

A decorative graphic consisting of a thin yellow circle on the left side. A thick black bracket is positioned on the left, and a thick yellow bracket is on the right, both framing a horizontal olive-green bar. The title text is centered within this bar.

# **Community-Based Recycling Activities**

- Brasil
- Panama
- Nonthaburi, Thailand
- Waseda, Tokyo, Japan

Yasuhiko Hotta, Dphil

Policy Analyst

Institute of Global Environmental Strategies

# Member of study group

IGES;

Yasuhiko Hotta

Martin Medina

Makiko Tanaka

Akira Ogihara

Hideyuki Mori

MOEJ

Kazuhiko Takemoto

Hiroaki Takiguchi

# [ Purpose of the Case Studies ]

At the Senior Officials Meeting on the 3Rs, it was identified that multi-stakeholder process as one of the most important keys of best practices in the 3Rs.

- **Purpose of the Case Studies:**



- **Objective of the Study Group:**  
“Effectiveness of multi-stakeholders’ involvement in the 3Rs”

# **Four Cases of Community-Based Recycling Activities**

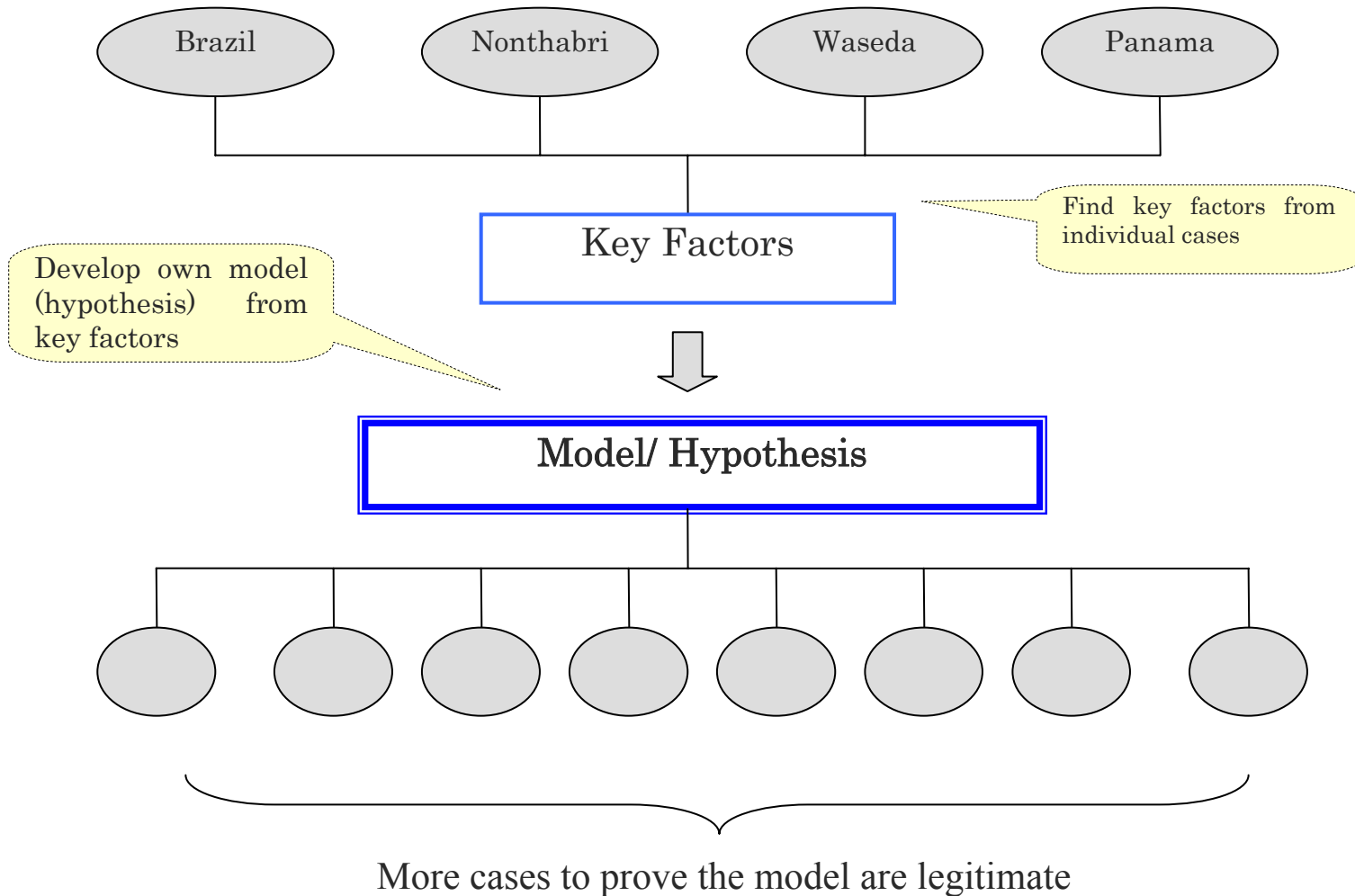
## **Formalization of waste pickers involvement in national recycling activities**

