

The International Conference on Promoting the Low-Carbon Cities in Tokyo
February 21, 2012

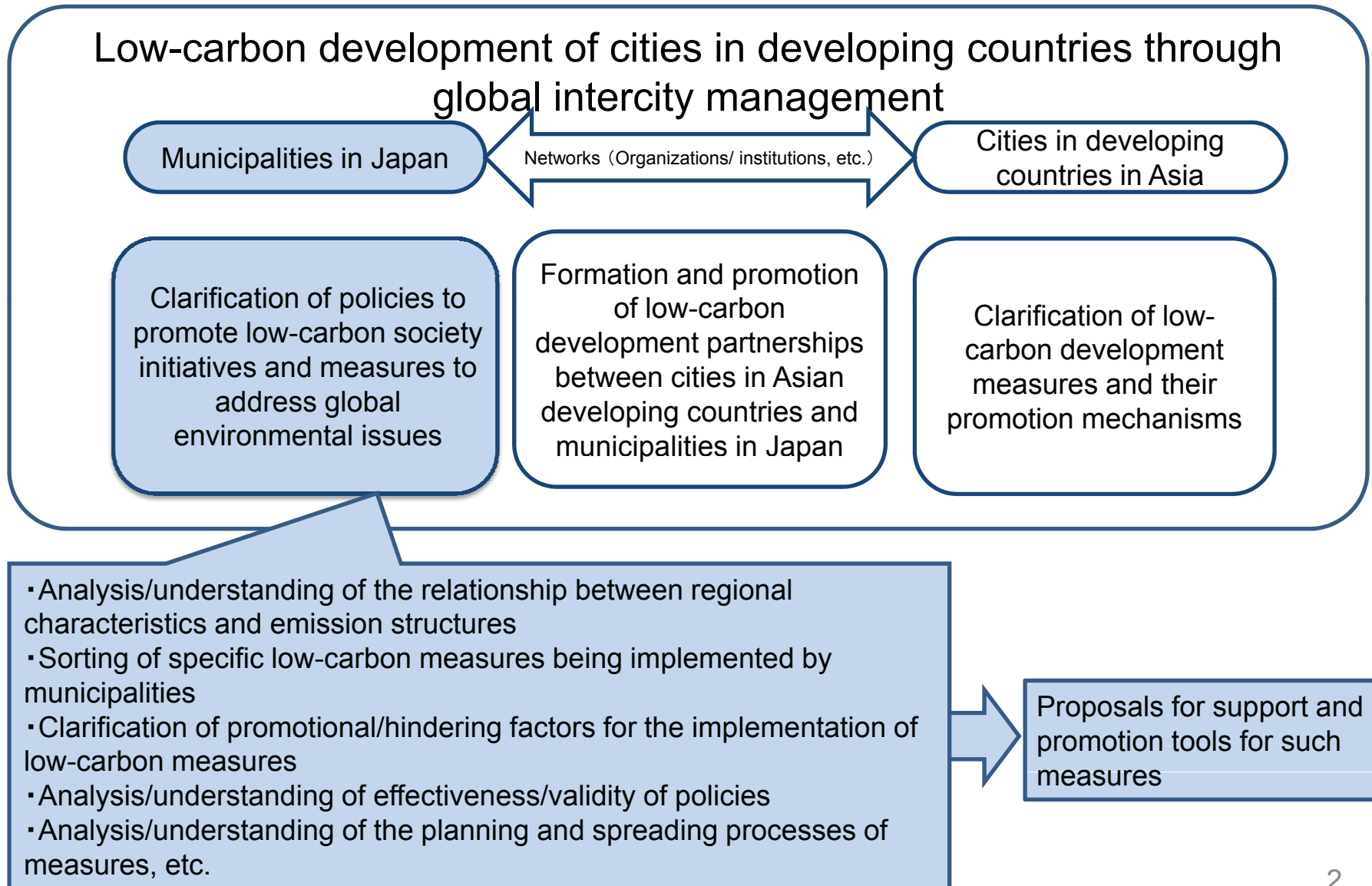
Challenges in Low-Carbon Society Development facing Municipal Governments in Japan

~ Lessons from Research on Low-Carbon
Measures of Municipalities ~

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Technology Development Fund E-906》

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1. Outline of Research



2. Framework and Process of Research

Research Topics	FY2009	FY2010	FY2011(final)
<p>(1) Clarification of policies and measures contributing to low carbon development in Japanese cities and issues relating to “individual methods and their promotional means”</p>	<p>① Understanding of CO2 emission characteristics in cities</p>		<p>⑫ Comprehensive analysis of structurization of low-carbon measures</p>
	<p>② Understanding of trends in the implementation of low-carbon policies and measures (Administrative work/projects)</p>	<p>(Community-based measures)</p>	<p>⑬ Consideration of promotional models for low-carbon measures</p> <p>⑬ Consideration of promotional models for low-carbon measures</p>
<p>(2) Development of “low-carbon policy model” based on the effectiveness/validity data in Japanese cities</p>	<p>③ Testing of effectiveness/validity of low-carbon measures</p>	<p>⑧ Analysis of promotional and hindering factors</p>	<p>⑬ Consideration of promotional models for low-carbon measures</p>
	<p>④ Analysis of policy making and spreading processes</p>		<p>⑬ Consideration of promotional models for low-carbon measures</p>
	<p>⑤ Consideration of Structurization (modelization) of low-carbon policies</p>	<p>⑨ Consideration of policy indexes of low-carbon measures (draft proposal)</p>	<p>⑯ Analysis of international cooperation and its spreading status</p>
<p>(3) Clarification of “factors contributing to the development of international partnership” with cities in Asian developing countries</p>	<p>⑥ Understanding of the implementation status/challenges of collaborative measures among developing countries</p>	<p>⑩ Sorting of case examples of international partnership</p>	<p>⑰ Feasibility Survey on international partnership</p>
	<p>⑦ Understanding of Citizens’ awareness of international environmental cooperation</p>	<p>⑪ Understanding of Citizens’ awareness structure concerning international environmental cooperation</p>	<p>⑱ Analysis of citizens’ action structure concerning international environment cooperation (Da Nang City, Vietnam)</p>

