

# Development of 3R Policy for Waste Management: Toyama City

Development of an eco-friendly,  
recycling-oriented city

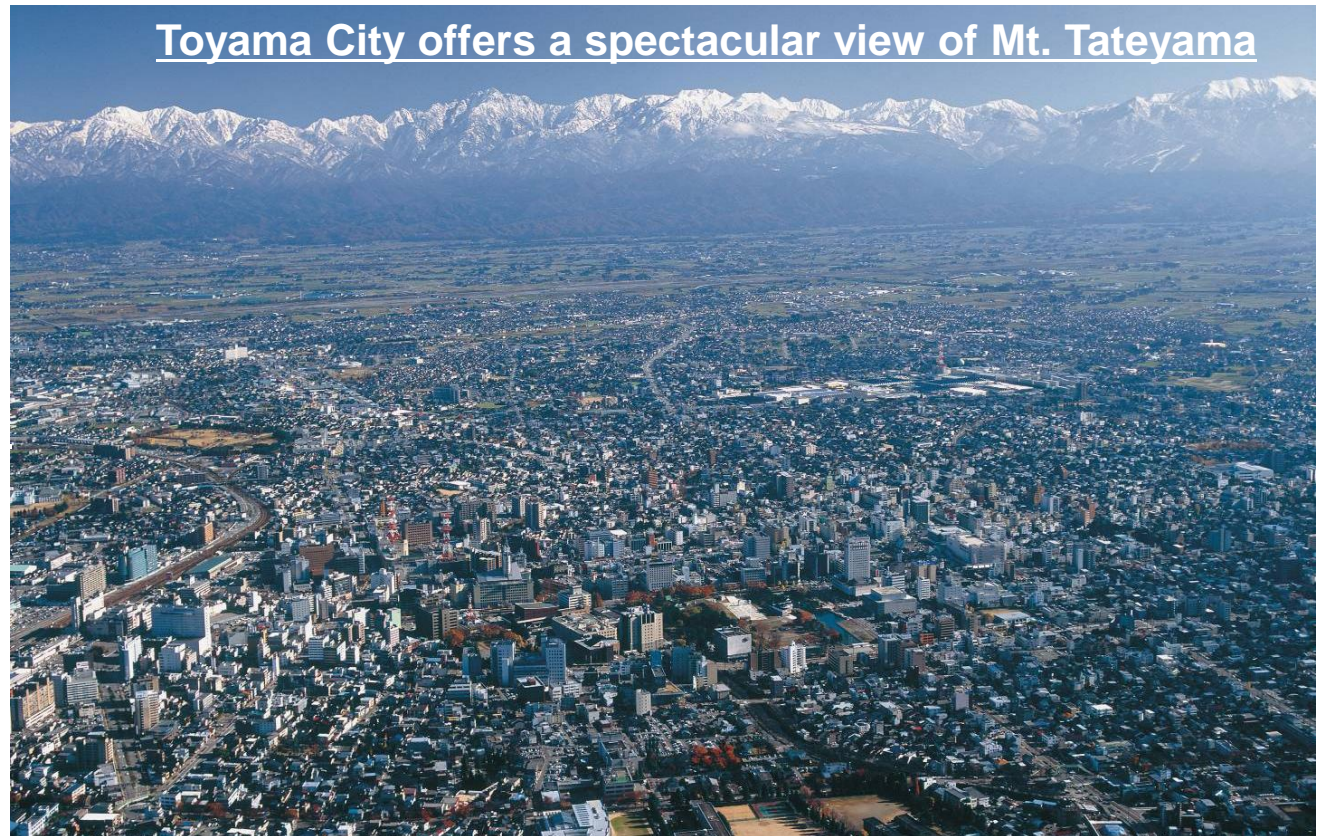
# Overview of Toyama City

- ✔ Population: Approx. 40% of the population of Toyama Prefecture (421,953 according to the 2010 census)
- ✔ Area: Approx. 30% of Toyama Prefecture (1,241.77 km<sup>2</sup>)
- ✔ Rich in nature, the area has a varied topography and terrain ranging in elevation from sea level (Toyama Bay) to 2,986 m above sea level (Mt. Suishodake)
- ✔ General account budget for FY2015: Approx. 168.1 billion yen