- **Case 1-Brazil**
- **Case 2-Panama**

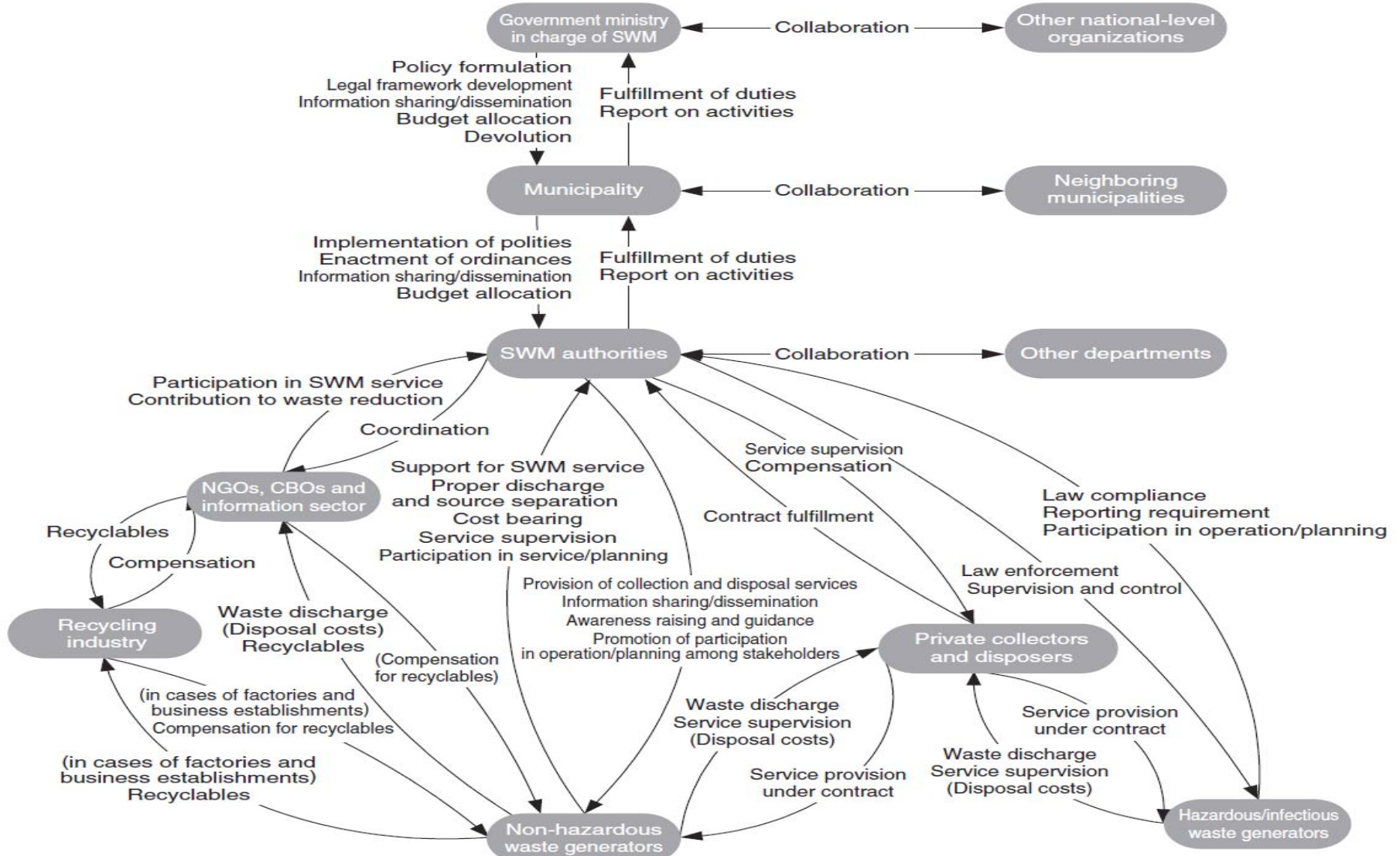
## **Community-Based Recycling Activities**

