

The experience of improving household Recycling in Taiwan

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Singapore**



行政院環境保護署
Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)

- **Who are the authorities of recycling?**
- **Policy and Promotion of Zero Waste**
- **Recycling model**
 - **Four-in-One Resource Recycling Program**
 - **NGO work together with household**
 - **Recycling Fund Management Board**
- **Mission Impossible**



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Introduction

Taiwan

Demographic

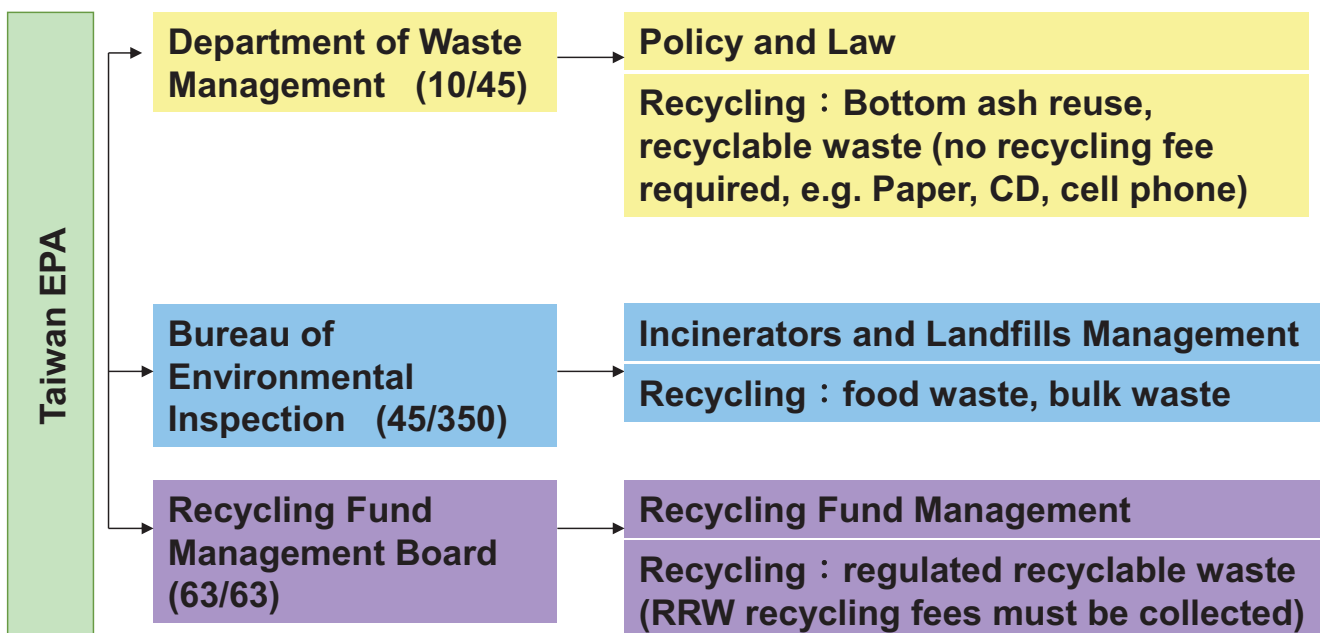
■ Population: 23.2 million

■ Area: 36,000 square kilometers

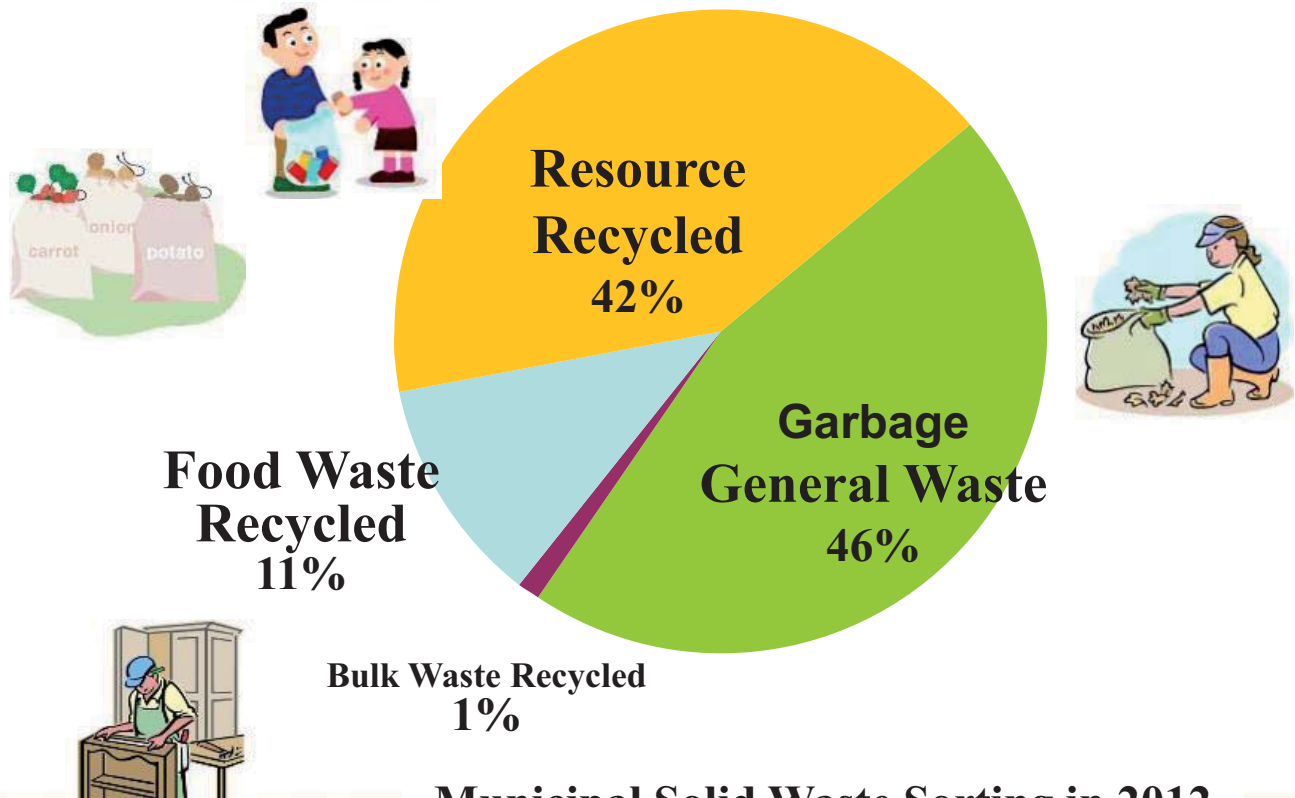
■ Population Density: 641 persons/ km²



MSW Management : Structure and Function



MSW



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Policy and law about recycling

1997: “Four-in-One” recycling program

1998: EPA Recycling Fund

2000: Garbage bag fee system in Taipei City

2001: Promote food waste recycling



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Policy and law about recycling