## ■ Map of Japan



## ■ Map of Toyama Prefecture



Toyama City offers a spectacular view of Mt. Tateyama

Urban district of Toyama City as seen from above Toyama Station

# Domestic and Overseas Recognition for Toyama City's Environment Policies

## ■ Selection of eco-model cities (Jul. 22, 2008)

Purpose: To select cities working to develop pioneering approaches to achieving ambitious goals, such as delivering a significant reduction in greenhouse gas emissions and promoting the development of a low-carbon society that will set an example for the rest of the world.

### ▶▶ Action Plan for Toyama Eco-Model City Project

First-stage plan: Apr. 2009 to Mar. 2014

Second-stage plan: Apr. 2014 to Mar. 2018



## ■ Selection of eco-future cities (Dec. 22, 2011)

Purpose: To produce innovative best practices and disseminate them throughout Japan and overseas in order to create new industries and revitalize local areas, thereby developing a sustainable socioeconomic structure in Japan.

### ▶▶ Plan for Toyama Eco-Future City Project

First-stage plan: May 2012 to Mar. 2017



## ■ Selection of energy efficient cities by SE4ALL (Sept. 23, 2014)

Purpose: To achieve the three goals set under SE4ALL, a UN initiative designed to promote sustainable energy.

### ▶▶ Plan for Improved Energy Efficiency in Toyama City

Plan: Apr. 2015 to Mar. 2020



Mayor speaking at a UN meeting

## Selected as an *eco-model city* (Jul. 22, 2008)

Promote the development of a low-carbon society that will serve as an example for the rest of the world and lead the way in the international community

### Purpose

- ✓ For Japan to develop into a low-carbon society, the structure of Japanese society will need to be fundamentally changed, including in terms of how people's lifestyles, the city, and traffic should be.
- ✓ Select as eco-model cities those cities that are working to develop pioneering approaches to achieving ambitious goals, such as delivering a significant reduction in greenhouse gas emissions, and support their efforts in order to present a clear and detailed vision of what a low-carbon society should be.
- ✓ Involve citizens and local companies and utilize the potential power of the community to work together in realizing a model low-carbon community.

### Results of selection

Application: Apr. 11 to May 21, 2008; 82 applications were received (from 89 organizations).

#### *Eco-model cities (6)*

Large cities	Yokohama and Kitakyushu
Provincial cities	Obihiro and <b>Toyama</b>
Small municipalities	Shimokawa (town) and Minamata

#### *Transitioning from candidate cities to eco-model cities (7) (Jan. 22, 2009)*

Large cities	Kyoto and Sakai	Special ward in Tokyo	Chiyoda ward
Provincial cities	Iida and Toyota		
Small municipalities	Yusuhara (town) and Miyakojima		

**Criteria:** (1) Set a significant reduction in greenhouse gases as a goal; (2) Lead the way with pioneering efforts and model projects; (3) Demonstrate regional adaptability; (4) Be feasible; and (5) Be sustainable

*The CO<sub>2</sub> reduction plan for the development of a compact city based on public transportation was well received.*



➤➤ Development of an action plan (Action Plan for Toyama Eco-Model City Project) (Mar. 2009)

# Selection of Eco-Future Cities

One of the 21 National Strategic Projects included in the New Growth Strategy (adopted by the Japanese Cabinet in June 2010)

Government projects intended to produce innovative best practices for matters such as environmental protection and preparations for a super-aging society by selecting eco-future cities that are working to develop strategic approaches, implementing support measures (such as increasing related budgets and implementing regulatory reforms) and then disseminating these best practices throughout Japan and overseas in order to create new industries and revitalize local areas, thereby developing a sustainable socioeconomic structure in Japan.

