

Oct. 11<sup>th</sup> 2015 Low Carbon Asia Research Network(LoCARNet) 4<sup>th</sup> Annual Meeting

## Lifestyle Change for Low Carbon and Resource Efficient City

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-Transformative Actions by City of Sapporo, Japan

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Eco-City Promotion Department  
Environmental Bureau  
City of Sapporo, JAPAN

**1** About The City of Sapporo

**2** Energy consumption in Sapporo

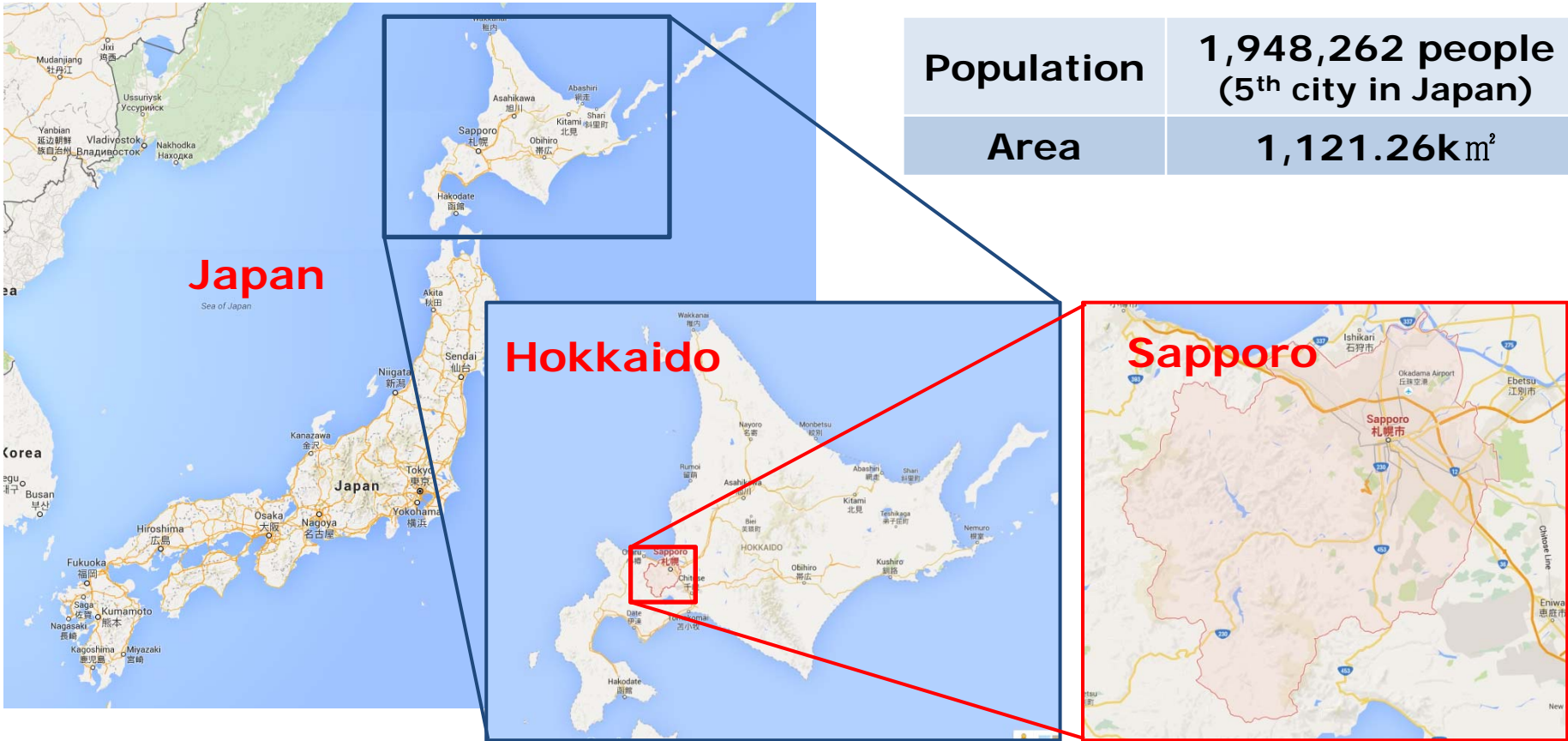
**3** Lifestyle changes for a low-carbon city