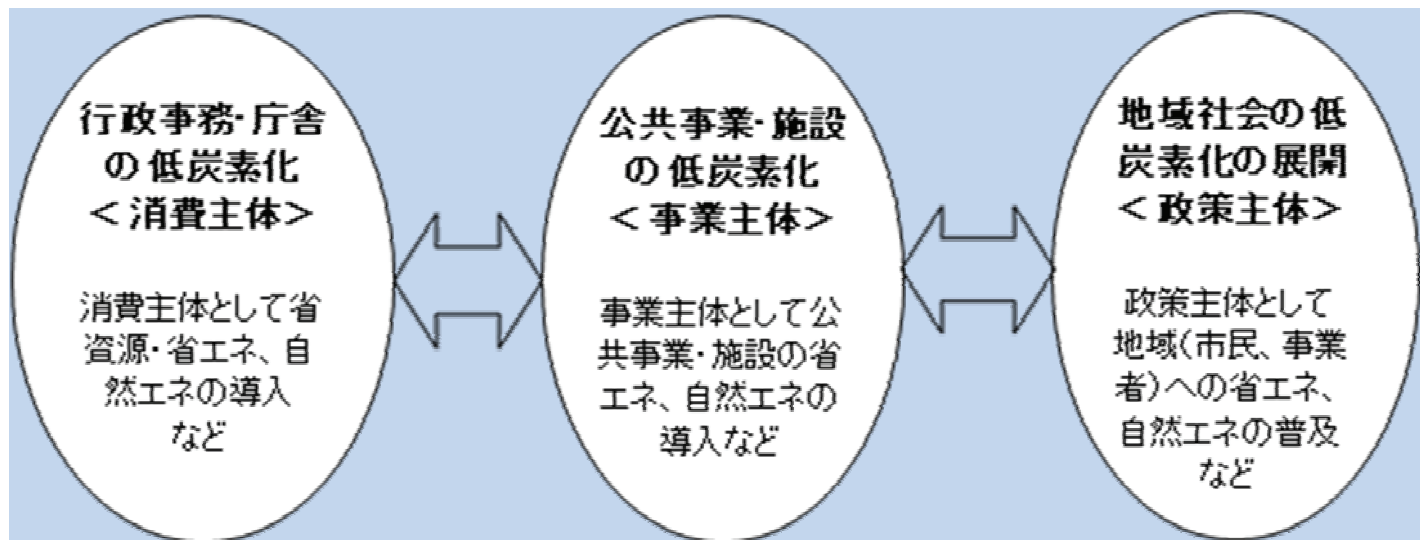
3. Basic Concepts

◆Definitions used in this research

Low-carbon municipality: Essential for the development of a low-carbon community. A municipal government that promotes low-carbon measures in its all administrative areas and activities shall be called a “low-carbon municipality.”

Measures taken by a low-carbon municipality: Three action areas of a municipal government including: "Low-carbonization of administrative work/municipal government buildings*", "Low-carbonization of public works/facilities", "Low carbonization of local communities."

* **Low-carbonization:** Reducing amounts of greenhouse gas emitted directly or indirectly from economic activities, production activities and administrative works in the region.



4. Research on Structurization of Municipalities' low-carbon policies: Survey Outline

Understanding of trends in the implementation of low-carbon policies

Surveys were conducted to find out the actual conditions of low-carbon initiatives for administrative work/municipal government buildings and for public works/facilities in 2009 and in local communities (community-based measures) in 2010.

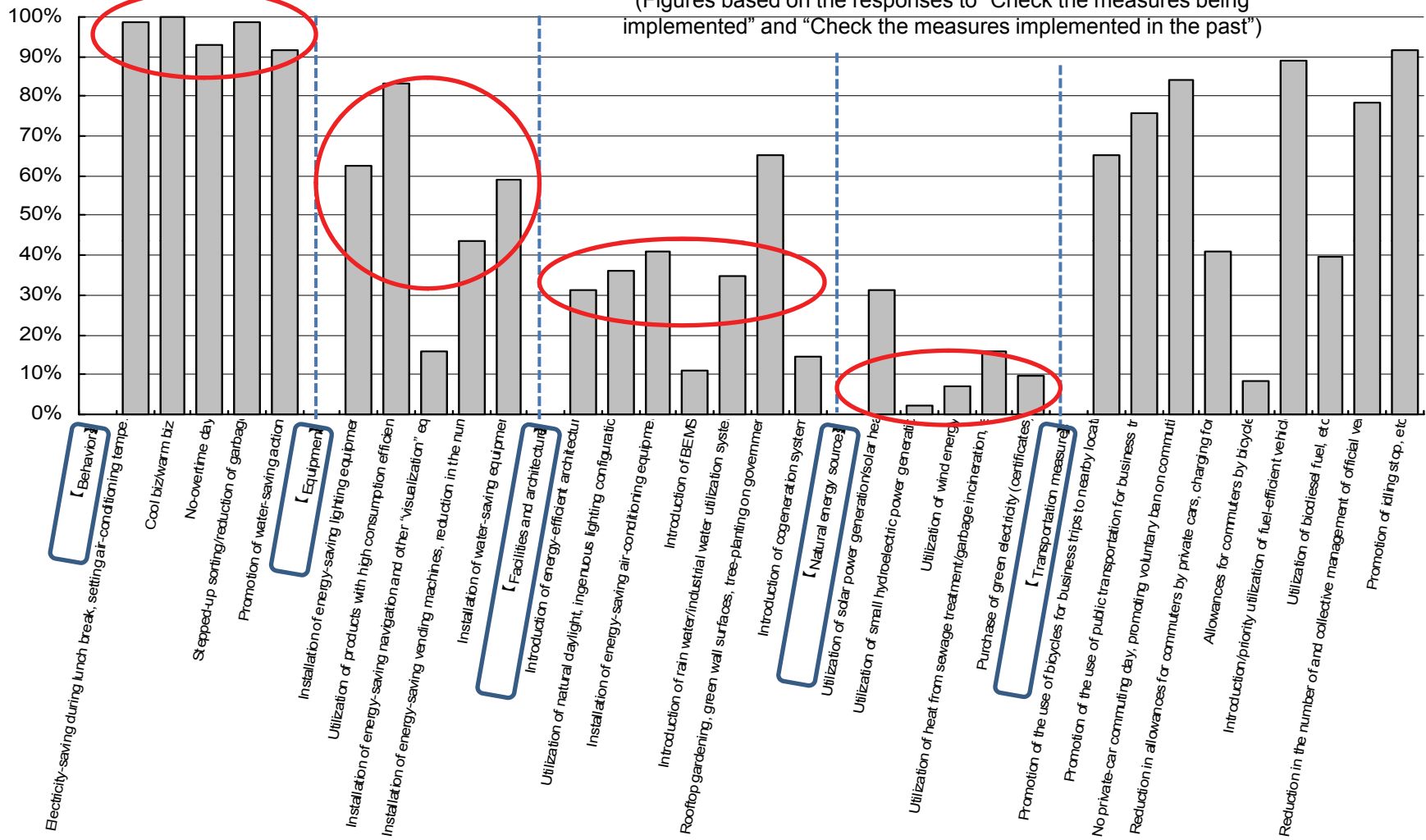
Research Categories	FY2010 Survey (Community-based Measures)	FY2009 Survey (Administrative Work/Projects)
① Plan schemes	Reduction targets, formulation year/base year	Reduction targets, formulation year/base year
② Plan progress management	Status of plan progress management of community-based measures and emission reductions achieved	Status of plan progress management of administrative work/projects and emission reductions achieved
③ Policy promotion measures	Status of introduction of community-based policy promotion measures	Status of introduction of administrative work/project-based policy promotion measures
④ Policy Promotion measures	Priority areas of plan	
⑤ Policy implementation Status	<p>Low-carbon policy implementation status/methods of implementation in the following sectors/areas:</p> <ul style="list-style-type: none"> • Industry sector (manufacturing/construction) • Industry Sector (agriculture, forestry, and fisheries) • Civil work sector • Household sector/consumers • Transport sector • Areas/districts 	<p>Low-carbon policy implementation status of the following administrative work/projects which are likely to emit large amounts of CO₂:</p> <ul style="list-style-type: none"> • Government buildings/general administrative work • Administrative work/projects related to waste disposal • Administrative work/projects related to water supply • Administrative work/projects related to sewerage • Administrative work/projects related to schools • Road-related projects • Public transportation-related projects • Public housing-related projects • Public medical service-related projects
⑥ Promotional/hindering factors	Factors that promote or hinder community policy implementation	Factors that promote or hinder administrative measures' implementation
⑦ Status of measures taken by citizens, businesses and municipal governments	Status of low-carbon initiatives by businesses, citizens, and municipal governments	