\* Also positioned as part of the Japan Revitalization Strategy, a new growth strategy adopted by the Japanese Cabinet in June 2013.

Five cities, including Toyama City, were selected (earthquake-affected areas were not included) (December 2011).

## Reason for selection

Toyama City has put forward a strategic proposal aimed at developing a compact city based on public transportation (including LRT) that may provide a model for resolving issues common to local cities.



## International Recognition: Energy Efficient City

In recognition of its efforts as an eco-future and eco-model city as well as expected improvements to energy efficiency, Toyama City was **the only city in Japan to be selected as an energy efficient city under a UN initiative called SE4ALL (Sustainable Energy for All)** in September 2014.

### Selected cities

**Toyama City (the only Japanese city selected)**, Iskandar, Manila, Warsaw, Thimphu, Ulan Bator, etc. (13 cities/areas around the world in total)

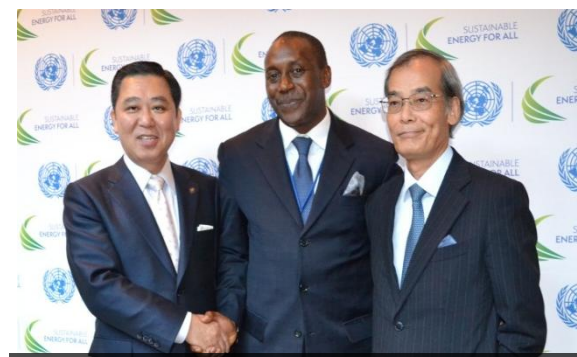
### SE4ALL

Promoted as a priority issue by the UN Secretary-General, Ban Ki-moon, the aim of this initiative is to achieve the following by 2030:

- (1) Ensure universal access to modern energy services
- (2) Double the global rate of improvement in energy efficiency
- (3) Double the share of renewable energy in the global energy mix



The mayor speaking at a UN meeting



Meeting Mr. Yumkella (Special Representative of the Secretary-General for SE4ALL) and Mr. Horie (MOFA Ambassador for Global Environmental Affairs)



# Development of 3R Policy for Waste Management: Incorporation of “Development of an Eco-friendly, Recycling-oriented City” Slogan into Various Plans

## Tangible project

## Promotion of waste recycling

Domestic waste: Sorted collection of various kinds of recyclable waste promoted.

Waste from business activities: Recycling facilities in the city used.



平成27年度 ごみ・資源物 収集カレンダー ④ 四方・八幡・草島・倉場

資源物の収集は、毎月1回、毎月10日(日)の収集日に行われます。 ※上記収集日は、天候により、変更となる場合がありますのでご注意ください。

4月		5月		6月	
日	水	日	水	日	水
1	2	1	2	1	2
3	4	3	4	3	4
5	6	5	6	5	6
7	8	7	8	7	8
9	10	9	10	9	10
11	12	11	12	11	12
13	14	13	14	13	14
15	16	15	16	15	16
17	18	17	18	17	18
19	20	19	20	19	20
21	22	21	22	21	22
23	24	23	24	23	24
25	26	25	26	25	26
27	28	27	28	27	28
29	30	29	30	29	30

◆富山県 保寿館(平成27-29年度) 家庭ごみと資源物の分け方・出し方

資源物(リサイクルするもの) 資源物には、中身の詰まった、飲食したあとに不要となる食品や容器、ペットボトル、プラスチック製容器包装、紙製容器包装(古紙)などがあります。

分別して 決められた「決められた日」の収集日まで 決められた日の朝8時までに 決められた場所へ持ち込んでください。

資源物ステーション

燃やせるごみ(燃焼処理) 燃やせるごみは、燃焼処理場で燃焼処理されます。燃焼処理されたごみは、灰とスラグに分かれます。灰は、埋立地に利用されます。スラグは、コンクリートの原料として利用されます。

燃やさないごみ(資源物の収集) 燃やさないごみは、資源物の収集日に収集されます。燃やさないごみは、資源物の収集日に収集されます。

燃焼場に出さないごみ

燃やさないごみ(燃焼場に出さないごみ) 燃やさないごみは、燃焼場に出さないごみとして収集されます。燃やさないごみは、燃焼場に出さないごみとして収集されます。

Public awareness raised through the provision of collection calendars and brochures.

