

International Symposium

Developing Research Towards Achieving the SDGs
in the Post COVID-19 Era

November 10th, 2020 06:00-08:30 GMT/15:00-17:30 JST

Research Challenge for Localization of SDGs into Cities and Regions; Pilot Study for Localities in Japan

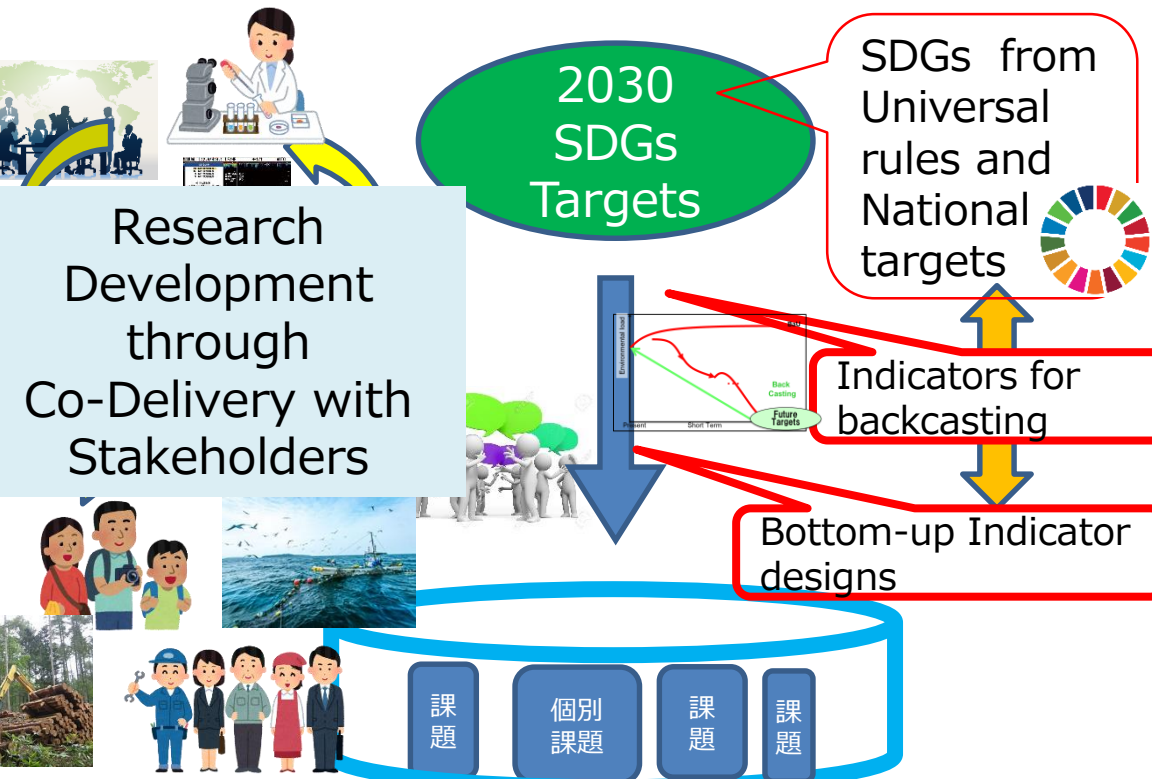
Professor, Graduate School of Engineering,
University of Tokyo

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Environmental Studies, Japan

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Action Research for SDGs Co-Planning

- Subjective progress evaluation theories and methodologies rather than comparative estimation
- Coordination of Bottom-up Planning and Scientific objectivity
 bottom up goals and indicator setting based on scientific analysis



SDGs and Targets Design



Inclusive Research on Integrated Implementation Methodology Towards Achievement of SDGs FY2018-2020

Goal Based Governance Design Implementation and Verification

Subtheme 1 : SDGs Indicator Design NIES and UTokyo

SDGs indicator design for National Environmental Policy Strategies

Subtheme 2 : Governance and SDGs UNU-IAS

SDGs system for National Governments and Localities with a view of International Comparison

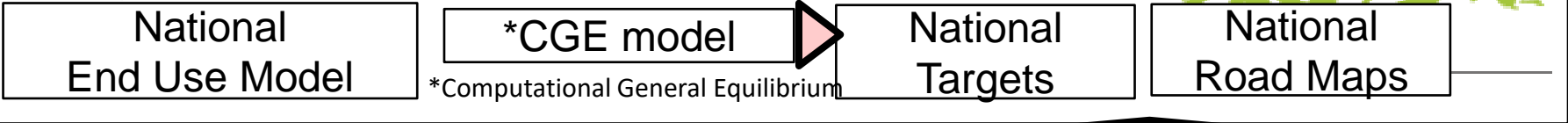
Subtheme 3 : Enterprises and SDGs Keio Univ.