- **Case 3-Nonthabri**
- **Case 4-Waseda, Tokyo, Japan**

# Framework of Case Studies



# Stakeholders in SWM and 3Rs in developing countries



# Case 1: BRAZILIAN WASTE PICKERS

- **Catadores contribute to the 3Rs by recovering reusable and recyclable materials:**
  - \* **They supply 90% of the materials that are recycled by Brazilian industry**
  - \* **They reduce up to 20% the amount of wastes to be collected, and disposed of**
  - \* **World's third highest recovery rate of Al: 85%**
  - \* **Recover 16% of paper, 21% of PET bottles, and 40% of glass**
- **Traditionally poor, neglected, ignored or repressed. UNICEF: 45,000 waste picker children in 1998, 30 % of them had no schooling**

# [ Key Stakeholders ]

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- **National, State, and Municipal Governments**
- **Waste pickers**
- **UNICEF**
- **Industry (CEMPRE)**
- **NGOs**
- **Civil society**



# Organization of Informal Recycling Activities

- **ASMARE Waste Picker Cooperative**
  - Collect source-separated materials at schools, businesses, residences, office buildings
  - Members earn up to 6 times the minimum wage
  - Members receive training and various benefits
  - ASMARE is now a model for other cooperatives
- **COOPAMARE Waste Picker Cooperative**
  - Collect 100 tons of recyclables / month, at a lower cost than the city recycling program
  - Members earn US \$ 300 / month, twice the minimum wage (half of labor force < US \$150)
- **MNCR**
  - Now the world's largest waste picker movement: 500 co-ops with 60,000 members
  - National Congress of Catadores in 2001 with 1,700 waste pickers as participants
  - Latin American Congress of waste pickers in 2003
  - MCNR leader in organizing a Latin American network of waste pickers

# [ Reaction of government ]

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- **National Program WASTE AND CITIZENSHIP (*Lixo e Cidadania*) was created in 1998**
- **Participation of various stakeholders (NGOs, wastepickers, government, private sector) in local, state and national forums**
- **Stakeholders participate in the preparation of integrated waste management programs (PPPs)**

# Waste and Citizenship: National Forum

- Promote the creation of State and Municipal Waste and Citizenship Forums throughout the country
- “No More Children in Dumps” National Campaign and their enrollment in schools (*Bolsa Escola* Program)
- Closure and restoration of open dumps
- PPPs between waste pickers and local governments
- National Training Program
- Involvement of banks

# Challenges Ahead

- **Globalization → Prices of materials (China and Economic Crises in South America)**
- **Legal gaps and lack of government support**
- **Lack of business skills among catadores**
- **Difficult to organize catadores, slow process**
- **Lack of solidarity, conflicts among catadores**
- **Scarcity of funds for projects**
- **Vulnerable to political changes?**

# Conclusions

- **By involving all stakeholders it is possible to address social, economic, and environmental concerns in a mutually beneficial way:**
  - \* **Jobs are created**
  - \* **Poverty is reduced**
  - \* **Industry secures inexpensive raw materials**
  - \* **Natural resources are conserved**
  - \* **The environment is protected**

# [ Case 2- Panama ]

- A JICA conducted a waste management project in Panama municipality
  - focusing on capacity development for recycling household wastes
  - 2002-2003
  - Kokusai Kogyo Co. Ltd

# Major actors in waste management

- Panama municipality
- Private companies subcontracted by Panama Municipality
- Waste pickers (several informal groups)