**1** About The City of Sapporo

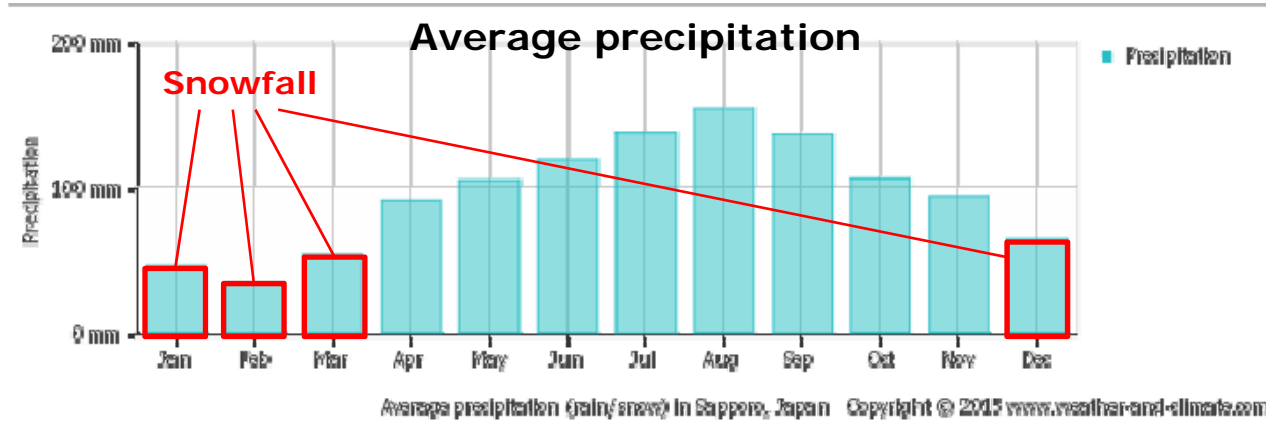
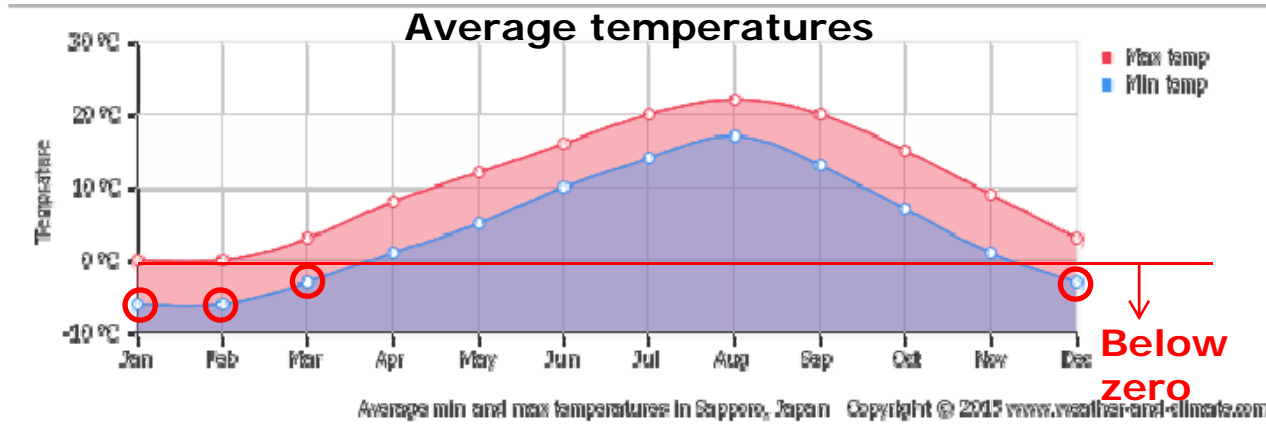
2 Energy consumption in Sapporo