SDGs Implementation and Evaluation for Private Enterprises

Development of Regional Integrated Models (Regional AIM) and Spatial Planning Model to design sustainable regions and cities

Integrated Model (AIM)

Design of Vision and Road Map for *National Scale*

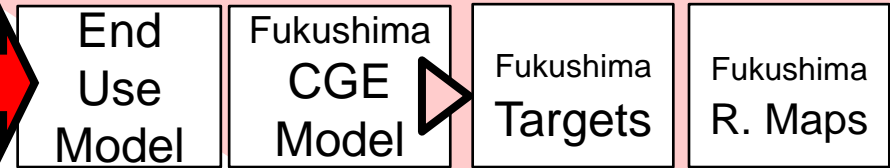


Regional Rebuilding Parameter

- 【Population】 Policies for aging
- 【Industries】 Policies for low carbon
- 【Bio-Sys】 Natural habitat restoration
- 【Land Use】 Compact city Policies

Regional Parameters

Analysis for Fukushima Pref. Scale



Spatial Planning Model

Eco Growth Modules

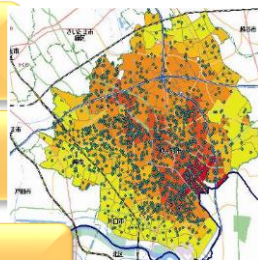
Local Heat/Energy Management

Low Carbon Industrial System

Strategic Spatial Zoning System

Forestry Eco System Service Model

Spatial Policy/ Tech. Process Packages



Planning for Local Scale

Snap Shot Models

Policy Support Tools

Local Targets

Local Statistics and Project Data

Buildings

Industries

Agriculture/ Forestry

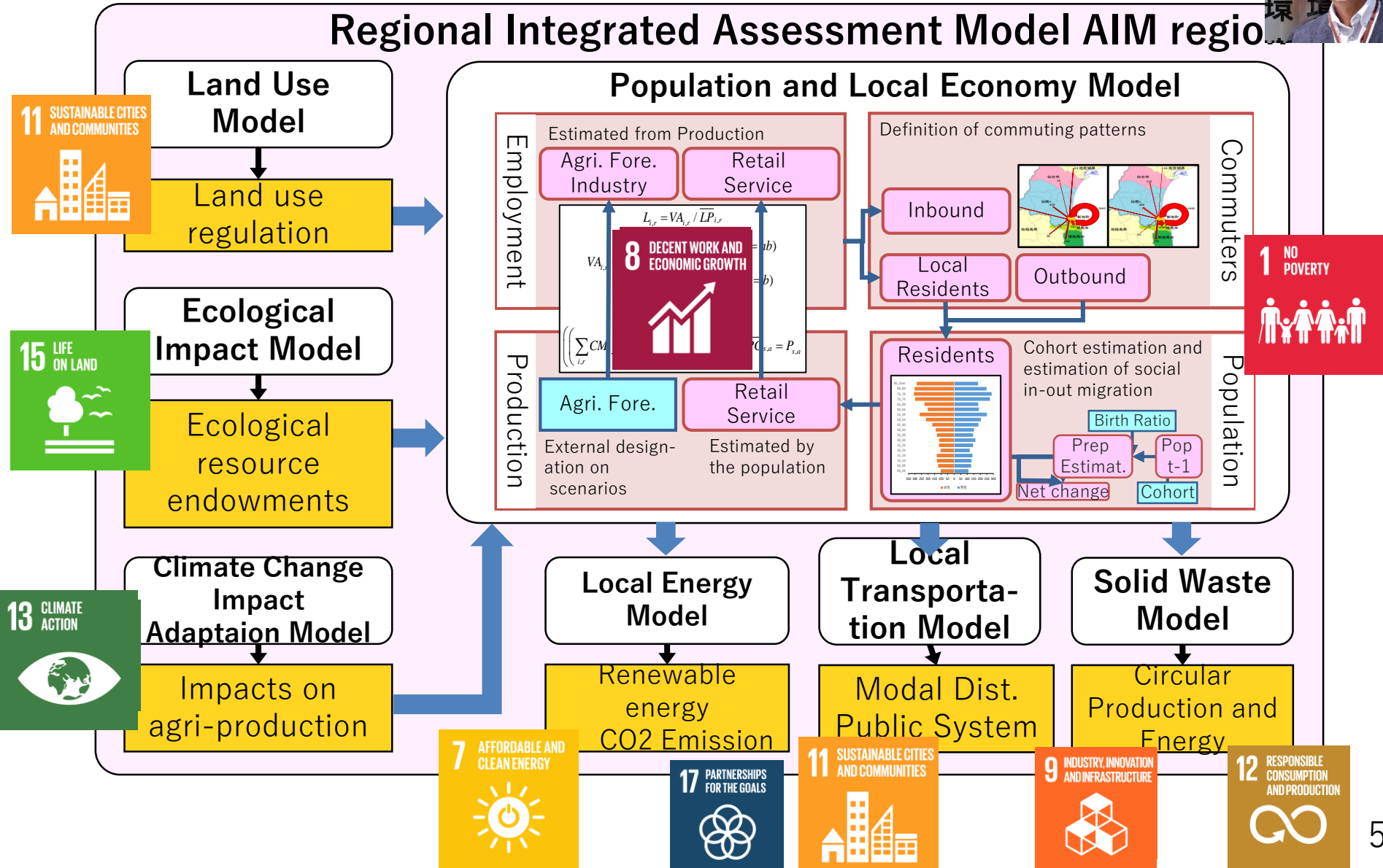
Life Style

AIM Regional Model to Quantify the SDGs Accomplishments

Dr. Gomi NIES



Regional Integrated Assessment Model AIM regio



Local Indicators from Japan for HDPF in UN, NY

Revised by authors from the Material of Cabinet Office Local SDGs Committee, Local Indicator WG

As Official Local SDGs indicators for Japanese Cities

SDGs Policy Key Indicators (Quantified)
 SDGs Policy Key Indicators (To Be-Quantified)

1	1.1.1	1.2.1	1.2.2	1.3.1	1.4.1	1.4.2	1.5.1	1.5.2	1.5.3	1.5.4	1.a.1	1.a.2	1.a.3	1.b.1	1.X														
2	2.1.1	2.1.2	2.2.1	2.2.2	2.3.1	2.3.2	2.4.1	2.5.1	2.5.2	2.5.3	2.a.1	2.a.2	2.b.1	2.c.1															