# Tangible Project: Utilization of Eco-Town Industrial Park

Approved by the Ministry of Environment and the Ministry of Economy, Trade and Industry, this is the first such park in the Hokuriku district and 16th in Japan

Promotion of recycling for all business and domestic waste generated in the city.

## TOYAMA CITY ECO TOWN PLAN

for Developing a City Harmonized  
with the Environment





# Tangible Project: Utilization of Eco-Town Industrial Park

## Recycling of garbage

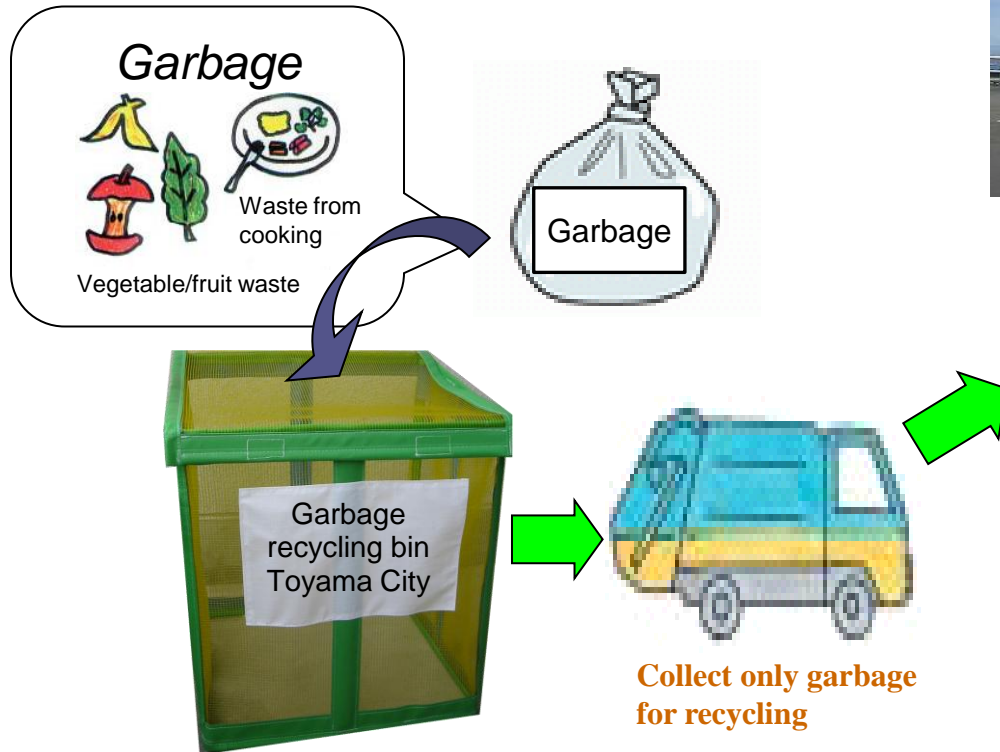
Household kitchen waste also recycled

Amount of waste treated  
in FY2014 (13 districts)  
→ **937 t**

Treatment facility: Toyama Green Food Recycle, Inc.

\* They mainly recycle business waste (from food manufacturers, hotels, and commercial facilities).

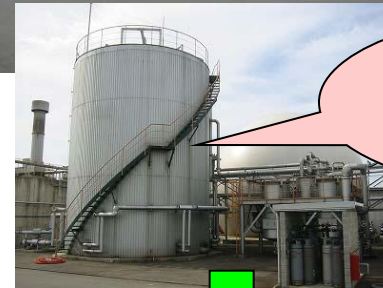
- A total of 13 districts are covered. The area has been expanded since 2006.