# Waste management before reorganization of informal sectors

- ❑ Waste management of Panama Municipality did not cover the whole area
- ❑ Private companies and informal groups covered the areas where Panama Municipality did not cover in complementary manner
- ❑ Private companies and informal groups: collecting metal recyclables (steel, aluminum, copper etc.) and exporting them to Asia
- ❑ Informal groups did not collect solid wastes which do not include recyclables



# [ Integration between formal sector and informal sectors ]

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- Private companies and informal groups were reorganized to be a part of waste management by formal sector, setting up a new cooperative controlled by Panama Municipality

# [ Key success factors ]

- Needs to minimize household wastes due to lack of landfill site and increasing wastes from neighboring municipality
- Complains from local people to Panama municipality
  - Uncollected household wastes
  - Many conflicts over recyclable wastes among the informal groups
- Strong leadership by Panama municipality

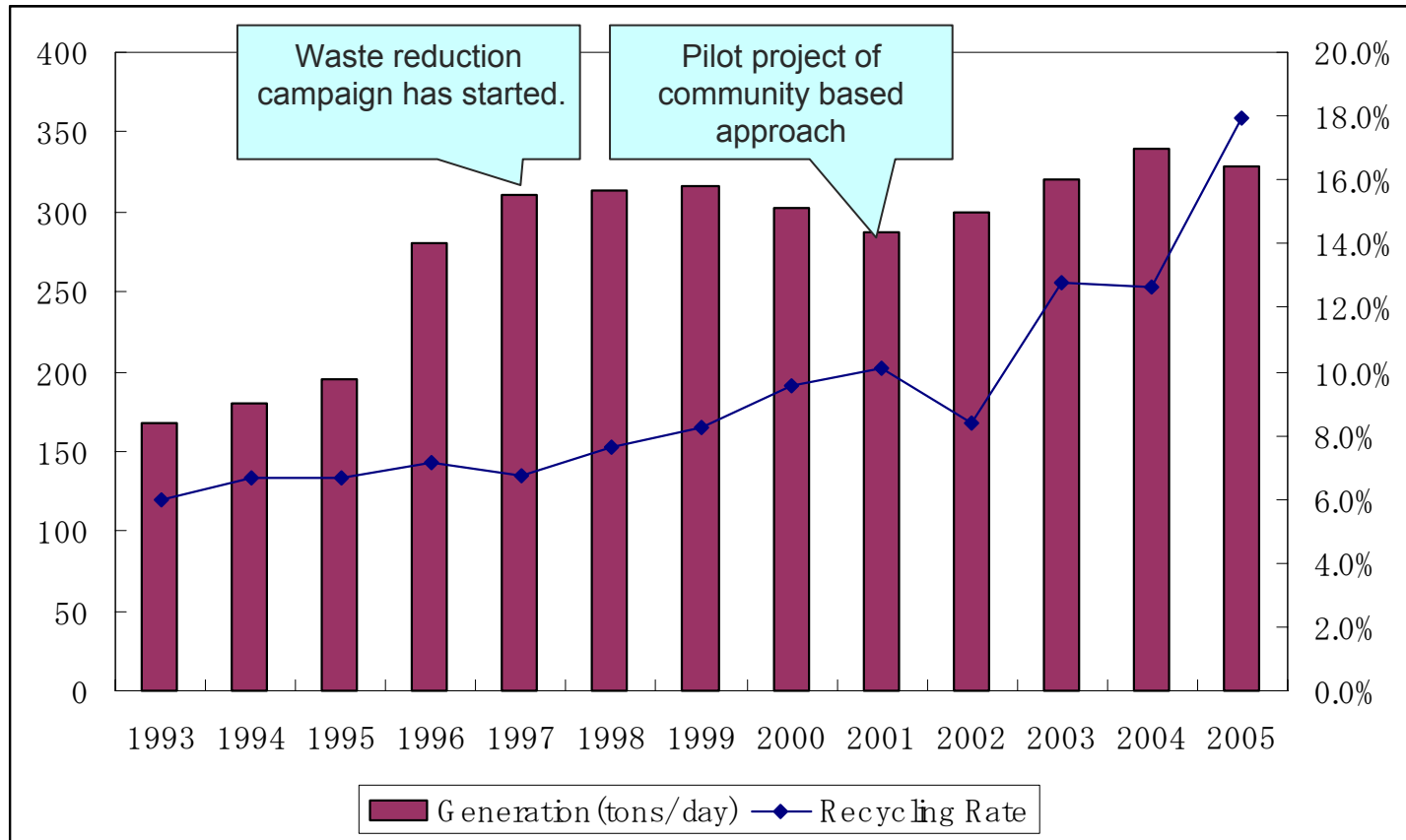
# Benefits from formalizing informal sectors