5. Implementation Status of Low-carbon measures by Municipalities in Japan

(1) Low-carbonization of administrative work

Trends in the implementation of low-carbon measures at municipal government buildings and their administrative work

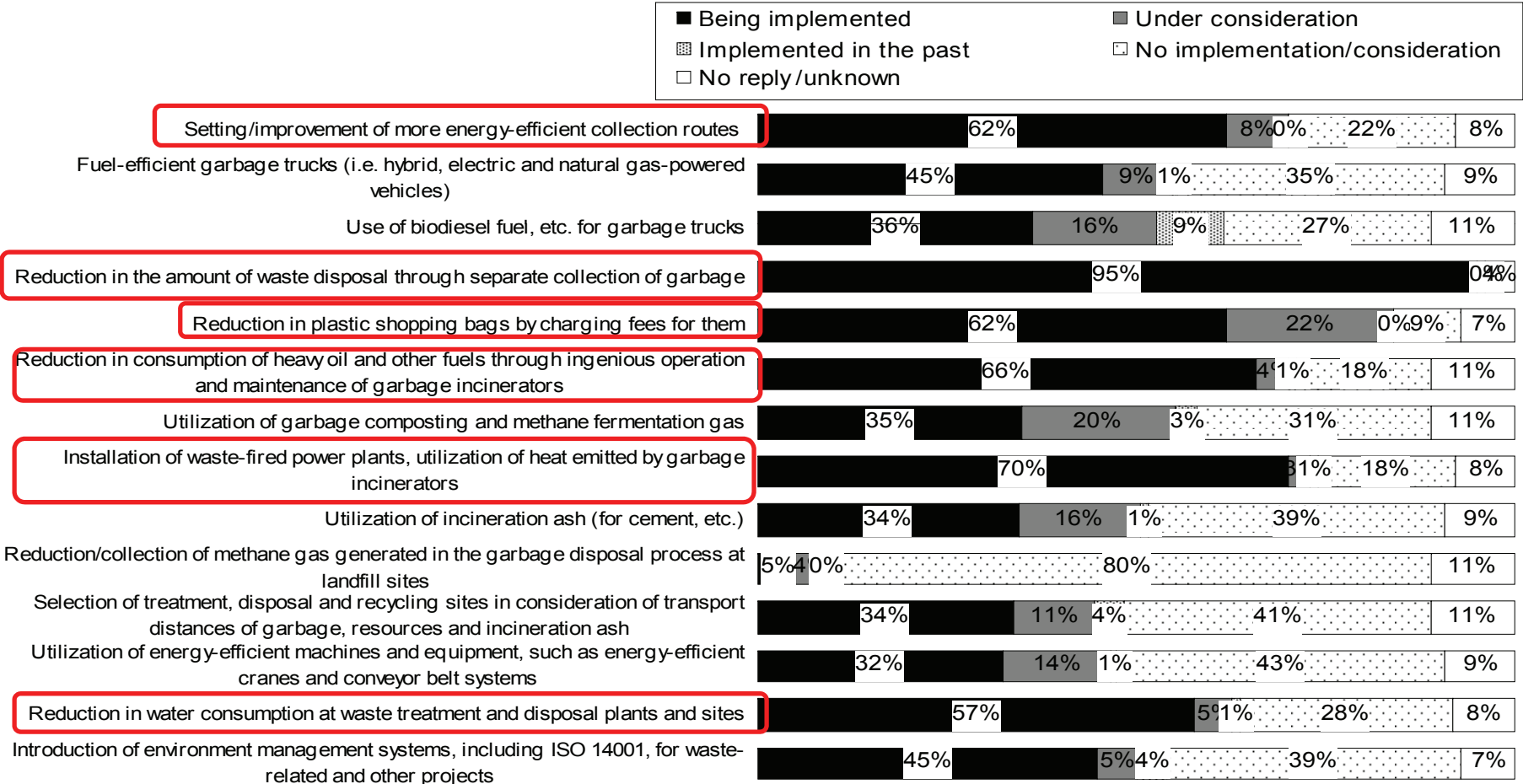
(Figures based on the responses to "Check the measures being implemented" and "Check the measures implemented in the past")



5. Implementation Status of Low-Carbon Measures in Municipalities in Japan

(2) Low-carbonization of projects

Low-carbonization measures being implemented for public works/facilities (Waste-related projects)