3 Lifestyle changes for a low-carbon city

# SAPPORO Sapporo's Location

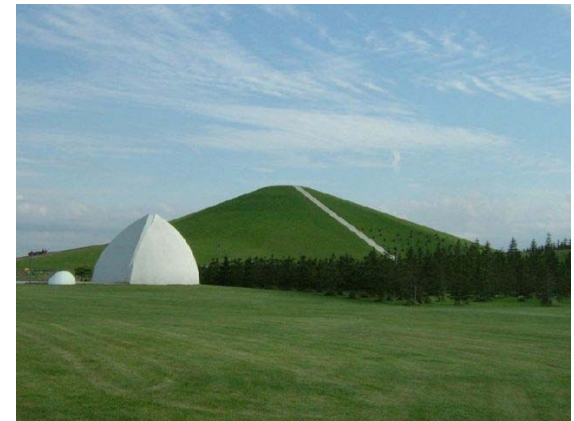


# Average temperatures and precipitation



Average snowfall : about 5m in a winter

# SAPPORO The Cityscape of Sapporo

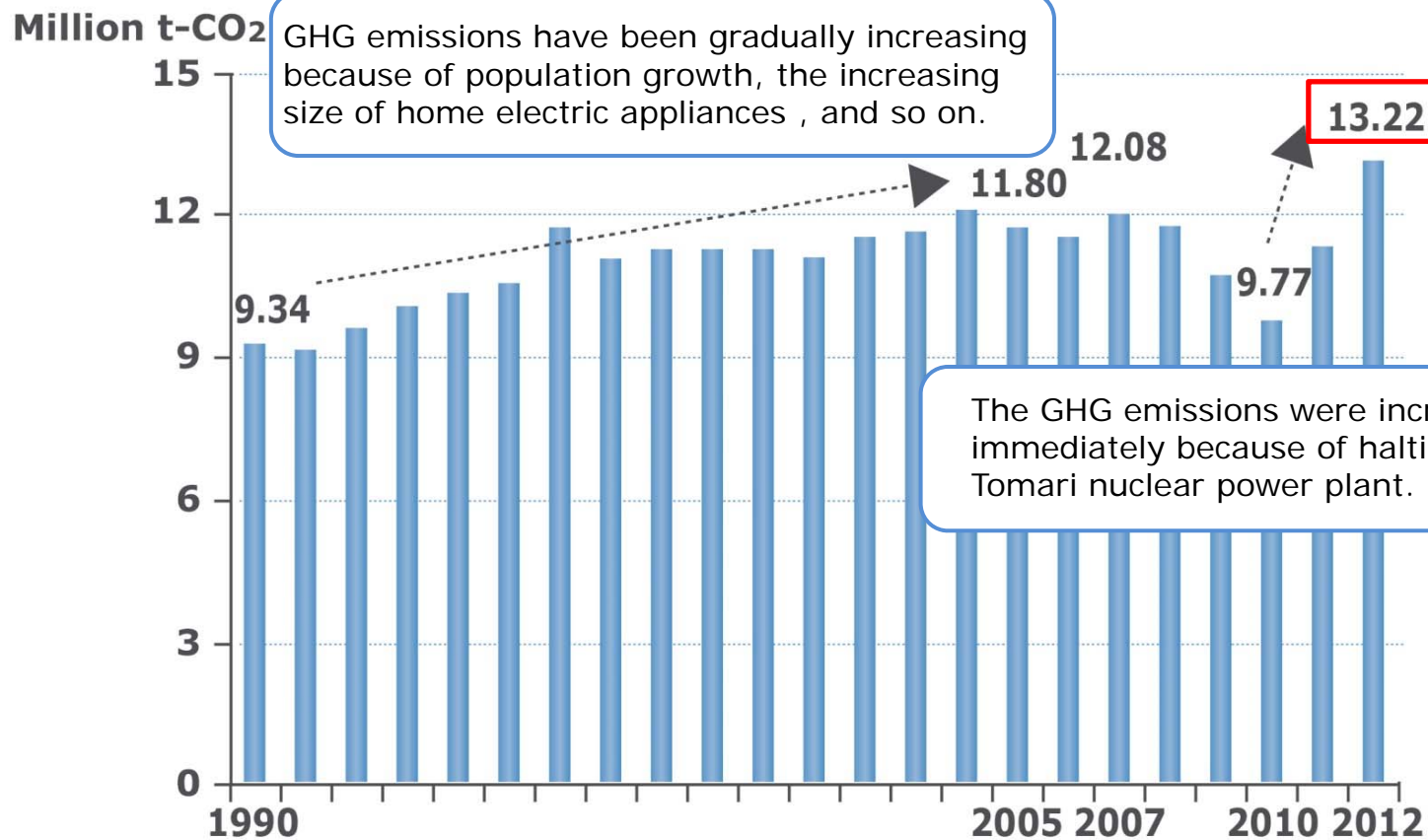


スイーツオブザイヤー 2006  
さっぽろ・いちごタルト  
札幌プリンスホテル多々良ビル

1 About The City of Sapporo

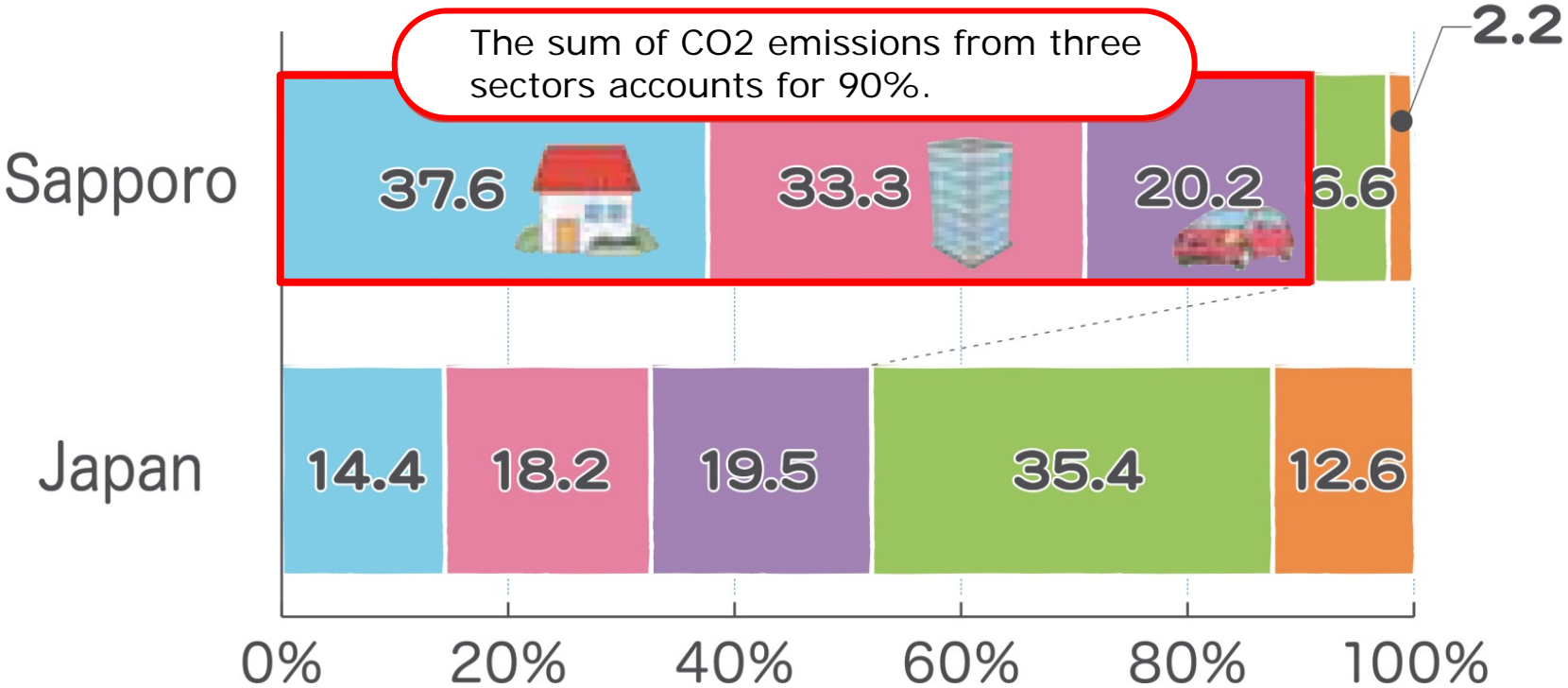
**2 Energy consumption in Sapporo**

3 Lifestyle changes for a low-carbon city





# SAPPORO Factors of CO2 Emissions



# SAPPORO Urban Vision and Action Plan

○Sapporo Urban Development Strategy Vision [2013-2022]

One of the most important challenges:

**“Creating a Low-Carbon society & Energy conversion”**

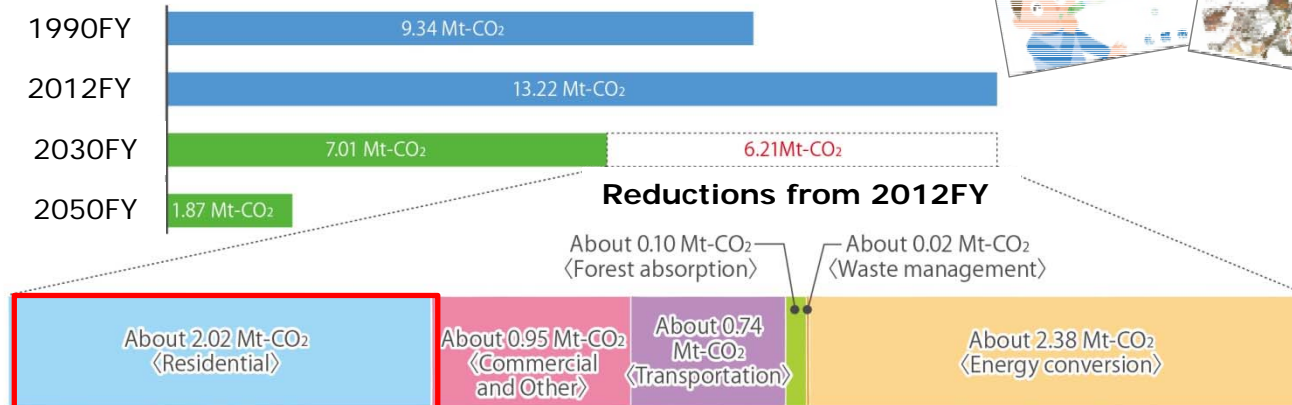
○Sapporo Warming Countermeasures Action Plan [2015-2050]

■ medium-term objectives :

**25% reduction** in CO2 emissions **by 2030**, compared to 1990

■ long-term objectives :

**80% reduction** in CO2 emissions **by 2050**, compared to 1990



**Composition of CO2 reduction : high contributions of domestic uses**

We aim to make Sapporo an “Eco-Capital”, a sustainable low-carbon society of which can boast to the world.



社会像：家庭 Resident

札幌型スマートライフスタイルが  
定着している社会

- 高断熱・高气密住宅の普及
- 省エネ・再エネ機器の普及