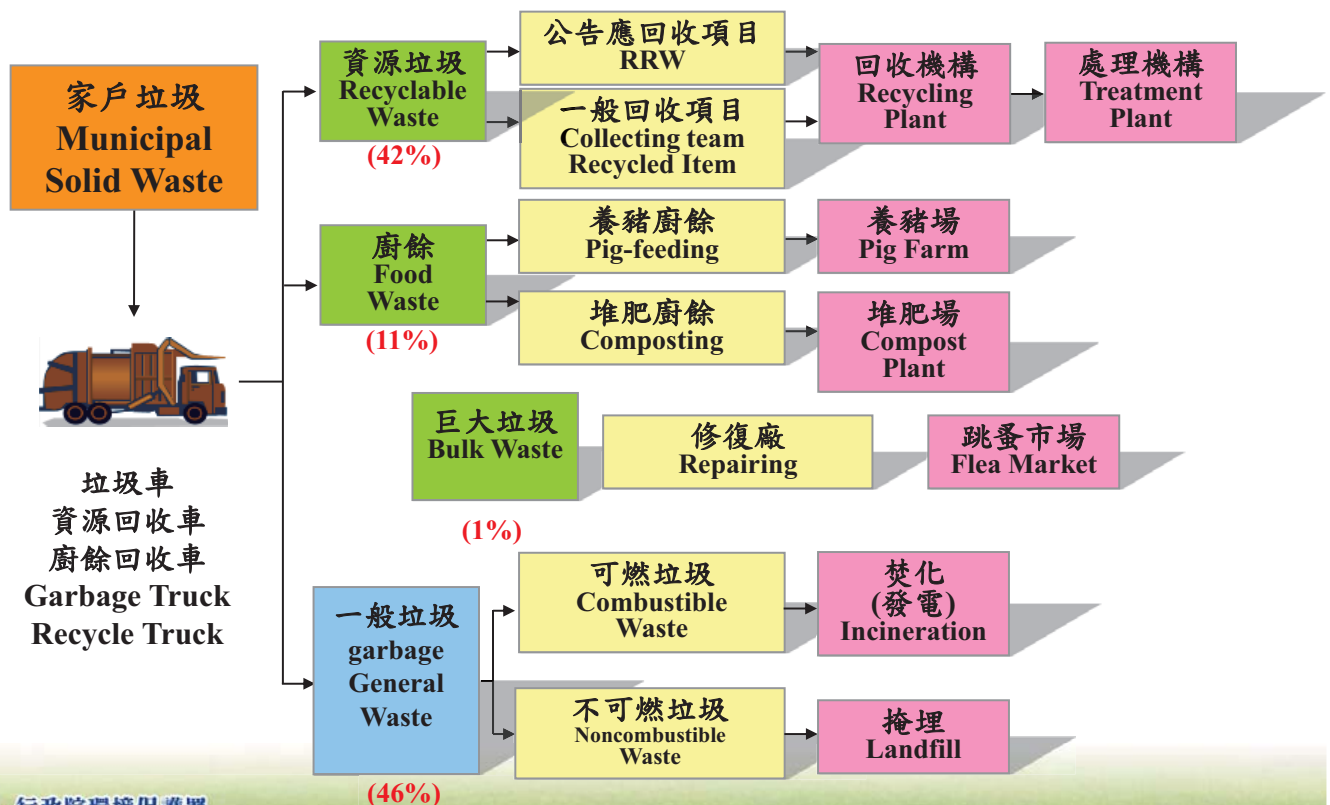
2004 : Proposed "Zero Waste" policy

2005 : **Waste separation mandate WDA 12**
(Sorting three, Taiwan free)

2006 : Incinerators reduced from 36 to 26

2011 : **New Taipei City promoted Garbage bag Fee**

Clearance Structure Sorting three Taiwan free



2004 Zero Waste Policy

- **Actions- To achieve Zero Waste by**
 - Green design, production, consumption, source reduction, recycling, reuse, and recovery to reduce waste
- **Targets - Reduction (baseline 2001:0.9kg)**
- **2007:25%**
- **2011:40%**
- **2020:75%**
- **Food waste recycling is the keypoint**



Waste Disposal Act 5

- **The central competent authority (EPA) shall determine the recycling items.**
- **The local competent authorities may add other recycling items.**

Example: Taipei city government added old clothes, clean plastic bags as recycling items



Waste Disposal Act 5

- EPA determines the following items must be recycled by local government collection Team
 - Paper
 - Iron
 - Aluminum
 - Glass
 - Plastic
 - CDs
 - Cell Phone & Charger
 - RRW



Waste Disposal Act 15

- The manufacturer or importer of the RRW shall bear responsibility for recycling, clearance and disposal.
- The vendor shall bear responsibility for recycling, clearance work.
- The EPA shall officially announce the scopes for the RRW.



Regulated recyclable waste(RRW) Recycling fee must be collected

1.鐵容器
Iron
container



2.鋁容器
Aluminum
container



3.玻璃容器
Glass
container



4.紙容器
Paper
container



5.塑膠容器
Plastic
container



6.農藥廢容器
Pesticide
container



7.乾電池
General battery



8.機動車輛
Automobile\Motorcycle



9.輪胎
Tire



10.鉛蓄電池
Lead-acid
battery

11.資訊物品
Electronics
IT object



12.電子電器
Household
appliance



13.照明光源
Fluorescent
lamp



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Waste Disposal Act 12

- The central competent authority (EPA) shall determine regulations for transporting, **sorting**, storage, discharge, methods, equipment and reuse of general waste.
- 2005: Staff of EPA/EPB check garbage bags for compliance (**food waste and resource waste must be sorted**)



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CHECK GARBAGE BAGS



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Four-in-One Resource Recycling Program 1997



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慈濟基金會

NGO-Buddhist Tzu Chi Foundation



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1990 Don't clap Use your hands to recycle



Also NGO



Protesting Against



But also recycling



Our community



me



Tuesday and Saturday



Monday and Thursday



MONEY



Recycling Industries



Municipality



Bees



Waste Disposal Act 23

- **Prior to March 28, 1997, surplus fees related to joint recycling, clearance and disposal organization established by responsible enterprises accordance with WDA shall be allocated to the Resource Recycling Management Fund.**
- **1997 recycle Fund surplus NTD 5.3 billion**