- Contribution for
  - enhancing proper waste management
  - creation of employment opportunities and stable business operation in the area of waste management
  - more benefits from trading of recyclables

# [ Case-3 Nonthaburi, Thailand ]

- Nonthaburi Municipality
  - Population: 270 thousands.
  - Known as an agricultural area (tropical fruits production)
  - Developing very fast both in economy and population as a suburb of Bangkok.
  - Higher living standard than other region of Thailand.

# Waste generation and recycling rate in Nonthaburi (1993-2005)



Data sited from Pranee Muenthaisong (2006)

Source: Nonthaburi Municipality 2005

# Key activities on the 3Rs in Nonthaburi

- Community-based recycling projects
- Organic waste management (centralized composting facility subsidized by EU)
- Recycling of florescent lump with collaboration of TOSHIBA (supported by Japanese government: JETRO and AOTS)
- Waste collection scheme: clear collection bag, no waste bin on the road, twice a day collection, GPS for waste collection vehicle

# Key-stakeholders of recycling activities

- Municipal officer
- Community and household
- Crew of the municipal solid waste collection vehicles
- Junkshops (Private recycling facility)
- Scavengers and pickers

# [ Background ]

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- Hygiene and health concern caused by nearby waste collection facility
- The scheme has started after the consultation on environmental and health concerns with a municipal officer
- The community has traditionally strong bond among members



# Community Recycling Project

- In 2001, a pilot activity has started under Kitakyushu Initiative.
- Phibulsongkram Village and Suan Klang Muang 3 Village as pilot sites
- Both achieved 20% recycling rate just after 6 months
- The activities continue to be implemented in 2006.

# Field visit of Community Recycling Project

- Community size; 300 people around 3 people in each household.
- Income level is average in Nonthaburi
- Recycling is done mainly by older generation and small shopkeepers as a voluntary activity (40 people out of 300 people).
- Separated recyclables are sold to earn community fund.
- Community fund is used to improve common infrastructure (changing street lumps and pavement of the street) of the community.

# Key for success

- Close and sustainable relations and trust with local governmental officials (every month, there is a consultation session with community)
- Strong presence of community leader
- General awareness of community members on seriousness of waste issues
- This activity not only contributing to improve waste management and recycling but improve community infrastructure by earning community fund.
- Success of this activities started to make the community member confident (starting new project to revitalize the canal near to the community)

# [ Case-4 Waseda, Tokyo, Japan ]

- Waseda Town

- Population: 52 thousands (including 30 thousands students). 450 shops and restaurants
- Known as a university town
- In vacation time, the population reduces to less than half.

# Key activities on the 3Rs in Waseda

- Eco-Summer festival (1996-1999), Waseda Earth Thanking Festival (2000-)
- Close collaboration with TMG in the occasion of charging for collection of commercial waste (1996)
- Stakeholder network using e-mail mailing list among shop owners, recycling machine maker, local governmental officials (both Shinjuku district and TMG), university professor, and students (1997)
- Eco-station using empty shop space (recycling point in the town) (1998)
- Summit of Recycling Commercial Town (1999)
- Community development such as Earth Quake Hazard management

# Key-stakeholders of recycling activities

- Waseda Commercial Town Community
- Mr. Yasui, Chairman of the Community (now MP)
- Shinjuku District
- TMG
- Waseda University
- Students (1->700 for organizing the festival)
- Recycling Machine Makers (used as a showcase of their products)
- Mass media
- Customers
- Professors
- Citizens organizations and NGOs

# [ Background ]

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- Started as a commercial incentive
- Utilizing network of people around Waseda (including distant people) along the development of IT
- Strong personality of Mr. Yasui