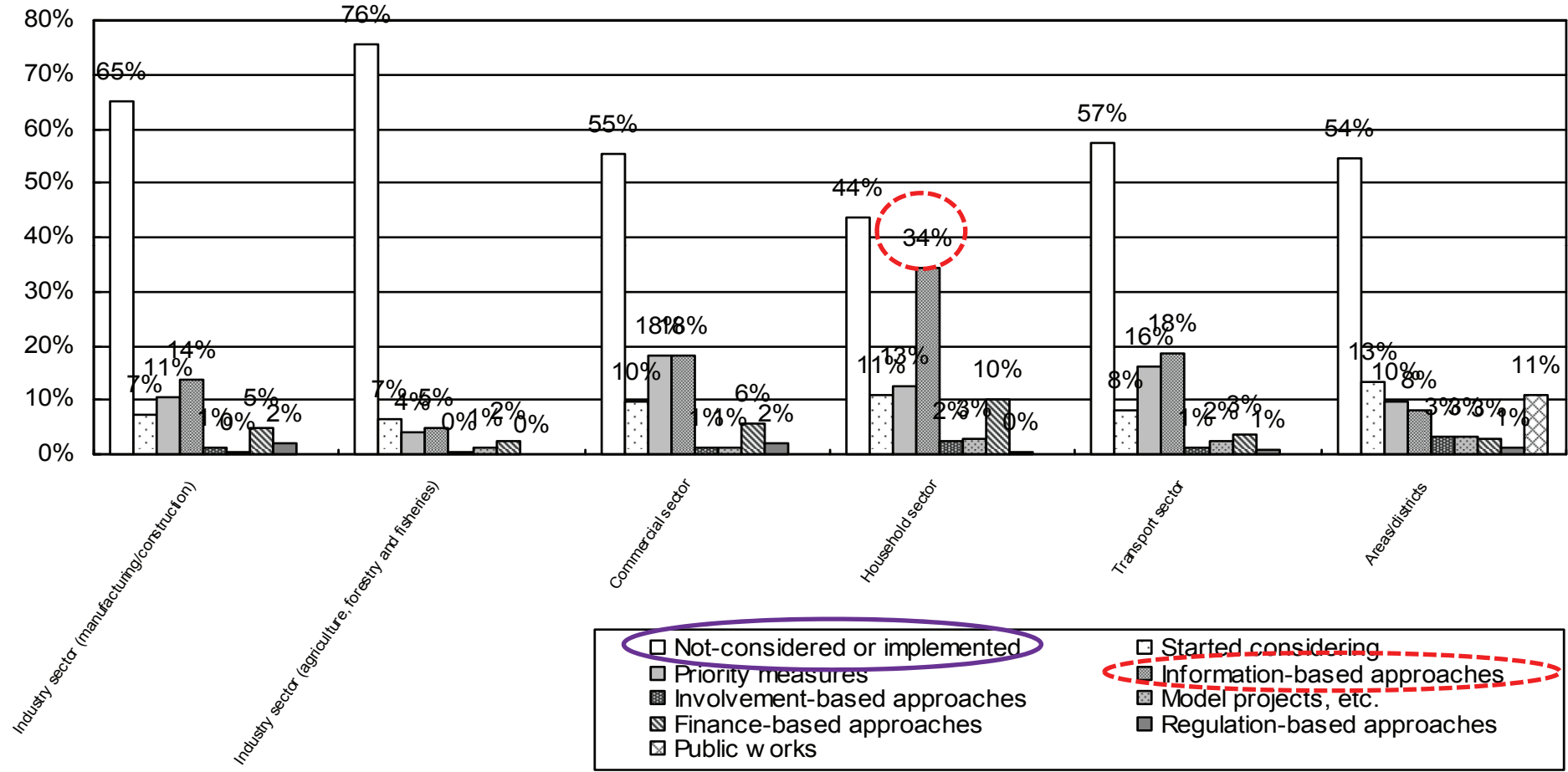


※The implementation rates tend to be higher for “soft” measures such as behavior-based initiatives and tune-up measures for energy efficiency.

5. Implementation Status of Low-carbon Measures by Municipalities in Japan

(3) Low-carbonization of local communities: Trends in the measures implemented and methods of implementation

Trends in the implementation of low-carbon measures for local communities



※We examined the status of implementation based on the responses to questions asking whether they implement it or not concerning 13 to 27 measures considered to be representative in each sector. Figures in the chart are based on the average numbers of those who replied yes.

2010 Survey on the Implementation Status of Low-Carbon Measures (Community-based measures) by Municipalities in Japan (by Hosei University)

5. Implementation Status of Low-carbon Measures by Municipalities in Japan

(4) Low-carbonization of local communities : Analysis of trends in the measures taken by municipalities seen in environment white papers

Progress in Low-carbon measures in a local community (Example: City A)

The mayor's statement acknowledging the environment-related issues in the annual environment white paper

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Specific references to environmental issues	Harmful materials/dioxin	○	○	○	○							
	Resources/energy	○							○	○	○	
	Disposal/waste	○	○		○							
	Pollution caused by urban living		○									
	Social activities based on mass production/consumption/disposal		○	○	○	○	○	○	○	○	○	○
	Acid rain		○									
	Global warming		○	○	○	○	○	○	○	○	○	○
	Ozone layer depletion			○	○	○	○	○	○	○	○	○
References to how the society should be	Zero-emission society	○	○	○					○	○	○	○
	Sustainable society		○	○	○	○	○	○	○	○	○	○
	Environment-friendly society					○	○					
	Recycle-based society						○					
References to global warming	Pressing issues						○					
	Effective measures required						○					
	Further strengthening /improvement of measures required							○				
	Positioned as priority measures											
	First year to start fighting global warming									○		

From discussions in general terms to discussions by stakeholders

Deepening of stances on initiatives

5. Implementation Status of Low-carbon Measures by Municipalities in Japan

(5) Low-carbonization of local communities: Temporal analysis of measures taken

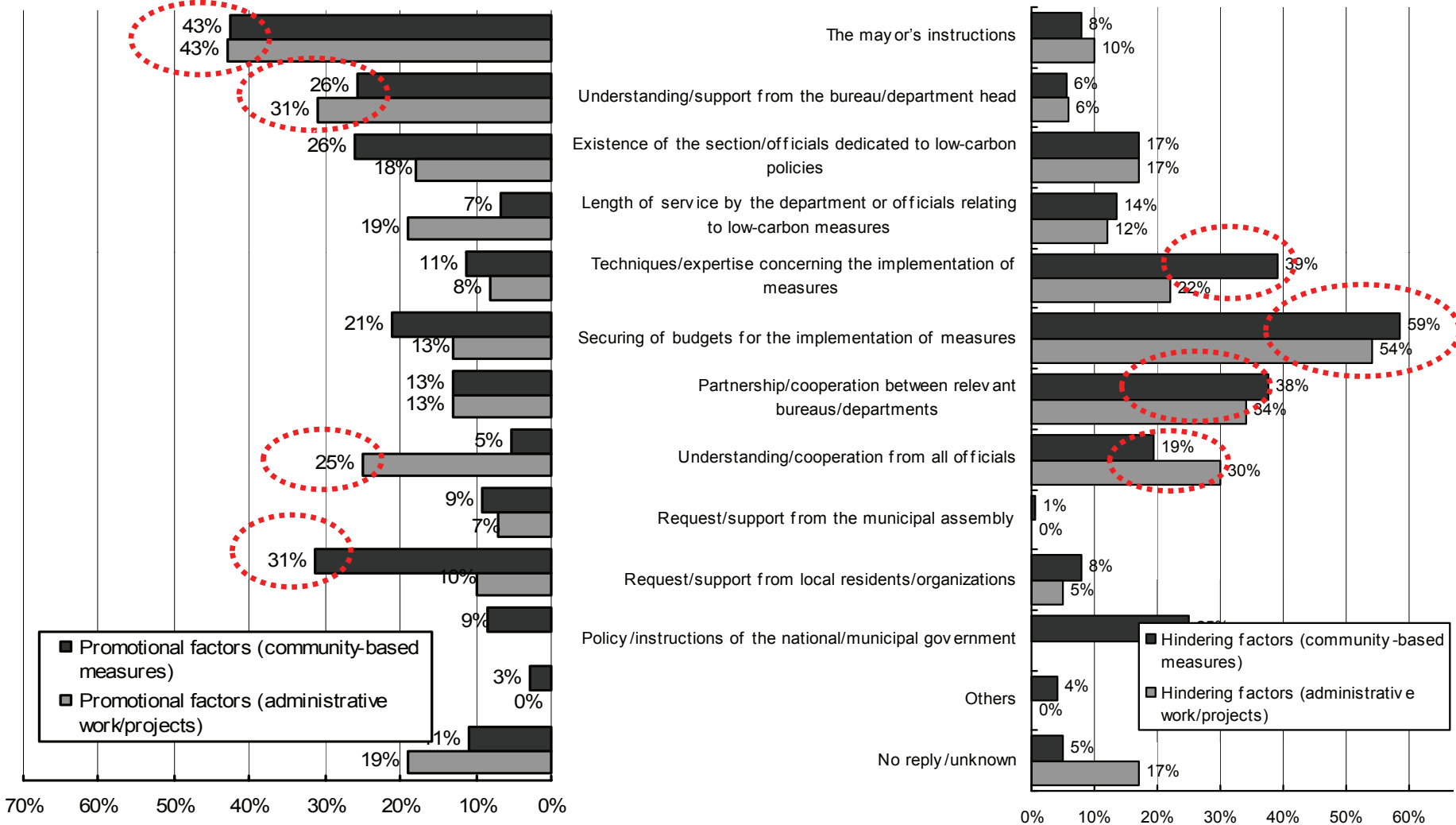
Progress in Low-carbon measures in a local community (Example: City A)

