary **Local** Reviews (VLRs) !

## Let's meet again at following opportunities;

- UNFCCC/COP25 (Dec 2-13, 2019, Madrid)
- World Urban Forum (Feb 8-13, 2020, Abu Dabi)
- ASEAN High Level Seminar on Sustainable Cities (March 9-13, 2020, Manila)
- Asia-Pacific Forum on Sustainable Development (March 25-27, 2020, Bangkok)
- High Level Political Forum (middle of July, NY)
- and other opportunities!

Junichi FUJINO (Ph.D)

(fujino@iges.or.jp)

Principal Researcher

Program Director, City Taskforce

Institute for Global Environmental Strategies (IGES)

<https://pub.iges.or.jp/staff/fujino-junichi>