3	3.1.1	3.1.2	3.2.1	3.2.2	3.3.1	3.3.2	3.3.3	3.3.4	3.3.5	3.4.1	3.4.2	3.5.1	3.5.2	3.6.1	3.7.1	3.7.2	3.8.1	3.8.2	3.9.1	3.9.2	3.9.3	3.a.1	3.b.1	3.b.2	3.b.3	3.c.1	3.d.1		
4	4.1.1	4.2.1	4.2.2	4.3.1	4.4.1	4.5.1	4.6.1	4.7.1	4.a.1	4.b.1	4.c.1	4.X				3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X	3.X
5	5.1.1	5.2.1	5.2.2	5.3.1	5.3.2	5.4.1	5.5.1	5.5.2	5.6.1	5.6.2	5.a.1	5.a.2	5.b.1	5.c.1	5.X														
6	6.1.1	6.2.1	6.3.1	6.3.2	6.4.1	6.4.2	6.5.1	6.5.2	6.6.1	6.a.1	6.b.1																		
7	7.1.1	7.1.2	7.2.1	7.3.1	7.a.1	7.b.1	7.X		7.X	7.X																			
8	8.1.1	8.2.1	8.3.1	8.4.1	8.4.2	8.5.1	8.5.2	8.6.1	8.7.1	8.8.1	8.8.2	8.9.1	8.9.2	8.1.0.1	8.1.0.2	8.a.1	8.b.1	8.X											
9	9.1.1	9.1.2	9.2.1	9.2.2	9.3.1	9.3.2	9.4.1	9.5.1	9.5.2	9.a.1	9.b.1	9.c.1																	
10	10.1.1	10.2.1	10.3.1	10.4.1	10.5.1	10.6.1	10.7.1	10.7.2	10.a.1	10.b.1	10.c.1	10.X		10.X															
11	11.1.1	11.2.1	11.3.1	11.3.2	11.4.1	11.5.1	11.5.2	11.6.1	11.6.2	11.7.1	11.7.2	11.a.1	11.b.1	11.b.2	11.c.1	11.X													
12	12.1.1	12.2.1	12.2.2	12.3.1	12.4.1	12.4.2	12.5.1	12.6.1	12.7.1	12.8.1	12.a.1	12.b.1	12.c.1																
13	13.1.1	13.1.2	13.1.3	13.2.1	13.3.1	13.3.2	13.a.1	13.b.1	13.X																				
14	14.1.1	14.2.1	14.3.1	14.4.1	14.5.1	14.6.1	14.7.1	14.a.1	14.b.1	14.c.1																			
15	15.1.1	15.1.2	15.2.1	15.3.1	15.4.1	15.4.2	15.5.1	15.6.1	15.7.1	15.8.1	15.9.1	15.a.1	15.b.1	15.c.1															
16	16.1.1	16.1.2	16.1.3	16.1.4	16.2.1	16.2.2	16.2.3	16.3.1	16.3.2	16.4.1	16.4.2	16.5.1	16.5.2	16.6.1	16.6.2	16.7.1	16.7.2	16.8.1	16.9.1	16.10.1	16.10.2	16.a.1	16.b.1	16.X		16.X			
17	17.1.1	17.1.2	17.2.1	17.3.1	17.3.2	17.4.1	17.5.1	17.6.1	17.6.2	17.7.1	17.8.1	17.9.1	17.10.1	17.11.1	17.12.1	17.13.1	17.14.1	17.15.1	17.16.1	17.17.1	17.18.1	17.18.2	17.18.3	17.19.1	17.19.2				