- 省エネ行動の実践



Commerce and Industry 社会像：産業・業務

環境保全と経済成長が  
両立している社会

- 省エネ・再エネ設備の普及
- 省エネ行動の実践
- 環境産業の振興と人材育成



社会像：運輸 Transportation

環境に優しい交通体系が  
確立している社会



- 次世代自動車の導入
- エコドライブの推進
- 公共交通の利用促進

社会像：エネルギー Energy

エネルギーの創出と  
面的利用が進んでいる社会

- 再エネ機器の普及・拡大
- 分散電源の普及・拡大
- エネルギーネットワークの強化



社会像：みどり Green

豊かなみどりと  
共生している社会



- みどりの保全
- みどりの創出
- みどりの活用

社会像：廃棄物 Waste

ごみの少ない資源循環型社会

- ごみの減量・リサイクル促進
- 廃棄物発電・熱利用の推進



1 About The City of Sapporo

2 Energy consumption in Sapporo

**3 Lifestyle changes for a low-carbon city**

**Recent major actions by Sapporo City****Case 1**

**Sapporo Smart City Project  
: The promotion of energy conservation  
lifestyle for the citizens.**

**Case 2**

**Waste Reduction**

**Case 3**

**Environmental Education (Eco-Life Report)**

# SAPPORO Sapporo Smart City Project

## Sapporo Smart City Project (2015~)

### ◆Concept ~ “From Saving to Enjoying”

The objective is that the City of Sapporo will become a “smart city”, where everyone has a “smart life”, meaning conserving energy smartly, enjoyably and without waste.

Logo



Posters of promotion



We used Mr. Akimoto, Mayor of Sapporo and Ms. Tanaka, the Japanese popular model living in Sapporo as the messengers to make energy conservation appealing.

