



Spreading Toyama's FutureCity Projects Globally

Masashi Mori, Mayor of Toyama City

# Tabanan Regency, Bali, Indonesia – Realization of Sustainable Energy

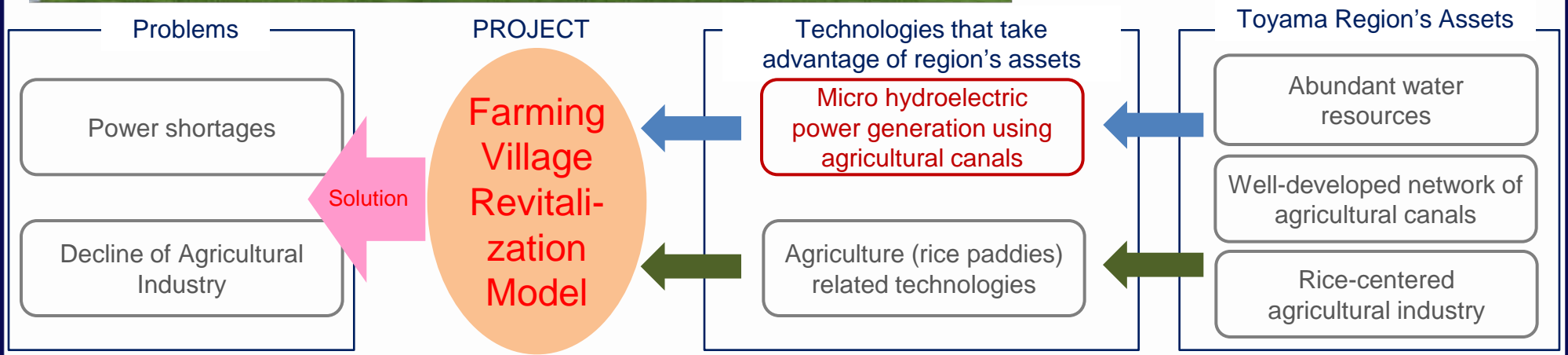
To solve problems such as power shortages and the decline of the agricultural industry, we plan to spread Toyama's **Farming Village Revitalization Model** globally, adapting the “micro hydroelectric power generation using agricultural water” and “agriculture (rice paddies) related technology” projects that took advantage of the Toyama region's assets.



UNESCO World Heritage listed Jatiluwih Rice Terraces in Tabanan Regency, Bali, Indonesia



March 21, 2014. Toyama City and Tabanan Regency, Bali, Indonesia sign Memorandum of Understanding to implement the project



# Tabanan, Bali, Indonesia – Realization of Sustainable Energy

With the project's adoption as a **JICA Project to Support Developing Countries Utilizing Japanese SME Technologies (ODA Project Formulation Survey Project)**, with eventual adoption as an ODA project in mind, surveys will be conducted with the aim realizing the project.



Consideration of suitable sites for micro hydroelectric power generators

## Project Details

Install micro hydroelectric power generation systems in the canals servicing rice paddies in the Tabanan Regency of Bali, Indonesia, to promote access to electricity in areas without electricity, and to boost power supply in areas that already have electricity, with the aim of improving the lives of people in the community.



## PROJECT PLAN

July 2015

Adoption as JICA Project Formulation Survey Project

Nov 2015 -

Installation surveys

Mar 2017

Installation work

Sept 2017

Installation of field trial equipment

# Iskandar, Johor, Malaysia – Collaboration Between GEEAP Cities

Toyama recently signed a Memorandum of Understanding with the Iskandar Regional Development Authority in Malaysia to implement FutureCity Initiative projects, such as micro hydroelectric power generation and public transport, in the region, which, along with Toyama, was selected as a partnership city for the Global Energy Efficiency Accelerator Program (GEEAP), part of the United Nations' Sustainable Energy for All (SE4All) initiative.



**Toyama's technology and know-how**

- Compact City building
- Renewable energy/energy-saving technologies, e.g. micro hydroelectric power
- Development of people-friendly and environmentally-friendly public transport systems etc.