SDGs Key Indicators for Policy Planning

SDGs Focal Projects for Model Project Planning

Smart
ICT Cities

Local Energy
Business

Local Transit
System

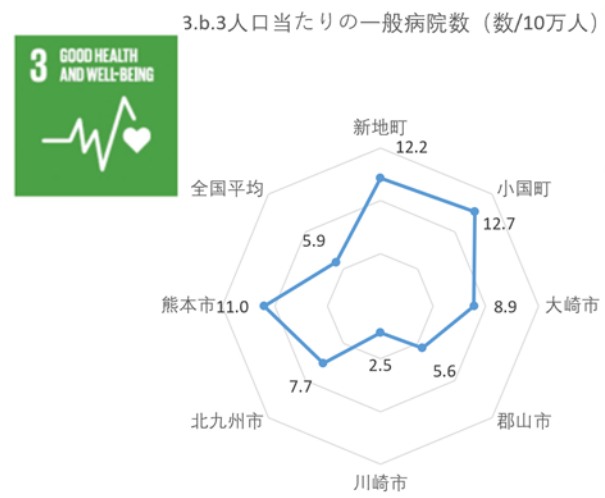
Local
Circularizing
Business

Goal	Global Indicator(GI)	Localized Indicator (LI)
1	1.1.1	相対的貧困割合
2	2.1.2.2	生産額ベースの食料自給率（各都道府県の食料生産額/食料消費仕向額）
3	3.4.1	心血管疾患、癌、糖尿病の死亡率 心血管疾患、癌、糖尿病の死亡数/総死亡数
3	3.b.3	人口当たりの一般病院数（一般病院数/人口）
4	4.1.1	中学登校者割合（（中学校在学者数-不登校者数）/中学校在学者数）
4	4.2.1	5歳未満の入院者割合（5歳未満の入院者数/5歳未満人口）
4	4.a.1.2	学校におけるコンピュータの設置状況率
6	6.3.1	汚水処理人口普及率
6	6.a.1	人口当たりの下水道費（下水道費/総人口）
7	7.1.1	人口当たりの電力エネルギー消費量（電力エネルギー消費量/人口）
7	7.2.1.4	新エネルギー発電割合（新エネルギー発電量/最終エネルギー消費量）
7	7.5.1	エネルギー消費量当たりの県内総生産（県内総生産/エネルギー消費量）
8	8.2.1	就業者当たりの県内総生産（県内総生産/就業者数）
8	8.4.1	1人1日当たりのごみ排出量（家庭部門）
8	8.5.1	労働者の平均時給（平均所得/所定内+超過実労働時間）
8	8.5.2	失業率（完全失業者数/労働力人口）
8	8.9.1	県内総生産当たりの観光消費額（観光消費額/県内総生産）
9	9.2.1.2	人口当たりの製造業粗付加価値額（製造業粗付加価値額/人口）
9	9.4.1	県内総生産当たりのCO2排出量（CO2排出量/県内総生産）
9	9.5.1	県内総生産当たりの研究開発費（研究開発費支出総額/県内総生産）
9	9.c.1	インターネット普及率
10	10.2.1	相対的貧困世帯割合
10	10.4.1	労働生産性（付加価値額/従業員数）
11	11.2.1	鉄道、電車、バスの利用割合
11	11.3.1.3	人口自然増減（出生数-死亡数）/総人口
11	11.6.1	廃棄物の最終処分割合（最終処分量/ごみ総排出量）
12	12.2.1	1人1日当たりのごみ排出量（家庭部門）
12	12.4.2	有害廃棄物割合（その他廃棄物/廃棄物の総搬入量）
12	12.5.1	リサイクル率
13	13.1.1	災害等の自然外因による死亡者割合（災害等の自然外因による死亡者/人口）
13	13.X	人口当たりのCO2排出量（CO2排出量/総人口）
14	14.4.1	人口当たりの漁獲量（漁獲量+養殖収穫量）/総人口
15	15.1.1	森林面積割合（森林面積/面積）
16	16.1.4.1	人口当たりの刑法犯認知件数（刑法犯認知件数/総人口）
17	17.1.2.1	財力指数
17	17.8.1	インターネット普及率
17	17.17.1	地域サポーターを設置している市区町村の割合