Eco-town industrial park



On-site power generation in the facility



Biogas generated from garbage

Garbage collected from many  
• Food manufacturers, and  
• Hotels and commercial facilities.



Sent to nearby plants.  
Used as fuel for boilers.

# Tangible Project: Utilization of Eco-Town Industrial Park

## Recycling of burnable waste

Waste cloth (clothing, bedding, etc.), which was originally treated as burnable waste, now recycled.

Treatment facility: Eco Mind Corporation

\* They accept waste plastics, textiles, paper, etc., from the local community and make refuse paper and plastic fuel (RPF) from them.



### Collect recyclable waste in groups

A bonus is offered to local volunteer groups (PTAs, neighborhood associations, etc.) that collect recyclable waste (4 yen/kg).

Items collected: waste paper, cans, and **clothes**

Delivered to Eco Mind

Produce

### Recyclable waste stations

The city has 8 recyclable waste stations open 9:00 to 15:00 on weekends and national holidays.

Items collected:

Waste paper, paper containers/packaging, cans/bottles, plastic containers/packaging, PET bottles, small home appliances, and **clothes**

Refuse plastic and paper fuel

Used as fuel for boilers, etc.



# Development of 3R Policy for Waste Management: Incorporation of “Development of an Eco-friendly, Recycling-oriented City” Slogan into Various Plans

Intangible project

Awareness raising for citizens and companies.

Preparation and distribution of “Streamlining Places of Business”

**マッタなし、ごみ問題。**

なかなからないごみは、深刻な社会問題となっています。企業にとっても、ごみ問題は大きな経営課題のひとつになっています。このパンフレットは、事業者の方々がごみをどう考え、どう対応すれば良いかを解説したものです。資源と環境の両面的にも持続的成長を達成するため、循環型経済システムの構築を急ぐことが求められており、円滑な経済活動と豊かな生活のために、皆様のご協力をお願いします。



**3Rを進めよう!**


1 発生抑制 (Reduce) 2 再使用 (Reuse) 3 再生利用 (Recycle)

**RRRR**  
Reduce Reuse Recycle

どうしてごみは発生するのでしょうか?

- ① ライフスタイルの変化
- ② オフィスのOA化
- ③ 企業の取り組み
- ④ 新しいリサイクル率

**事業所をスリムに!**



**ごみの減量で地球も事業もコスト削減**

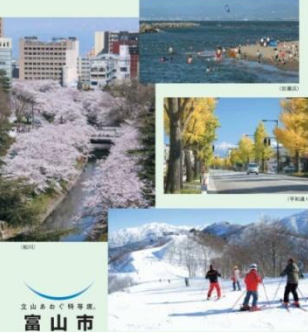
山形県中野町 富山市

Preparation of various brochures and educational materials.

“Beautiful City Toyama,” a supplementary reader for third and fourth grade elementary school students

**美しい富山**

平成27年度版



富山市

10. ごみをへらすためにできることは何だろう

ごみをださないくらしにすることが大切だってわかったね。じゃあ、ぼくたちにできることは何があるのかな。

只で始まる3つの言葉「3R」。ごみをへらすために気をつけることや、わたしたちにできることを考えてみましょう。

わたしたちにできることは何だろう?

- リデュース (Reduce) むだなものを買わない・もらわないようにしてごみをへらすようにすることです。
- リユース (Reuse) 製品を何度もくり返して使うことです。
- リサイクル (Recycle) 使い終わったものや、使えなくなってしまうものを、きちんと分別し、べつものにつくりかえ、もう一度使えるようにすることです。

# Intangible Project: Environmental Education

## 3R promotion schools

- Raising of children's awareness with regard to waste and the environment and encouragement of them to practice this advice at home (promote 3R activities).

### Intended for:

Children at nursery schools or kindergartens as well as first to fourth grade students at elementary schools within the city

### (Education content)

- **Do you know the 3Rs?** —what all of us can do—
- **Digital storytelling with pictures (featuring a refuse truck named “Packer”)**
- **Let's feel some actual recycled products**
- **Let's take a look at a refuse truck**



\* The actual content varies according to the age and grade of the children.