Annual budget

Trust fund : NTD 5.5 billion

Non-business fund : NTD1.3 billion

Fund surplus(2013)

Trust fund : NTD 8.3 billion

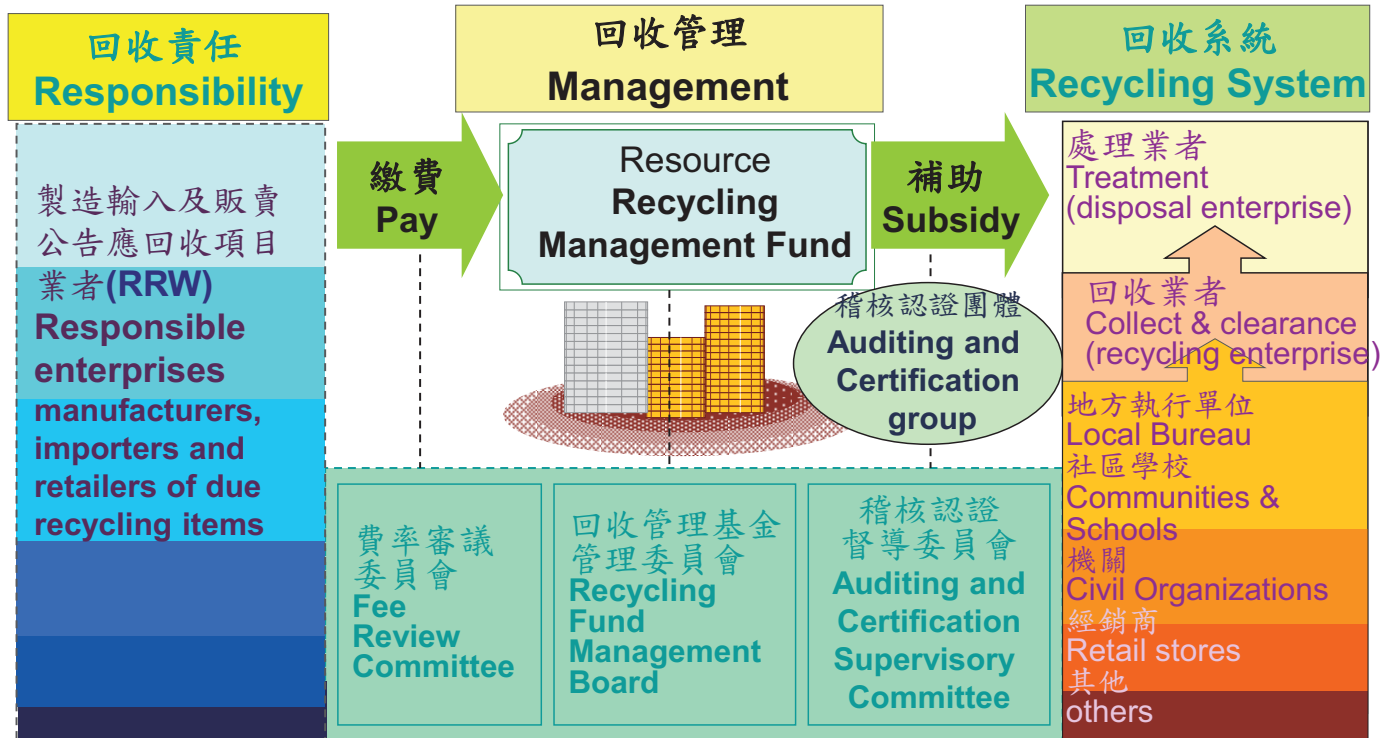
Non-business fund : NTD3.3 billion

80% of income goes to Trust Fund

20% of income goes to Non-business Fund



Recycling Management Fund Function & Operation



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Mission Impossible

Our Mission for Zero Waste

2001 0.9 (0.898)

2011 0.54 (0.427)

2020 0.225 (?)