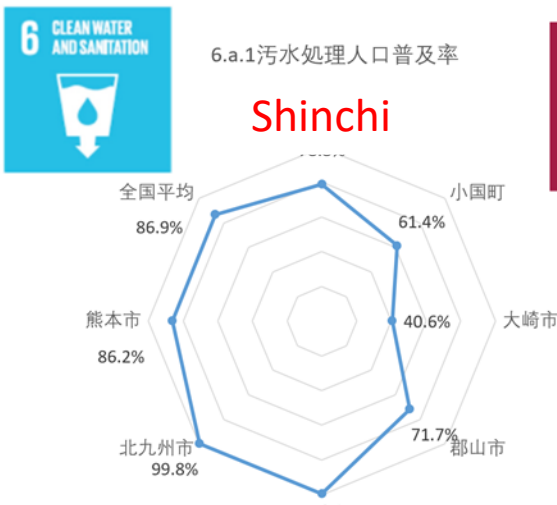
SDGs Key
Indicators
(Prototype)
for Policy
Design

through
Co-
Planning
Process

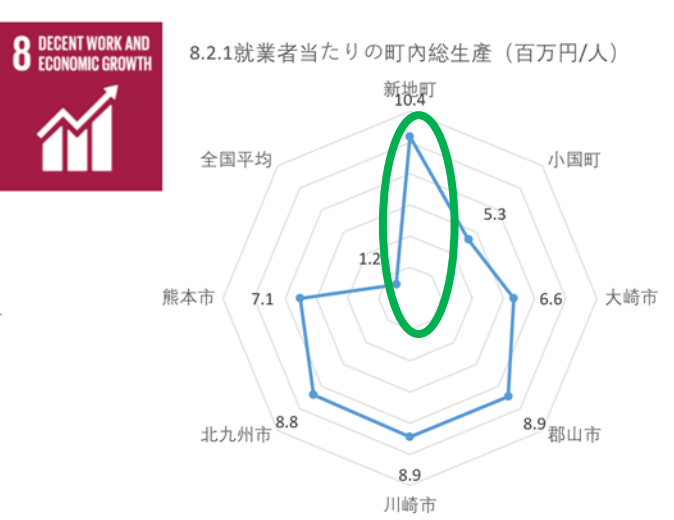
Comparative Diagnosis of Cities by SDGs Key Indicators (2010)



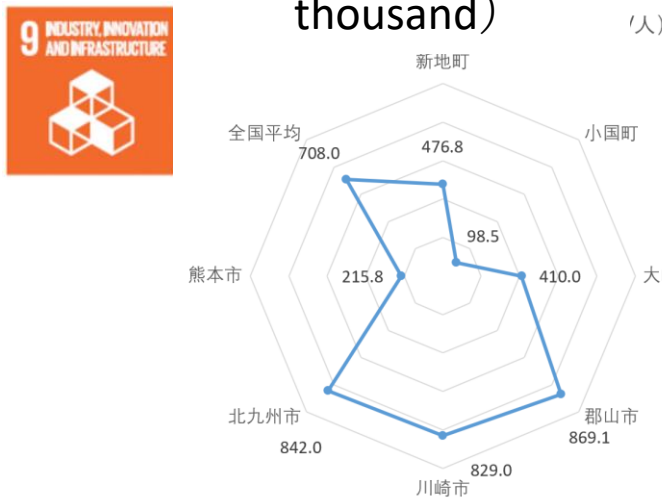
3.b.3 Hospitals per capita (100 thousand)



6.a.1 Ratio of Wastewater Treatment



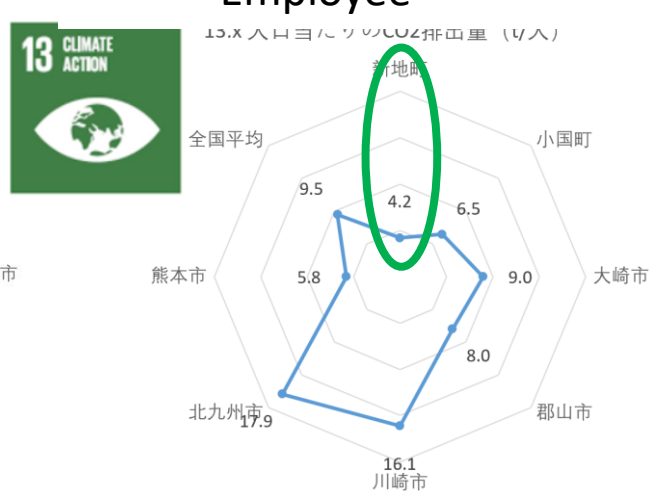
8.2.1 Local GDP per Employee



9.2.1.2 Industrial Production Value (thousand yen) per Capita



11.2.1 Ratio of Public Transit Users



13.X CO2 Emission (t) per Capita

Policy Scenario Design Process for SDGs Model Cities and Regions

Dialogue with Local Governments

Research Consortium

Local Information
 Statistics
 • GIS Population, Industries, (500mgrid)
 <2010年、2015年>