		Individual approaches	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Low-carbon measures for administrative work/projects	Priority measures	Energy-saving initiatives at public facilities		○	○	○	○	○	○	○	○	○	○	
		Utilization of solar heat energy (public facilities)	○	○	○	○	○	○	○	○	○	○	○	
		Utilization of solar power generation (public facilities)	○	○	○	○	○	○	○	○	○	○	○	
		Utilization of Natural gas-fuelled cogeneration systems			○	○	○	○	○	○	○	○	○	
		Utilization of heat emitted by waste incinerators	○	○	○	○	○	○	○	○	○	○	○	
		Utilization of gas produced in the digestion process	○	○	○	○	○	○	○	○	○	○	○	
Low-carbon measures for local communities (community-based measures)	Means of implementation for community-based measures	Plans for promoting community-based measures to fight global warming				○								
		Municipal ordinances concerning global-warming countermeasures									○			
		Declarations on taking actions to fight global warming and its medium to long-term goal setting										○		
		Medium to long-term action plan to fight global warming											○	
	Diffusion and awareness-raising	Promoting utilization of energy-efficient/new energy-based equipment by small and medium-sized enterprises, etc.		○	○	○	○	○	○	○	○	○	○	○
		Promoting energy-saving by citizens and businesses		○	○	○	○	○	○	○	○	○	○	○
		Spreading and awareness raising of new energy sources												
		Campaigns to stop global warming							○	○	○	○	○	○
		Eco-life promotion projects										○	○	○
		Environment-related lectures organized by municipalities and environment supporter training courses							○	○	○	○	○	○
	Building-related measures	Measures taken in collaboration with relevant agencies/organizations									○	○	○	
		Reduction of household CO2 emissions						○	○	○	○	○	○	
		Promotion of energy-efficient buildings (in the private sector)										○	○	
		Spreading and awareness-raising of ESCO projects, etc.										○	○	
	Transportation-related measures	Subsidies for enhancement of environmental performance of housing											○	○
Reduction of CO2 emissions from cars			○	○	○	○	○	○	○	○				
Functional enhancement of public transportation networks											○	○	○	
Improvement of Public transportation services											○	○	○	
Increasing transfer connections at transit stations											○	○	○	
No private car days											○	○	○	
Promotion of park-and-ride											○	○	○	
Research on road pricing											○	○	○	
Improvement of traffic environment											○	○	○	
Construction of car-only roads											○	○	○	
Improvement of pedestrian environment										○	○	○		
Construction of bicycle paths										○	○	○		

As community-based measures and their means of promotion are established, individual approaches have shifted towards low-carbonization of communities towards that of administrative work/projects.

6. Promotional and Hindering Factors to Low-carbon measures

Low-carbon measures : Promotional and hindering factors to community-based measures and administrative work/project-related measures



* "Policy/instructions of the national/municipal governments is the option only for community-based measures
 2009 and 2010 Surveys on the Implementation Status of Low-Carbon Measures by Municipalities in Japan (by Hosei University)

7. Development and Implementation of Policy Indexes for Low-carbon Initiatives

(1) Outline of Policy indexes for low-carbon initiatives

- Prepare a list of “108 standard menus of measures to be implemented” from low-carbon initiatives classified by types.
- Put together a checklist of the measures so that all municipalities can check on their own. The results will be tabulated by sectors and areas of measures and, using radar charts, build a system that allows them to visually identify their areas of strength and of weakness where measures need to be strengthened.

checklist

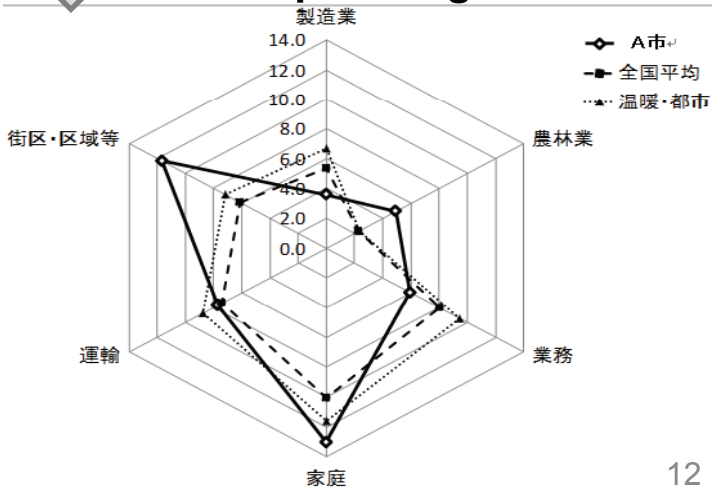
NO	Area	Name of Low-carbon measures	1. Not considered or implemented	2. Started considering	3. Priority measures	4. Information-based approaches	5. Involvement-based approaches	6. Model projects, etc.	7. Finance-based approaches	8. Regulation-based approaches
1	Action	a. Promotion of action plan making at business offices	1	2	3	4	5	6	7	8
2	Action	b. Promotion of appointment and training of supervisors at business offices	1	2	3	4	5	6	7	8
3	Action	c. Promotion of understanding of greenhouse gas emissions at business offices	1	2	3	4	5	6	7	8
⋮										
14	Equipment/ Architecture/ system	n. Utilization of fuel-efficient construction machinery at construction sites	1	2	3	4	5	6	7	8

Standard menu by city type

	都市・寒冷	農村・寒冷	都市・温暖	農村・温暖
施策1	◎	◎	○	○
施策2	○	○	○	○
施策3	○		○	
施策4		○		○
施策5	○		○	
施策6	○	○	○	○
施策7		○		○
施策8	◎	◎	◎	◎
施策9		○		○
⋮				
⋮				
施策n		○		○

◎必須施策 ○選択施策

Output image



<Reference> Examples of Low-carbon measures by municipalities and its items (1)