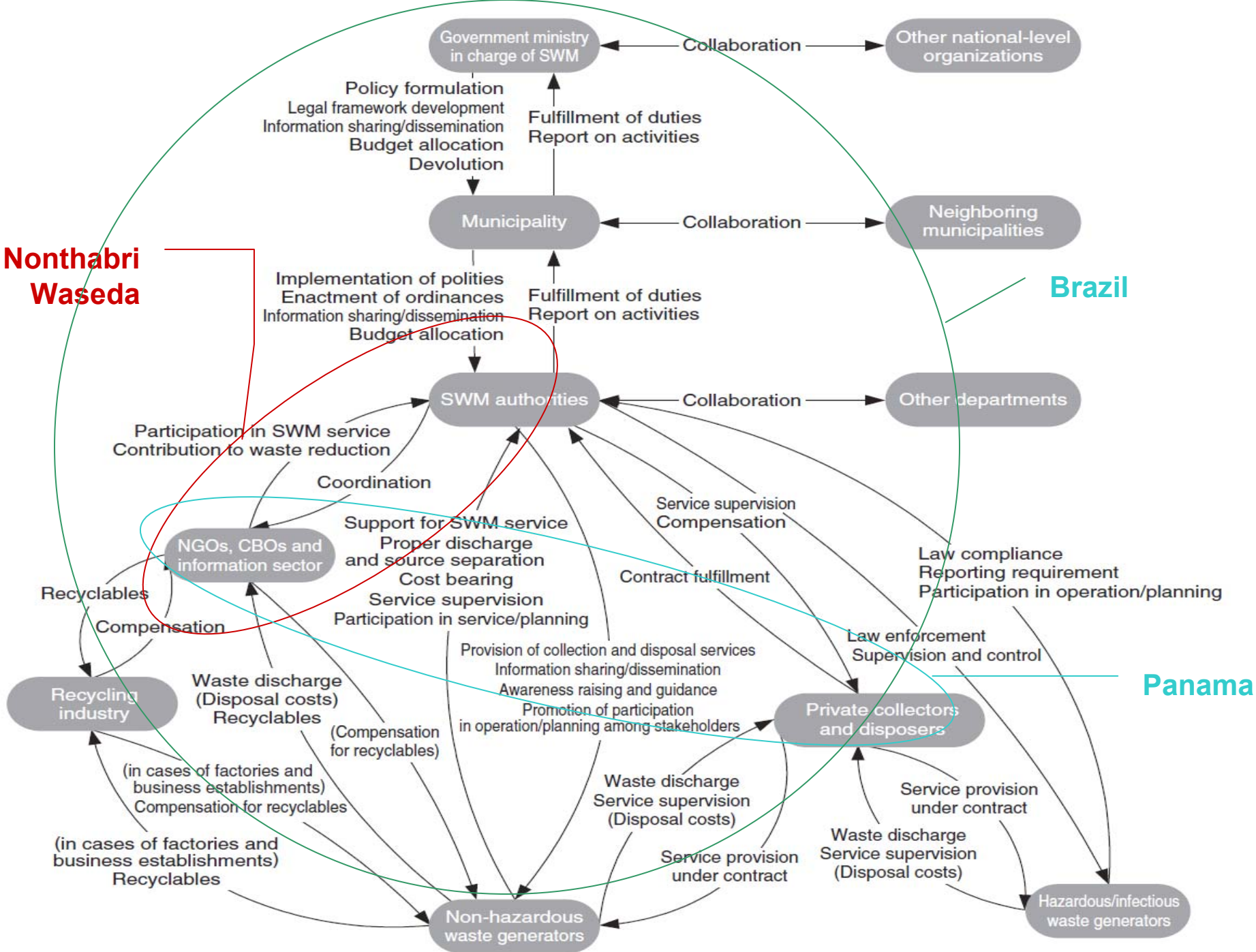
# Community Recycling Project

- In 1996, a festival was started to solve the issue of emptiness in summer time. Very successful.
- Setting Eco-Station as a recycling center in the town.
- Connecting organic waste, compost, farmer, products such as Tofu, and shops under the idea of eco-cycle.
- Zero throw away of PET and can in the campus and the town
- Revitalizing the town through collaboration with university and students