Diagnoses of Cities and Regions
 Goods/ Bads

Scoping Focal Policy Area / Pilot Project Design

BAU Scenarios

Future Scenario Simulation



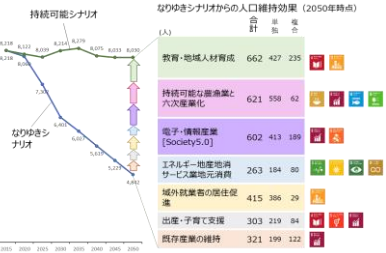
SDGs Local Indicators 138

Global SDGs Indicators

SDGs Policy Key Indicators



Policy Inventory



Newest Smart Community underway in Fukushima

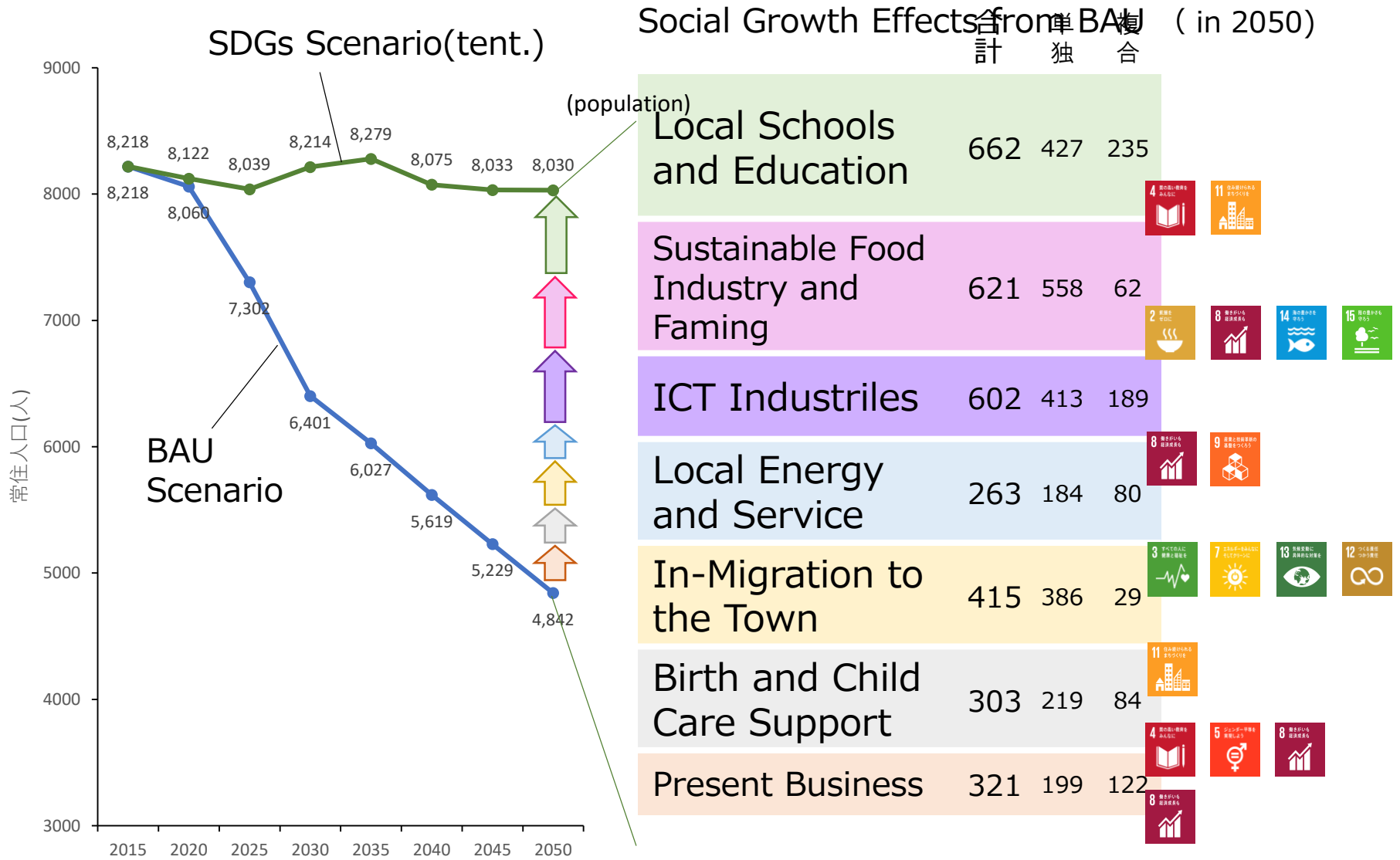


Shinchi Town,
Soma-Futaba Region, Fukushima Prefecture
Population: 8,247 / Households: 2,754 /
Area: 46.35 km² (As of Jan. 1st, 2017)