Sector	Sub Classification	Name of low-carbon measures
Industrial sector	Measures to spread and promote low-carbon actions on production	Promotion of action plan making at business offices
		Promotion of appointment and training of supervisors at business offices
		Promotion of understanding of greenhouse gas emissions at business offices
		Implementation of environment management, such as ISO introduction, at business offices
		Promotion of energy-saving behaviors of employees at business offices
		Promotion of green procurement (utilization of products/services with small carbon footprints, etc.)
		Utilization of emissions trading and carbon offsetting, etc.
	Measures to spread and promote low-carbon facilities/architecture/systems	Promotion of greater energy efficiency of production facilities
		Installation of energy monitoring/control systems
		Reduction of industrial waste discharges through installation/renovation of disposal facilities, etc.
		Improving thermal insulation / solar insolation shielding / ventilation / daylighting, etc. of factory buildings
		Promotion of rooftop gardening, green wall surfaces and tree-planting on premises of factory buildings
		Promotion of area-wide development of energy-efficient bases through partnership/cooperation among neighboring businesses
	Measures to spread and promote low-carbon fuels/energy sources	Installation/utilization of fuel-efficient construction machinery at construction sites
		Utilization of low-carbonization of energy used for production (shift to LNG and other fuels with smaller carbon content)
		Utilization of untapped energy source (exhaust heat)
	Measures to spread and promote low-carbon actions on production	Spread and promotion of green electricity certificates
		Promotion of implementation of environment management in agriculture, forestry and fisheries
		Promotion of energy-saving actions by those engaged in agriculture, forestry and fisheries
		Promotion of green procurement (utilization of products/services with smaller carbon footprints, etc.)
		Utilization of carbon offsetting, etc. (purchase of credits)
	Measures to spread and promote low-carbon facilities/architecture/systems	Promotion of sale of credits by securing forest absorption sources
		Introduction/utilization of fuel-efficient agricultural machinery, fuel-efficient fishing vessels, etc.
		Improvement on thermal insulation/ventilation/daylighting, etc. of production facilities (greenhouse facilities and aquaculture facilities, etc.)
	Measures to spread and promote low-carbon fuels/energy sources	Installation of energy monitoring/control systems in production facilities (greenhouse facilities and aquaculture facilities, etc.) and of navigation information systems, etc. in fishing vessels
		Utilization of low-carbon fuels/energy sources (shift to fuels with smaller carbon content, etc.) at production facilities (greenhouses, aquaculture facilities and fishing vessels, etc.)
		Installation of renewable energy facilities (solar power, solar heat and wind power, etc.)
Installation of renewable energy facilities (small hydroelectric and micro hydroelectric power generation, etc. harnessing irrigation canals, etc.)		
Promotion of recycling of agricultural, fishery, and livestock wastes and pruned tree branches through composting/methane fermentation, etc.		
Utilization of untapped energy sources (utilization of geothermal heat and hot springs for greenhouse culture, and snow for storage facilities for agricultural products, etc.)		
	Spread and promotion of green electricity certificates	

<Reference> Examples of Low-carbon measures by municipalities and its items (2)

Commercial sector	Measures to spread and promote low-carbon actions on business operations	Promotion of action plans making at business offices
		Promotion of appointment, fostering of supervisors at business offices
		Promotion of understanding of greenhouse gas emissions at business offices
		Implementation of environment management, such as ISO introduction, at business offices
		Promotion of energy-saving behaviors of employees at business offices
		Reduction of industrial waste
		Promotion of green procurement/purchases (utilization of products/services with smaller carbon footprints, etc.) (including promotion, etc. of the sale/serving of seasonal foods/local produce by businesses, such as retailers and restaurants, etc.)
		Utilization of emissions trading and carbon offsetting, etc.
	Measures to spread and promote low-carbon equipment	Installation of energy-saving office automation (OA) equipment and home electric appliances, etc. (promotion of installation/replacement)
		Spread and promotion of equipment supporting energy-saving measures, such as energy-efficient navigation systems and water-saving packing for faucets
	Measures to spread and promote low-carbon facilities/architecture/systems	Installation of highly-efficient lighting, air conditioners, hot-water supply systems, cogeneration systems and fuel cells, etc. in buildings and facilities
		Introduction of BEMS (energy management systems)
		Improving thermal insulation / solar insolation shielding / ventilation / daylighting, etc. of buildings
		Promotion of rooftop gardening, green wall surfaces and tree-planting on premises of buildings
		Promotion of area-wide development of energy-efficient bases through partnership/cooperation among neighboring building owners
	Measures to spread and promote low-carbon fuels / energy sources	Installation of renewable energy facilities (solar power, solar heat and wind power, etc.)
		Installation of renewable energy facilities (small hydroelectric and micro hydroelectric power generation, etc.)
		Installation of woody biomass-fuelled facilities (stoves and boilers, etc. that use wood pellets, fuelwood and scrap wood as fuel)
		Utilization of untapped energy sources (heat emitted by garbage incinerators, biogas, earth thermal, geothermal heat/hot springs and snow cold, etc.)
		Spread and promotion of green electricity certificates

7. Development and Implementation of Policy Indexes for low-carbon initiatives

(2) Implementation of Low-carbon Index surveys

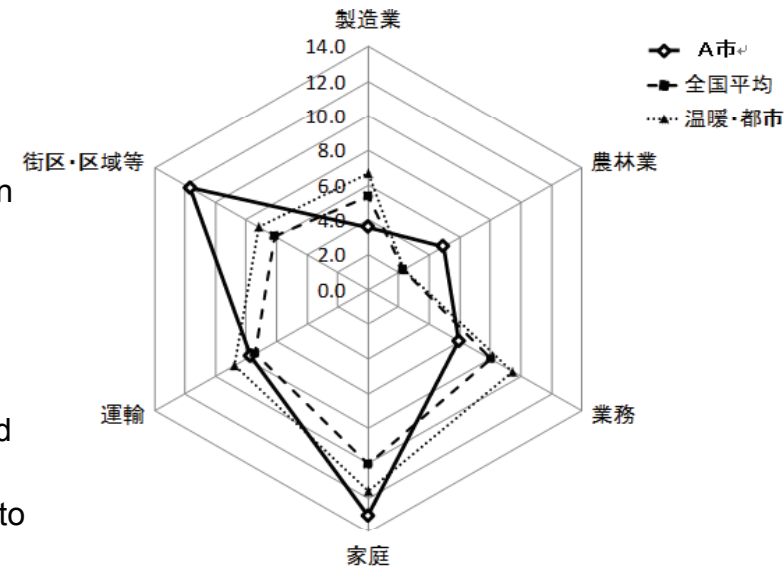
1. FY2010 Survey

We developed the “low-carbon policy index (draft)” for the purpose of clarifying the levels of implementation as well as challenges concerning low-carbon measures by municipalities in Japan. Using 108 items (policy items) whose levels of implementation to be assessed by 8 scales (9 scales in some measures), we conducted a questionnaire survey on a total of 230 municipalities. Then, based on the results, we developed a draft index.

2. FY2011 Survey

We conducted a verification survey by informing respondents of the survey results in order to find out whether the low-carbon policy indexes are valid in the eyes of index users or municipal government officials in charge of low-carbon measures. If they are found to be insufficient to deal with real-life situations, the causes of such inadequacy will be identified and improvements will be made as necessary. In this survey, we mainly considered changes in methods used for calculating index values.