# SAPPORO Sapporo Smart City Project

The Kickoff Event : the talk show with Mr. Akimoto, Mayor of Sapporo and Ms. Tanaka



The subway system decorated with the project's posters



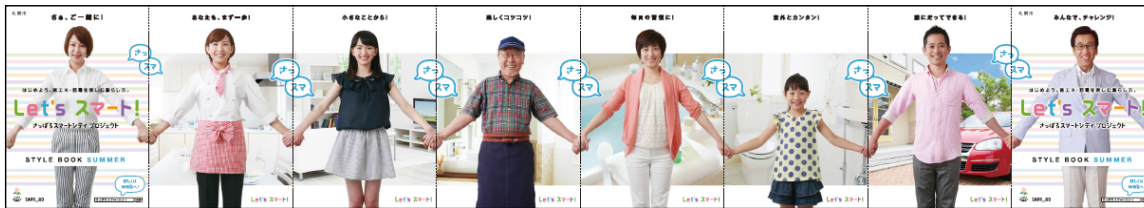
# SAPPORO Sapporo Smart City Project

## Goods of promoting

### ● Leaflet



You can see how to conserve energy while having fun, in the kitchen, the living room, the bathroom and so on.



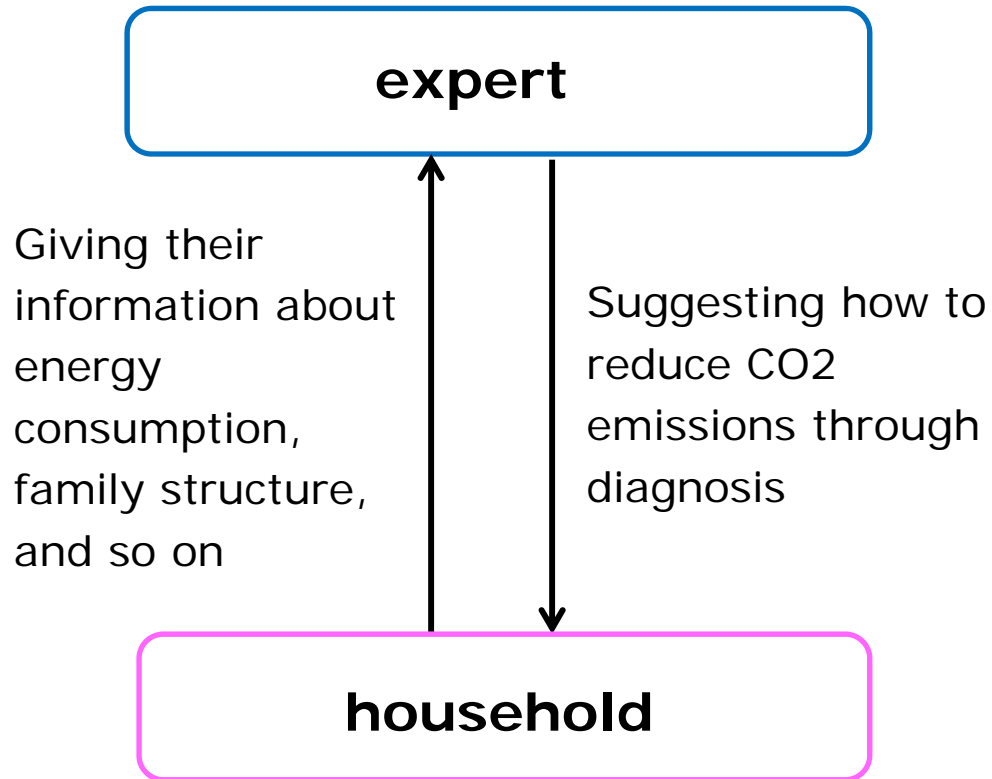
### ● Fan



### ● Tissue







# SAPPORO Method of "Uchi-eco Shindan"

## Step 1 Answering the questionnaire      Step 2 Deciding the schedule

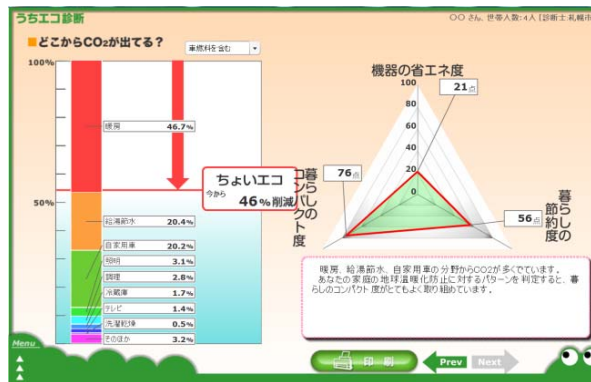
Concerning energy consumption, family structure, and so on before diagnosis.

between the households and experts.