SDGs from Local Energy Business



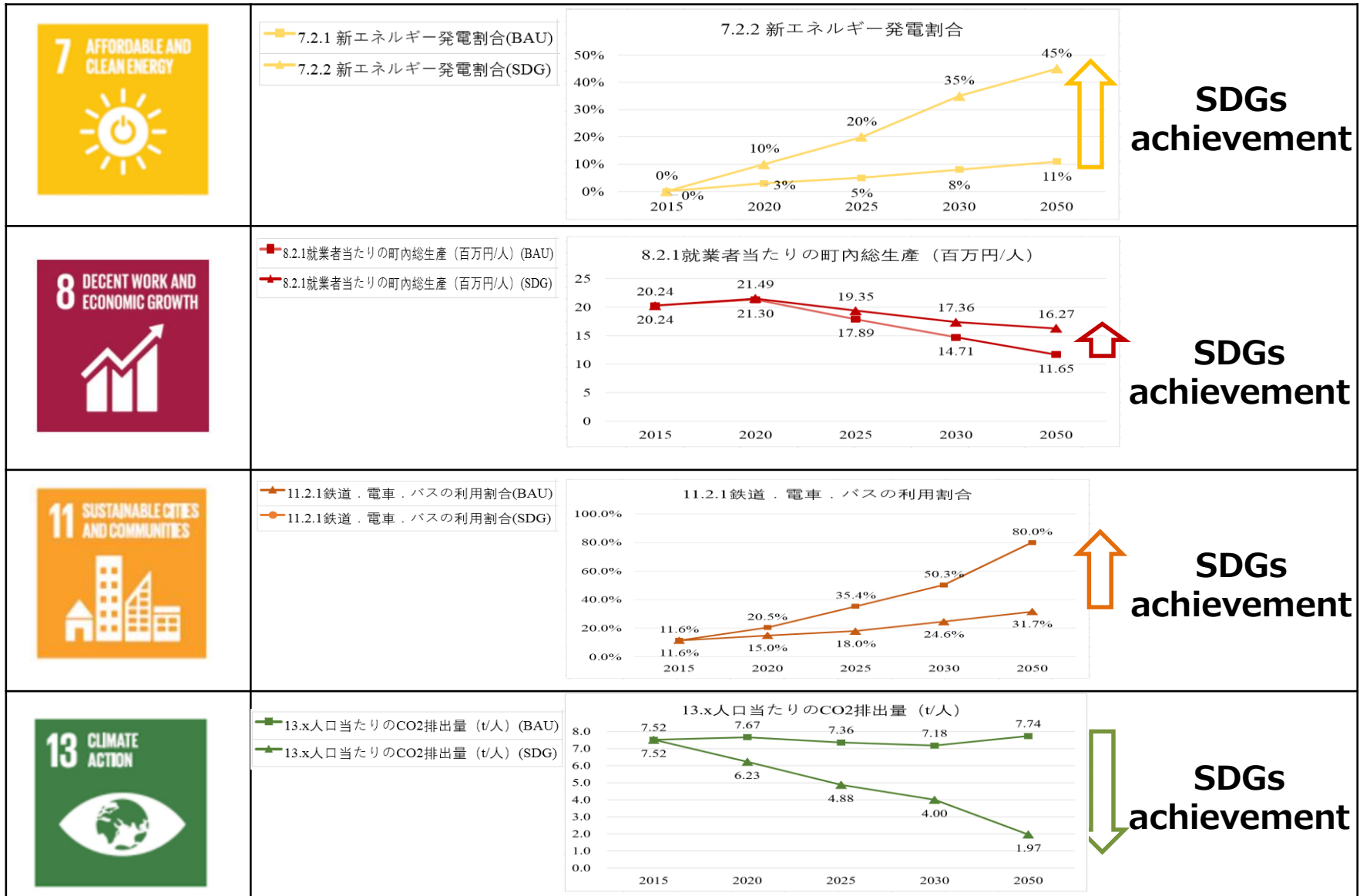
Socio Economic Environmental Forecast of Future Scenarios



設定案にもとづいて取組を全く実施しない「なりゆきシナリオ」とすべての取組を実施した「持続可能シナリオ」の人口をそれぞれ試算し、各取組の効果によるなりゆきに対する人口の押し上げ（人口維持効果）を分析した。各取組独で実施しても発揮される単独効果と、他の取組との相乗で発揮される複合効果がある。