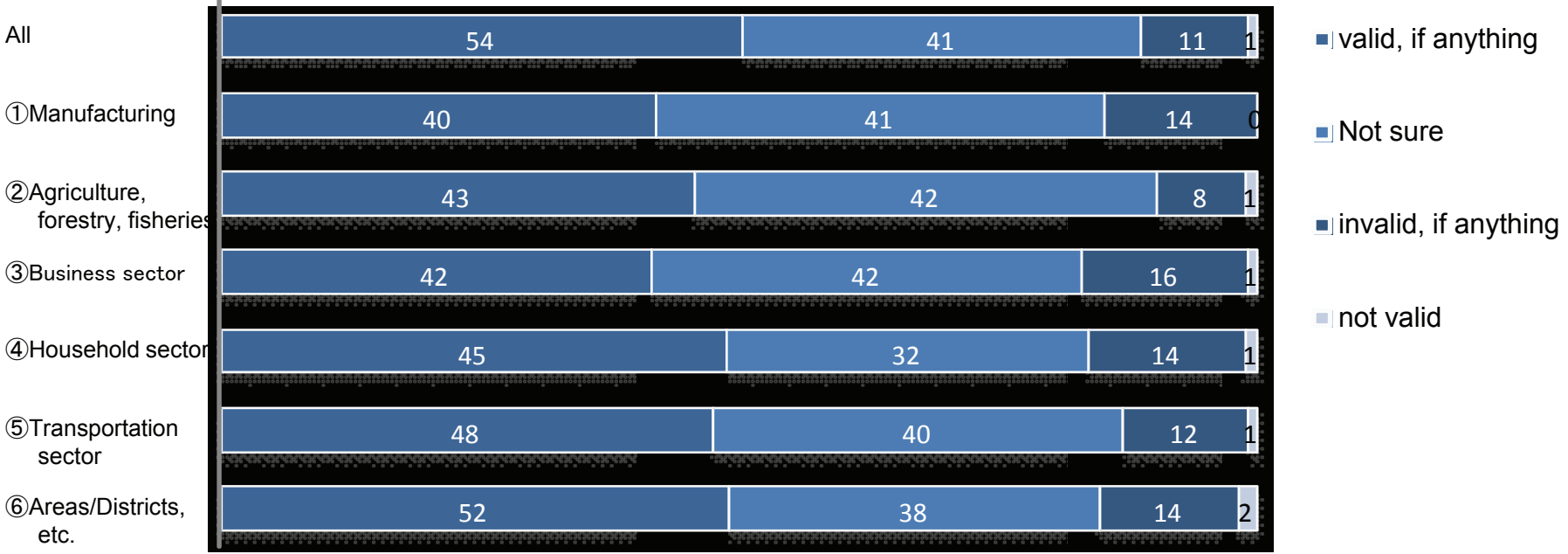
- Survey participants: 168 municipalities whose index values were calculated in the survey
- Survey method: Send out the estimated index values and questionnaires to the participants by mail and collect them by fax
- Survey period: September 7, 2011 (started sending out questionnaires)~ October 31, 2011
- Responses received: 119 municipalities out of 168 responded (Response rate: 70.8%)



7. Development and Implementation of Policy Indexes for low-carbon initiatives

(3) Consideration of the index review for low-carbon measures

Overall, 4.2% of the respondents thought the indexes were “valid”, 32.5% “valid, if anything”, 24.7% “Not sure”, 6.6% “invalid, if anything”, and 0.6% “not valid”. Similar patterns were observed in the results by sector. We consider the index values calculated in the survey are generally valid.

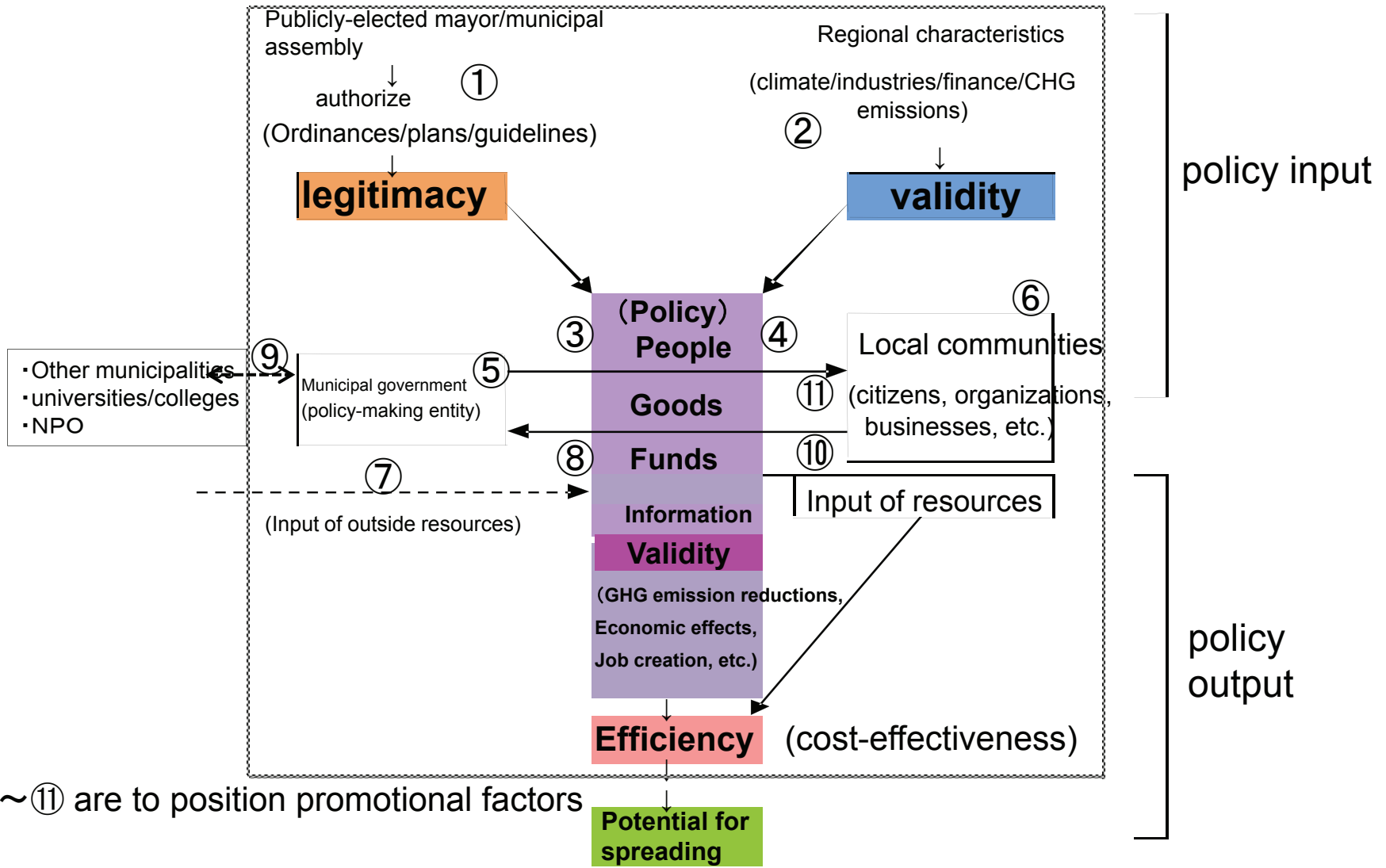


However, we will consider making some changes. At the moment, we weight each policy item (promotion of actions, installation of equipment...) in consideration of ①the extent of its effect; ②Sustainability of its effects; and ③the intensity of its effects. We also weight it according to its implementation status (yet to be implemented, implemented by an awareness-based approach, implemented by regulation-based approach...). We are planning to review these weighting.