## Step 3 Getting CO<sub>2</sub> reduction advice through diagnosis



① Visualization of CO<sub>2</sub> emission



② Analysis of CO<sub>2</sub> emission's details

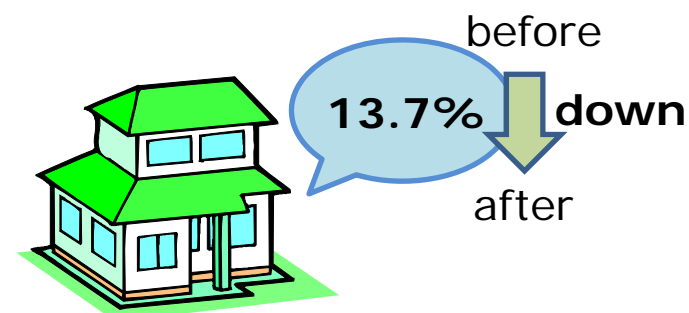


③ Suggestion of measures to conserve energy

# SAPPORO the situation of "Uchi-eco Shindan"



## Effect of "Uchi-eco Shindan"



- So far, **more than 500 households** have used "Uchi-eco Shindan" (2011-2014FY).
- The average amount of energy reduction through "Uchi-eco Shindan" is estimated **an average of 13.7% per year per a household.**

# SAPPORO Waste Reduction Background

## Up to success in reducing waste

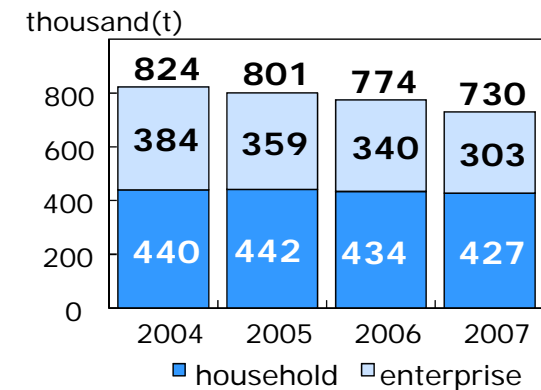
- ◆ Incineration plant was decrepit.



- ◆ Reclaimed ground will be filled in 2025.



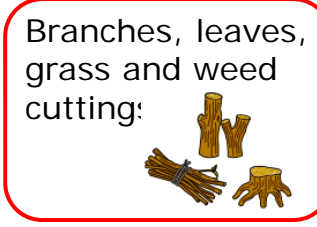
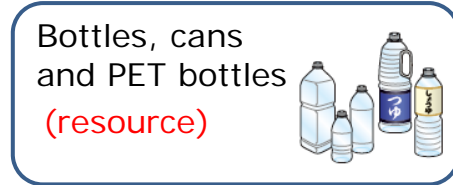
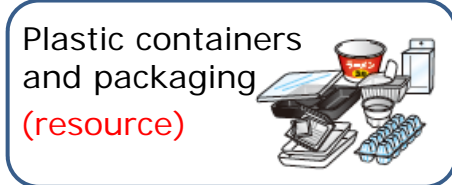
- ◆ The amount of household waste was moving sideways.



2009.7 「New rule of waste」

## New rules of waste

- ◆ Fee-charging for waste collection
- ◆ Changing how to separate waste



New category(resource)



Shutting down the decrepit incineration plant

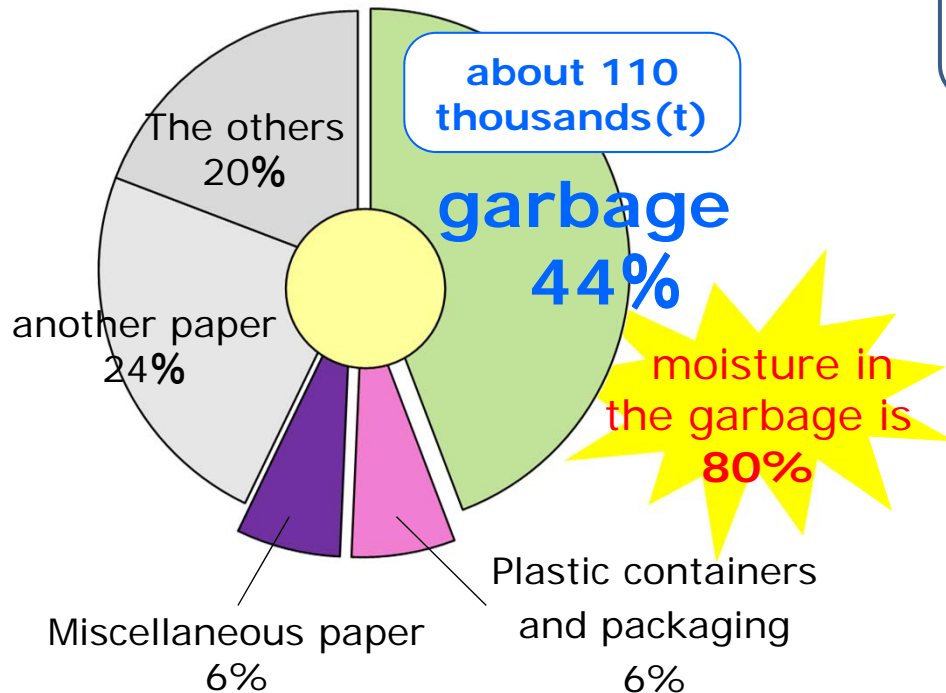


the results of people's efforts

# SAPP<sub>RO</sub> Waste Reduction

## We can reduce waste more

Composition of burnable waste(2012)



## Something we can do

① Don't wet first



② Wring garbage before throwing away



③ Dry garbage



10% reduction by draining off

## Waste Reduction Campaign

- ◆ Let's drop wasteful shopping and wasting food !
- ◆ Let's reduce garbage and money needed for food !