# [ Key for success ]

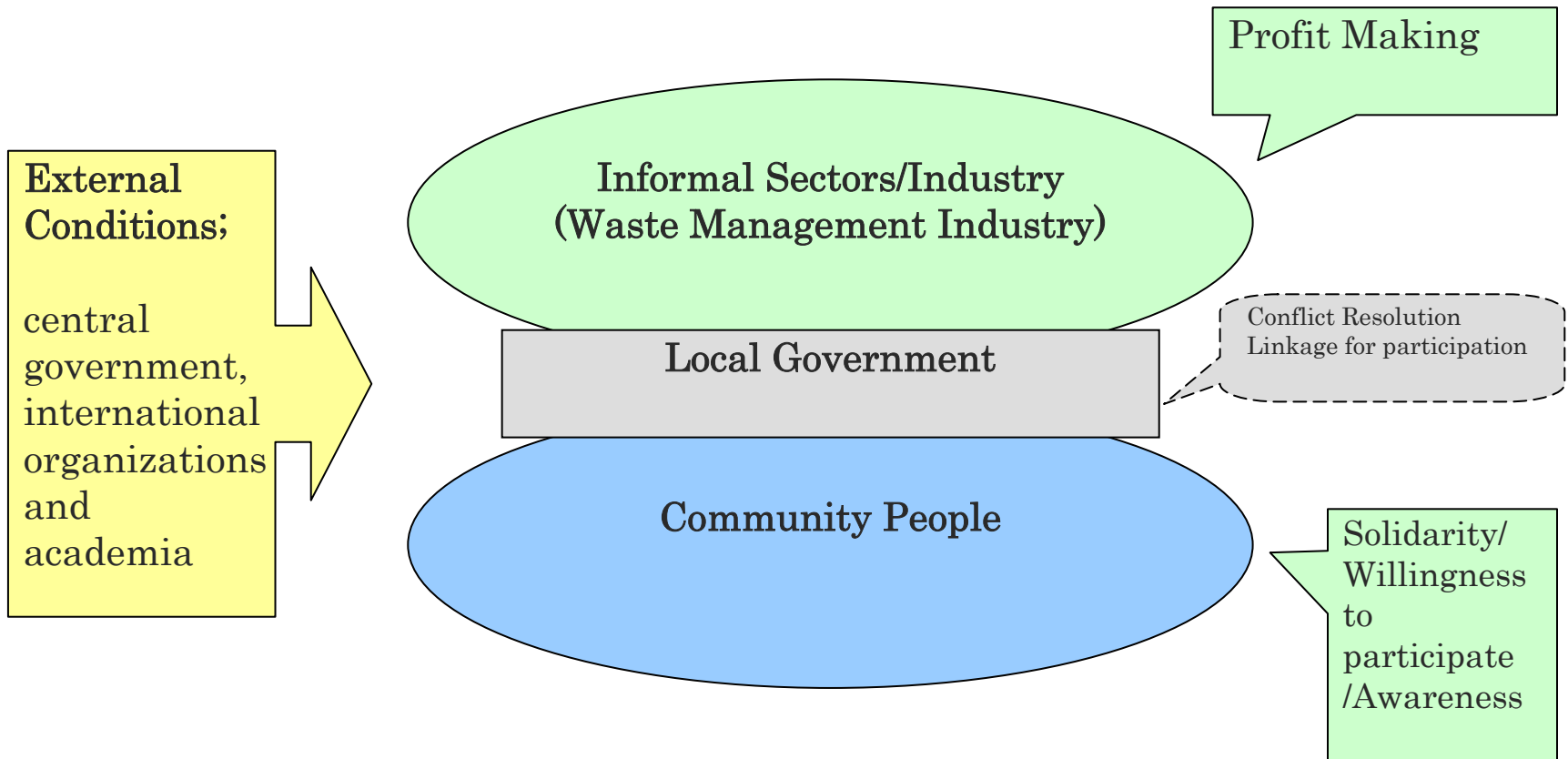
- Close and sustainable relations and trust with local governmental officials (through communication on commercial waste charge)
- Strong presence of community leader
- General awareness of community members on seriousness of waste issues (commercial waste charge)
- This activity not only contributing to improve waste management and recycling but improve the confidence of community members.
- Success of this activities started to make the community member confident (starting new project to revitalize the community)