8. Research on Low-Carbon Measures Promotional Factor Model

(1) Analytical framework: Perspectives of legitimacy/validity/effectiveness/efficiency and policies

(Analytical perspectives on promotional/hindering factors)



①~⑪ are to position promotional factors

8. Research on Low-Carbon Measures Promotional Factor Model

(2) Outline of research: Identification of Promotional/hindering factors through hearings with municipal governments

We conducted hearings with 11 municipalities' officers in charge on the following 5 items and analyzed their results.

1. **Legitimacy of measures**: How they are positioned in relation to the mayor's campaign pledges, municipal ordinances/comprehensive plans, etc.
2. **Validity of measures**: How much they consider the regional characteristics and emission patterns and how those characteristics are reflected in the municipality's low-carbon measures
3. **Effectiveness of measures**: Understanding of effects and co-benefits of overall low-carbon measures
4. **Efficiency of measures**: Status of cost consolidation of overall low-carbon measures and attitude towards cost-effectiveness
5. **Promotional/hindering factors for the implementation of measures**

City	Population	Per-capita CO ₂ Emissions *	Eco-Model City	Performance Assessment**	Key points of low carbon measures
Obihiro city	170,000	8.44t-CO ₂	○	B	Coupled with "Food Valley Tokachi" initiative.; uniqueness in agriculture and livestock industries.
Sapporo city	1.9 million	5.87t-CO ₂	/	/	Substantial funds be allocated to environment and energy-related measures in FY2011
Yokohama city	3.67 million	5.52t-CO ₂	○	C	Low-carbon measures positioned as part of its growth-strategy; a company for water-related projects overseas established.
Iida city	110,000	6.8t-CO ₂	○	B	Characterized by low-carbon measures taken in collaboration with businesses such as Ohisama Shimpo Energy Corp.
Toyama city	420,000	9.58t-CO ₂	○	A	Focusing on the revitalization of the city center area based on the construction and revival of light rail transit (LRT) networks
Kyoto city	1.47million	5.27t-CO ₂	○	A	Revised Japan's first municipal ordinance concerning measures to fight global warming in 2011
Hiroshima city	1.17 million	5.51t-CO ₂	/	/	Drawn of the city's policy vision "Hiroshima Carbon Minus 70" to reduce carbon emissions by 70% by 2050
Ube city	175,000	35t-CO ₂ (80% of the city's businesses are in cement industry)	/	/	Set sector-by sector in the plan; agreement system for businesses is working
Yusuhara Town	4,000	5.7t-CO ₂	○	B	Low-carbon measures harnessing its extensive forest area that covers 91% of the town; having abundant natural energy sources.
Kitakyushu City	980,000	16t-CO ₂	○	A	Proactively seeking partnership with Asian cities; strength in the industry sector
Minamata City	28,000	8.3t-CO ₂	○	C	Have long sought to become an Eco-Model City well before the designation

* CO₂ emissions are based on the estimates found in the "2009 White Paper on Environmental Initiatives by Local Governments" by the Research Institute for Environmental Politics of the Coalition of Local Governments for Environmental Initiatives, Japan.

** The performance assessments were conducted using the SABC-format 4-stage assessment conducted by the Cabinet Secretariat.

9. Low-carbon Measures Promotion Model: 11 promotional factors (1)

Promotional Factor Model	Factor Item	Specific examples
①Consistency with the mayor's basic policy	legitimacy	Adequately linked to the mayor's political commitments/campaign pledges as well as to the municipality's ordinances and planning system.
②Incorporation of regional characteristics	Legitimacy	Low-carbonization perspectives are incorporated to the measures and related projects to address the municipality's issues.
③Accumulation of technological knowledge and knowhow through personnel exchanges	People Information	Undertaking exchange of information and personnel with the national government, consulting firms, NPOs and other municipalities in order to acquire technological knowledge and knowhow necessary to promote low-carbon measures.
④Types of officials required for low-carbon development	people	Recognizing that the promotion of low-carbon measures requires the types officials different from those who took charge of pollution-prevention and other conventional environmental measures, proactively seek to foster human resources and technological competencies within the organization while developing partnerships with universities and other research institutions.
⑤Revamping of organizations/systems within the municipal government	people	The mayor's political commitments and campaign pledges are specifically factored into the municipal government's personnel system, organizational structure and fiscal system.
⑥Utilization of public research institutions and municipality's think tanks	Goods Funds information	Receiving cooperation from environment-related public research institutions and municipality's think tanks particularly for the planning and promotion of low-carbon measures on technological aspects while extending adequate support, including the acquisition of eternal funds.
⑦Utilization of Universities and other outside resources	People information	Proactively lure universities/colleges and research institutions to its communities while accepting researchers wishing to conduct field surveys and utilize their knowledge and expertise in the planning and promotion of low-carbon measures.

9. Low-carbon Measures Promotion Model: 11 promotional factors (1)

Promotional Factor Model	Factor Item	Specific examples
⑧Securing of budgets/fiscal resources	Money	<ul style="list-style-type: none"> • Taking necessary steps to secure fiscal resources for low-carbon measures, such as making low-carbonization projects exempted from budget cut. Also establishing an environmental fund to accept lighting and heating expenses reduced and saved through energy-saving measures at public facilities, profits on the sale of carbon credits and donations, etc., and allocate the funds to promote low-carbon measures. • As the prerequisite for the above, monitor and understand the cost effectiveness of each measure. (efficiency/reduced cost per primary unit). Quantify the effects of low-carbon measures as much as possible and achieve accountability by explaining whether the cost effectiveness is valid or not. In addition to project budget of the municipality, attempt to grasp personnel expenses of the government employees as well as amounts to be borne (investment) by residents and businesses.
⑨Cooperation with other municipalities in Japan	Goods Information	Seek to proactively undertake joint projects with other cities and rural towns and villages as a part of carbon credits and offsetting efforts.
⑩Encourage participation of residents	Local community	In addition to public comments in which residents express their opinions on the formation of plans and measures, focus on building mechanisms under which residents voluntarily participate in the promotion/implementation stages of plans, take actions themselves that contribute to low-carbonization such as installing solar power generation systems.
⑪Utilization of marketing mechanism for citizens	Local community	<ul style="list-style-type: none"> • Utilize social psychology and marketing-based approaches to have residents recognize the effects of energy-saving actions and CHG emissions reduction and take on low-carbon initiatives with a sense of achievement while utilizing energy-saving consultation service for residents (environmental “concierge” project) and eco-point project initiated by the municipal government.

Low-carbon measures by Municipalities in Japan : Summary

1. Through this research and survey, we were able to analyze actual low-carbon measures taken by municipal governments in Japan, identify challenges they were facing and factors that promoted low-carbon measures.
2. We have put together “low-carbon policy indexes” that can be used as a tool to promote low-carbon measures and developed the index method by conducting a verification survey on municipal governments who responded to our survey.
3. Based on the research results and the challenges identified, we will conduct a survey on the possibility of cooperation between municipalities in Japan and cities in Asia. Using the results, we will identify issues involved in establishing international cooperation on low-carbonization and its development at the municipal government level in FY 2011.

Furthermore, we are considering the possibility of further developing the indexes for low-carbon measures of municipal governments in Japan and extending them to Asian cities.

Thank you very much for your kind
attention.