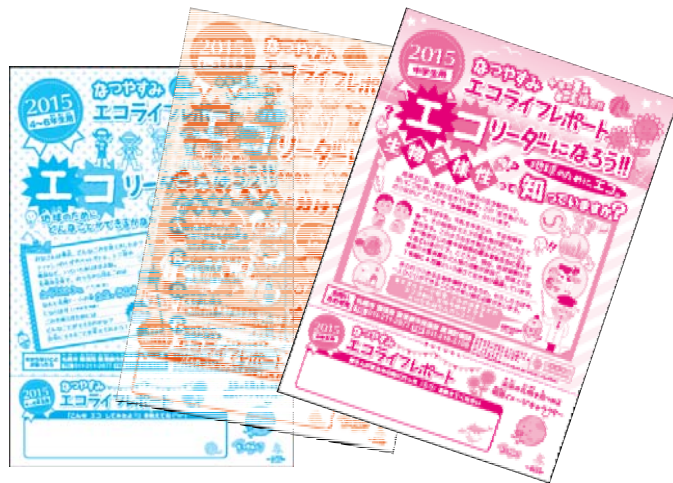
Leaflet

# SAPPORO Environmental Education ~ Eco-Life Report

## Eco-Life Report (2007~)

Checklist of eco-friendly actions for children, to do eco-friendly actions positively and be an eco-friendly leader who appeals to their family

- the surface  
~environmental topics or quizzes



- the back  
~checklist

2015 中学生用

### エコリーダーになる10の方法

夏休みの目標として取り組むエコ行動も、下の10項目の中から選んで取り組もう！(必ず2つ以上) 選んだ項目は一番下の報告用紙に記入し、取り組もうと決意しよう。

エコリーダーになる方法

1 洗濯や歯みがきの時、水を流したままにしない	6 この分別をきちんとする
2 買物のとき、レジ袋をもらわずにマイバックを使う	7 家族みんなで早起きをする(1時間)
3 テレビを見る時間や、ゲームの時間を減らす(1時間)	8 家から出て、公園やプールなどの楽しいところに行く
4 自分に合った食事の量を考え、残さず食べる	9 長時間使わない機器は、プラグをコンセントから抜く
5 冷蔵庫を開ける回数も減らす	10 身近な人とエコについて話そう

できるだけ多くのメニューにチャレンジしよう！

達成率	7/26	7/28	7/29	7/30	7/31	8/1	8/2	8/3
達成率	0/10	1/10	2/10	3/10	4/10	5/10	6/10	7/10

夏休みが終わった後、お友達と比べてみよう。達成率が高い友達を褒めよう。

私はこの夏、エコリーダーになりました！！

上の表で選んだ項目の番号に○をつけてください(いくつでも可)

夏休み前の計画	1	2	3	4	5	6	7	8	9	10
夏休みの振り返り	1	2	3	4	5	6	7	8	9	10

年 級 名 前

※目的の達成へ、夏休み前以上の目標(達成)を記入してください。夏休み後の下の欄(振り返り)を記入して目標達成後、達成率を記入してください。

### breakdown

- Step 1** Receiving the report at school before summer or winter vacation
- Step 2** Planning which task to focus on during vacation
- Step 3** Trying hard during vacation
- Step 4** Reporting results after vacation

More than 90% of the children participate every year.