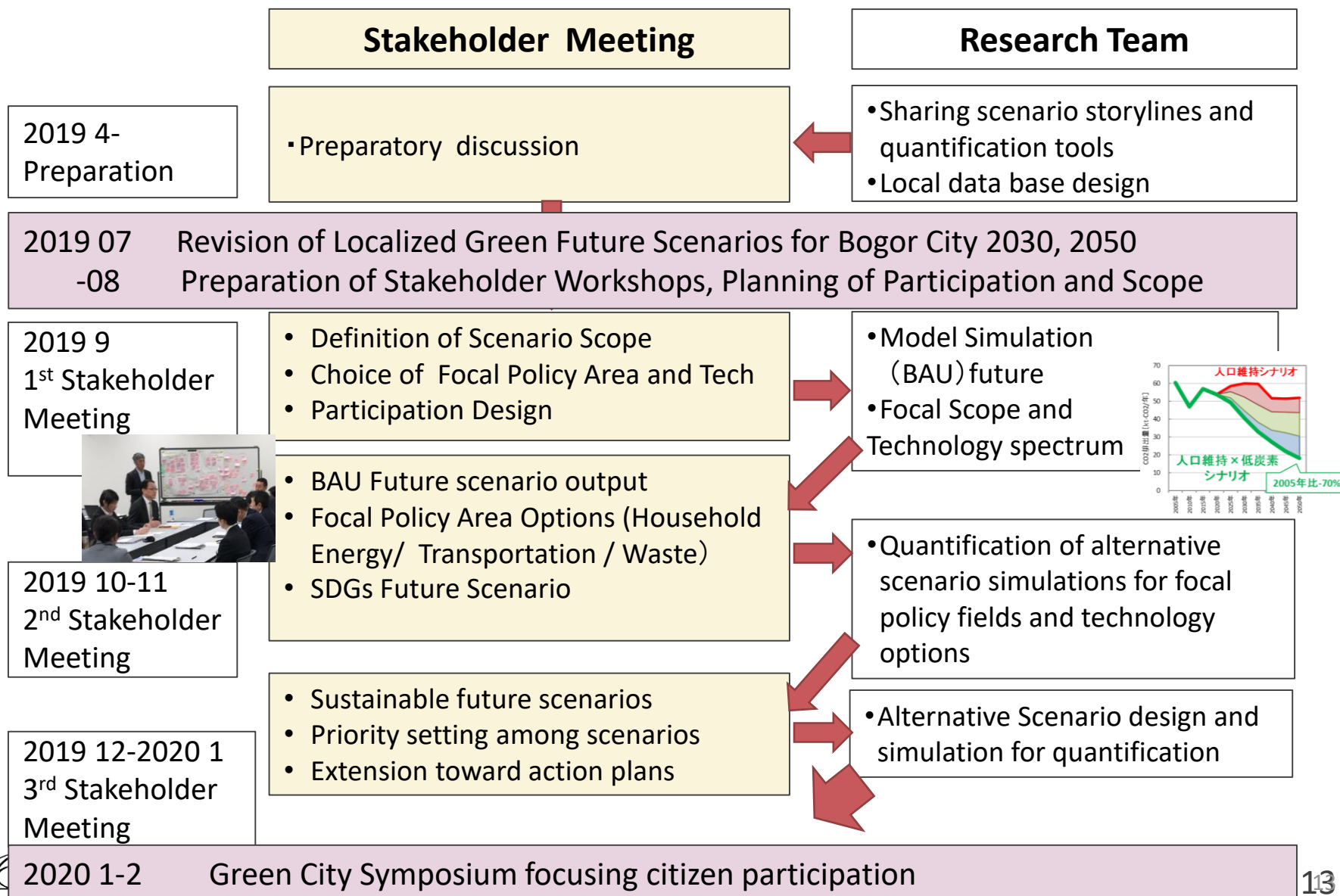
SDGs Policy Key Indicators Evaluation for Future Scenarios

Shinchi-BAU scenario and SDG scenario



Discussion materials for Interactive Simulation

Interactive Scenario Simulation in Fukushima



「Circulating Ecological Regions」; Japan Style SDGs

Development based on local Characteristics

→ **Autonomous • Decentralized Society**

→ Collaboration Co-work and Mutual Support



Proposal for Local SDGs and New Life Design toward Post-COVID Society

National Cabinet Administration Office WG, 2020

1) Future Vision Design for Post COVID Locality

- Smart and Digitalized Society - Future Work Style under New normal
- Remote Consumption Patterns and Styles
- New Medical and Social Resilience
- Expanded Scope for Public Welfare - Changing Human Mobility

2) Post COVID Actions in Local SDGs Perspectives