# Key lessons and issues for community-based initiatives

Category	Brasil	Nonthabri	Waseda	Panama
Willingness to participate	x	x	x	
Economic incentive	x	x	x	
Infrastructure	?	?	x	?
Linkage with municipality	x	x	x	x
Linkage with private business	X (informal)		X (formal)	X (informal)
Linkage with academia or international organizations	x	x	x	?
Sustainability	x	x	x	x

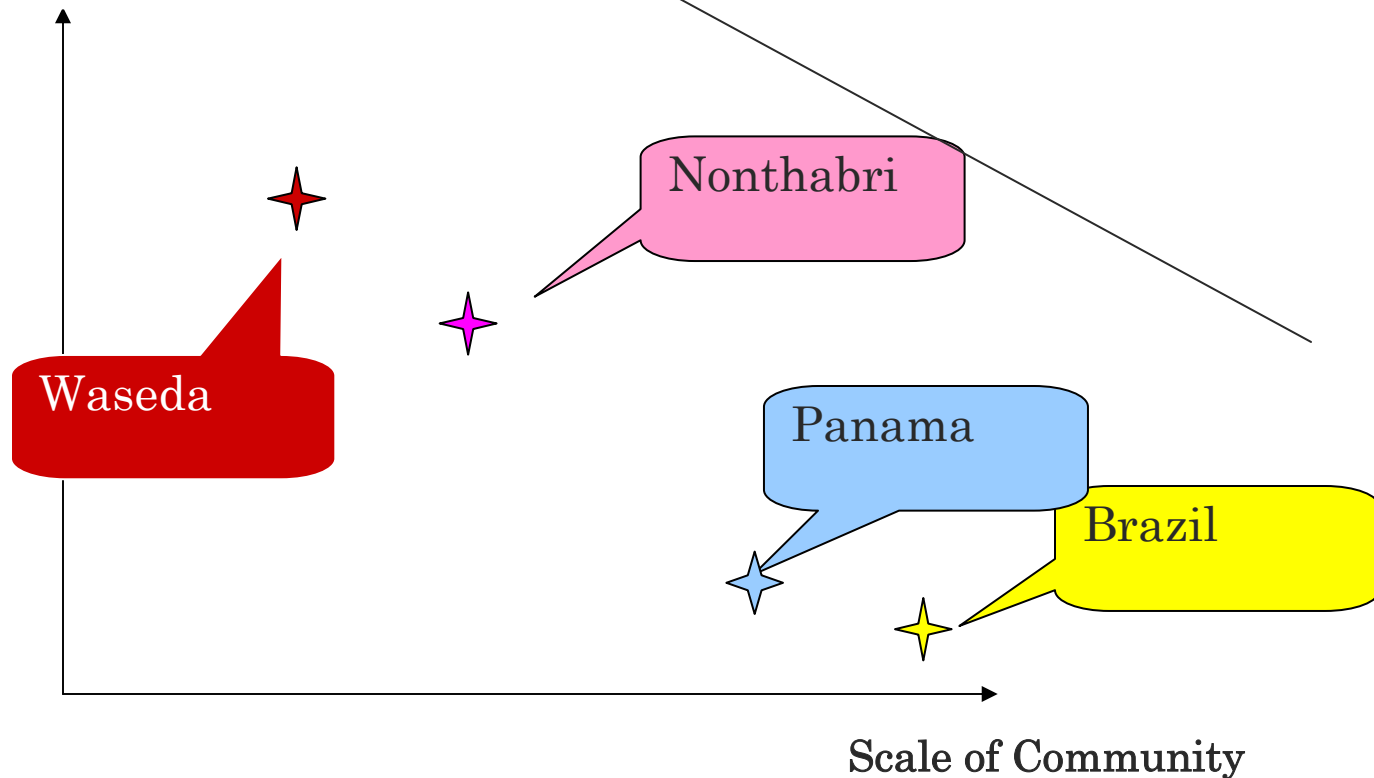
# Model of Multi-Stakeholder Process in 3Rs



# Economic development and multi-stakeholder approach (hypothesis)

Level of Economy  
(GNP per capita)

Development of civil  
society and networking



# Model of Multi-Stakeholder Process in 3Rs