**47 schools in total in 2014**

**(28 elementary schools, 3 kindergartens, and 16 nursery schools)**

## Launched in FY2009

**Children feeling some actual recycled products for themselves.**



**Children taking a close look at the mechanism of a refuse truck.**



# Collaboration with Overseas City

## Improvement of garbage recycle system in Mogi das Cruzes (Sept. 2011 to Aug. 2014)



JICA Partnership Program (local government type)

- Support provided for developing countries
- Led by local governments

Mogi das Cruzes is one of the sister cities with which Toyama City holds international exchanges



- Waste and recyclable waste are not sorted but buried directly instead.
- Recyclable waste is collected by voluntary waste pickers called “catadores” to make a living.

# Collaboration with Overseas City

## Improvement of garbage recycle system in Mogi das Cruzes (Sept. 2011 to Aug. 2014)

[Project objective] To reduce the amount of buried waste.

- Separation of recyclable waste for sorted collection in larger area across the entire city



- Expansion of recyclable waste separation centers
- Organization of catadores and provision of uniforms for them



# Collaboration with Overseas City

## Improvement of garbage recycle system in Mogi das Cruzes (Sept. 2011 to Aug. 2014)

Project objective: To provide environmental education

- Prepare educational materials to promote 3Rs with the support of Toyama City and JICA



- Raising of awareness among children of the important roles played by reducing, reusing, and recycling by likening them to cartoon heroes



- Holding of events that allow participants to learn through experience





# Collaboration with Overseas City

## Improvement of garbage recycle system in Mogi das Cruzes (Sept. 2011 to Aug. 2014)

- Visit Mogi in Mar. and Aug. 2013 and Feb. 2014.

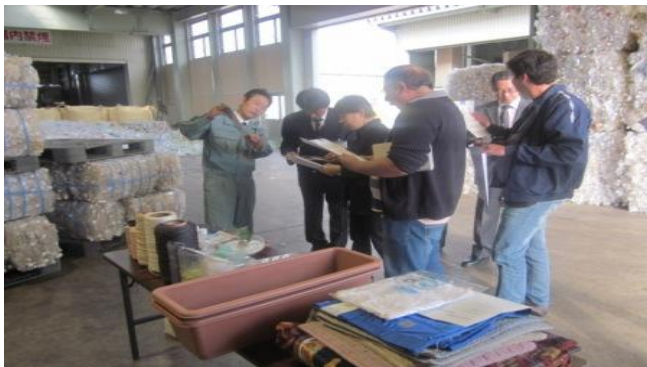


- Visit and provision of advice
- Participate in events



- Training in Toyama in Oct. 2012 and Jul. 2013

- Tour of a recycling facility
- Participate in activities at a 3R promotion school



# Collaboration with Overseas City

## Improvement of garbage recycle system in Mogi das Cruzes (Sept. 2011 to Aug. 2014)

- Visit Mogi (final visit) in Aug. 2014
- Event attended by local residents
- The mayor signs his name to confirm completion of the project



- Approx. 6-fold increase in waste recycling rate  
0.6% in 2012 → 4% in 2014



With the cooperation of JICA,  
a new international exchange between  
Toyama and Mogi for the joint resolution  
of environmental issues was realized.

# Summit Meeting of Environment Ministers Set To Be Held in Toyama

In 2016, a summit meeting of environment ministers is to be held in Toyama City.

In recognition of its past efforts and achievements, Toyama City was selected to be the host city for the meeting of environment ministers at the G7 summit to be held in Japan in 2016. At this meeting, various global environmental issues, such as global warming, climate change, and biodiversity, will be discussed.



Meeting of environment ministers to be held in Toyama City (May 15 and 16, 2016)



Summit to be held in Shima City (May 26 and 27, 2016)



The Hokkaido Toyako Summit in 2008  
(Source: website of the Prime Minister of Japan and His Cabinet)