# Thank you

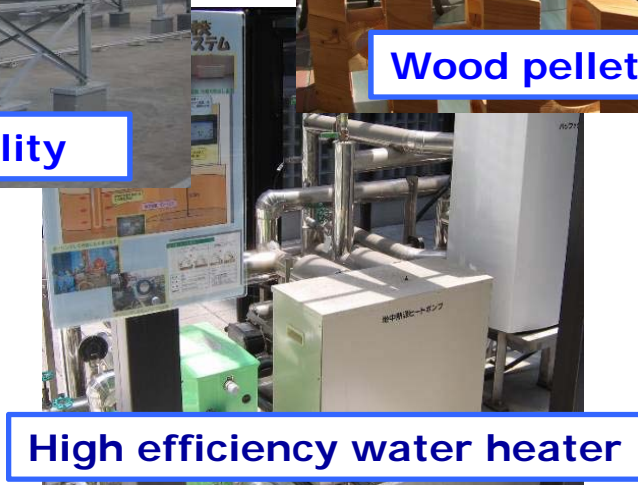


The characters of environmental education in Sapporo



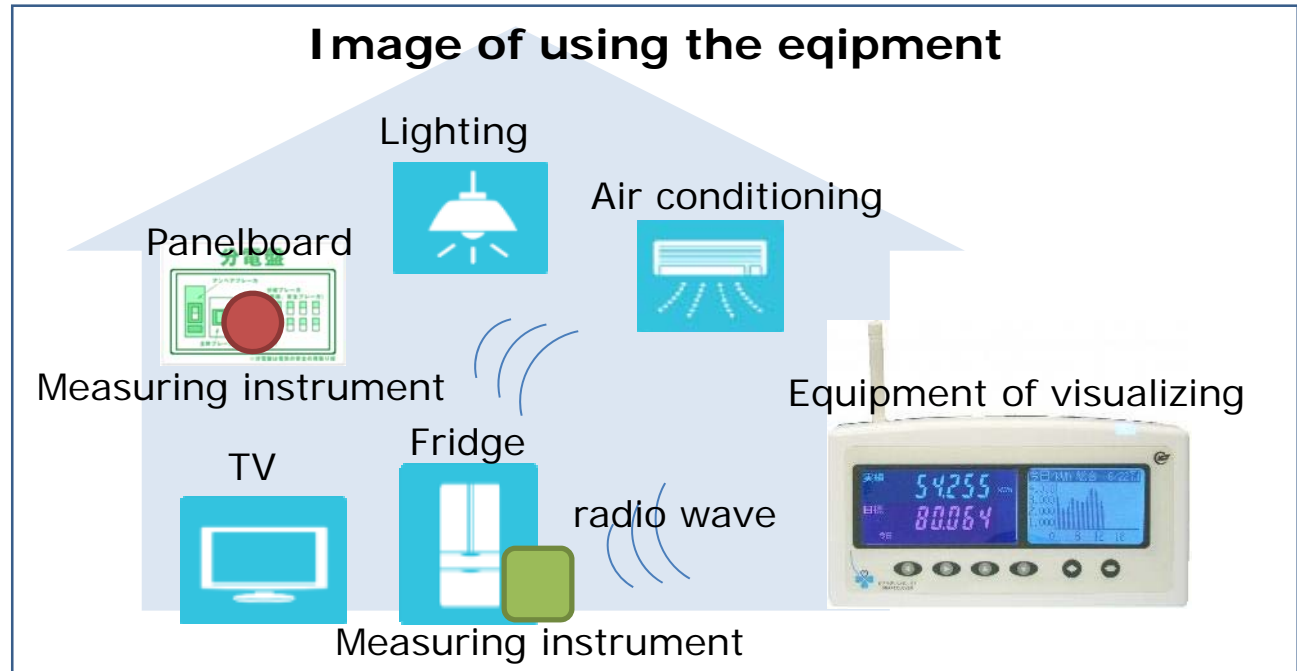
# SAPPORO The Others

## Subsidy for high energy efficiency equipment and new energy equipment



# SAPP<sub>RO</sub> The Others

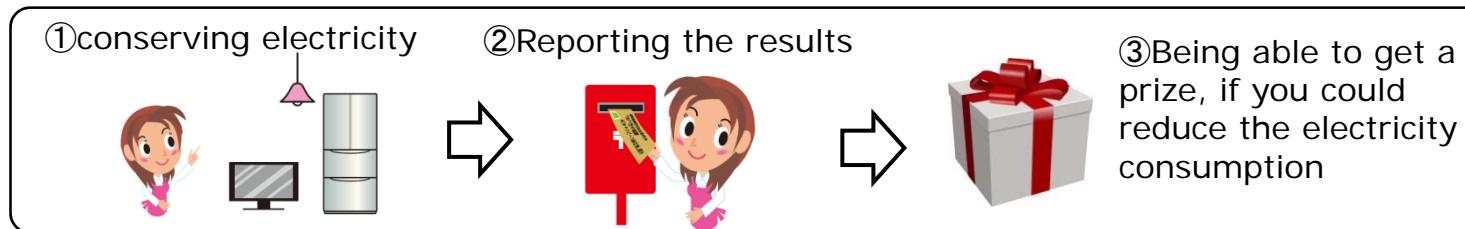
## Lending equipment which can visualize electricity consumption in households



You can save electricity by monitoring your electricity consumption.

## Up to Sapporo Smart City Project

- 2012.5 Halting Tomari nuclear plant because of the Great East Japan Earthquake
- 2012.7
  - Requesting electricity conservation with a numerical target
  - Planning scheduled blackouts
- 2012.7~2014.12 Sapporo Electricity Conservation Campaign



## Issue

- The Japanese government and the power company have requested electricity conservation without setting numerical targets and planning scheduled blackouts.  
⇒ The number of participant in the campaign was decreasing.
- Though electricity consumption in Sapporo is decreasing, energy consumption except electricity, like oil or gas, is also increasing.

Necessity to review the approaching method


# The image of Sapporo which we should aim

We aim to make Sapporo an “Eco-Capital”,  
a sustainable low-carbon society of which can boast to the world.

**Image of society: Resident**

The society, smart lifestyle suitable for Sapporo will have been established.


- Spread of high heat insulating and high airtight house.
- Spread of high energy efficiency equipment.
- Practice of energy saving acts.



**Image of society: commerce and Industry**


The society, environmental protection and economic growth will have been achieved.

- Spread of high energy efficiency equipment.
- Practice of energy saving acts.
- Promotion of environmental industry and development of human resources.



**Image of society: Transportation**

The society, eco-friendly transportation system will have been established.




- Introduction of next-generation vehicles.
- Promotion of environment-friendly driving.
- Accelerating utilization of public transportation.

**Image of society: Energy**


The society, energy generation and surface utilization will have increased.

- Spread of renewable energy equipment.
- Spread of distributed power system.
- Strengthening the energy network.



**Image of society: Green**

The society, we will have been coexisting with lush green.



- Preservation of natural environment.
- Creation of natural environment.
- Effective utilization of natural environment.

**Image of society: Waste management**

Establishing a Sound Material-Cycle Society.

- Reducing the volume of the waste and promotion a recycle.
- Promotion of waste burning power generation and effective utilization of waste heat