kg / per capita per day

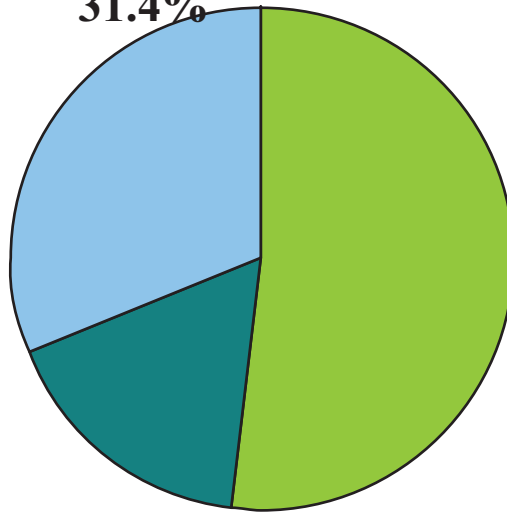


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Recycling Fund Management Board MSW Sorting



garbage
General Waste
31.4%



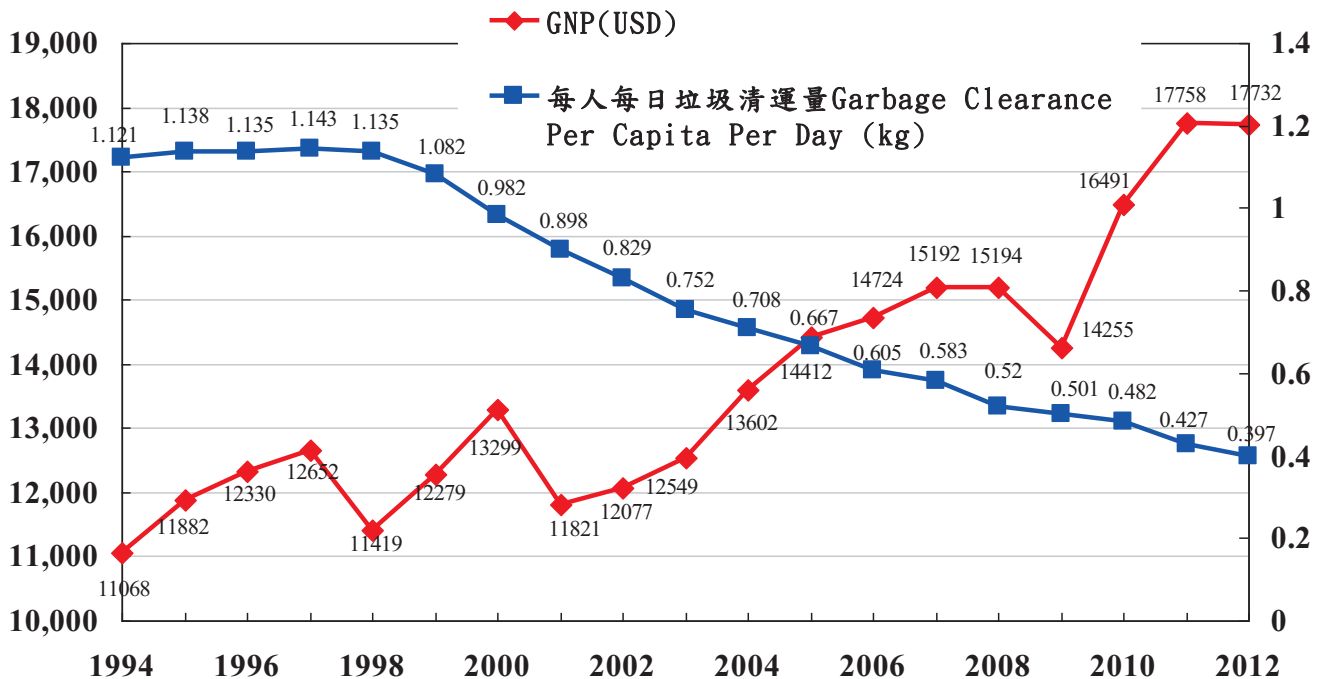
Resource Recycled
51.8%



Food Waste Recycled
16.8%

The weight measured of our office garbage sorting from Feb. to Dec. in 2011

Garbage Clearance V.S GNP





To be or not to be?

That is the question.



To recycle or not to recycle.

That is business or a fine.



A scenic view of a mountain range with green hills and a winding road. The hills are covered in lush green vegetation, and a road with a guardrail curves through the landscape. In the background, more mountains are visible under a clear sky.

Did You Recycle Today?
Thank You for Your Attention

Recycling Fund Management Board
Environmental Protection Administration
<http://recycle.epa.gov.tw>