**Problems**

- Rapid urban development increasing burden on environment
- Concentration of population  
Increased traffic congestion
- Development of urban transport networks
- Growth in domestic energy demand  
Energy supply to neighboring Singapore

**By disseminating Toyama's FutureCity projects to this region, we will assist in the improvement of energy efficiency and city planning that takes the environment into account**

Waste separation and recycling in the Brazilian city of Mogi das Cruzes is inadequate, so Toyama is taking advantage of a JICA program to extend Toyama's waste processing technology and personnel exchanges to **help solve the environmental challenges facing Mogi**.



Toyama's technology and know-how

Waste separation and recycling

Environmental education programs



**SOLUTION**



Mogi's Problems

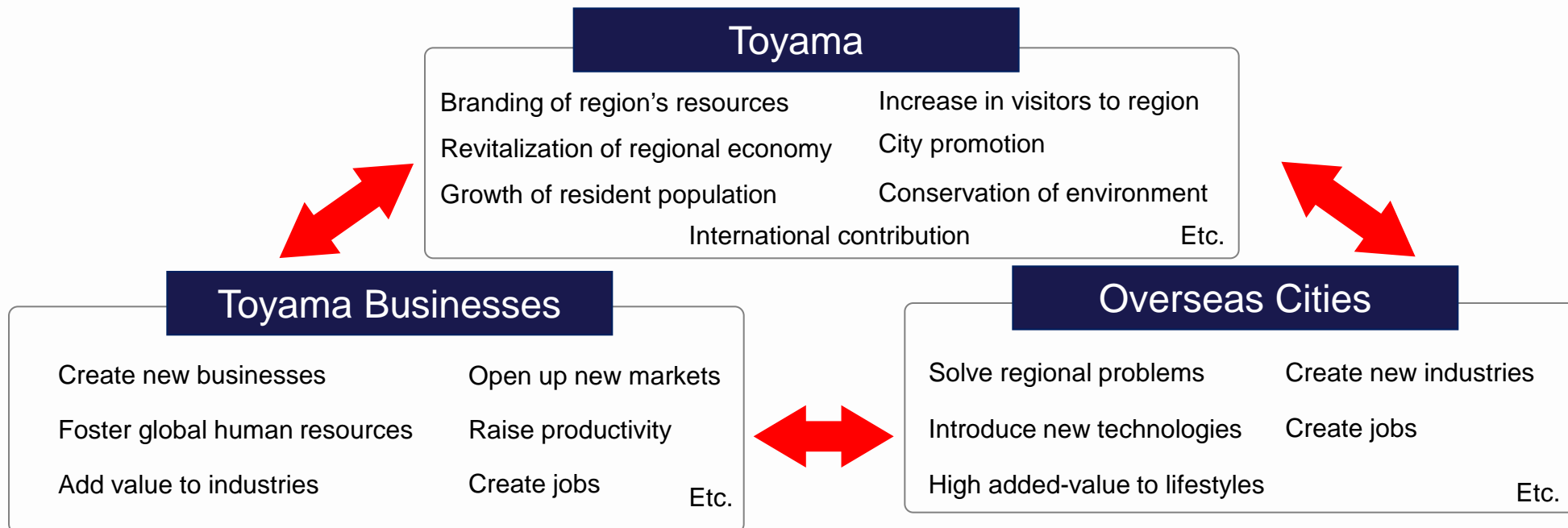
Most waste goes to landfill

Worsening environmental burden

**OUTCOMES**

- Mogi's recycling rate increased **seven-fold increase in two years** from 0.6% (2012) to 4% (2014)
- Environmental education programs conducted in **60%** of Mogi's schools

## Significance and Effect of International Collaboration in FutureCity Projects



Promote industries that take advantage of the regional assets  
for the revitalization of each other's regions

**Build a Sustainable Society** by revamping the appeal of the region and  
conveying that appeal to the world