Case 7: Pusan Metropolitan City

Food Reduction Program Via participation of community group

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1. Profile of Pusan Metropolitan City

Population: 3,879,000
Land Area : 749km^2
Budget : US$ 3.8 billion (2000)
Location
Pusan lies between 128° 45′ 54 ″and 129° 18′ 3″ east longitude, 34° 23′ 36″ and 35° 23′ 36″ north latitude. Pusan is in the same latitude as Tokyo
Climate
Pusan is in the Temperate Zone with a mild maritime climate. The average temperature of Pusan is 14° C Pusan is cool in the summer and warm in the winter.
Economic Activities
Retail, trade, services, port logistics
✲ Container Handling Volume: 6,440,000 TEU(200), the 4th in the world

2. Project Description

1) Situation before starting the project

The rapid growth in industry and population of Pusan Metropolitan City has made waste management a challenge. Most food waste had been landfilled along with other domestic solid wastes by 1994 when this project was initiated. Food waste composed 31% of the total waste production in 1994.

Daily Production and the Management of Waste in 1994

(Unit: ton/day)

Waste Production	Recycled	Amount Treated		
		Subtotal	Landfilled	Incinerated
4,600(100%)	985(21%)	3,615(79%)	3,546(77%) ***Food waste:*****1,426(31%)**	69(2%)

2) Initiation of the project

As expansion of landfill sites faced public opposition because of a noxious smell and leachates resulting from the decomposition of organic waste, the city government strove to seek out the way of food waste reduction. The food waste recycling project was started by the woman's association of the Guseo Sunkyung Apartment complex in Guemjung-Gu of Pusan Metropolitan City under the guidance of Mr. Bae Myung-chang, the president of the Republic of Korea Red Cross-Pusan Chapter.

3) Processes of the project at the first stage

EM ferment was provided to be added in home food waste disposal chamber. Fermented food waste was collected every week. It was transferred to farmhouses and used as an organic fertilizer.

4) Goals

Zero carrying in of food waste to landfill sites and incineration plants and utilization of food waste as a resource

5) Objectives

- Changing eating habits
- Saving cost for constructing the waste treatment infrastructure of the city (Wasting food costs over US$6,500 million annually for nation-wide)
- Reducimg the 2nd environmental pollution posed by incineration and landfill leachate
- Improving citizen's health by providing them with organic agricultural products cultivated by compost of food waste
- Supporting livestock industry by improving feed quality

6) Community Participation

The project was started up by voluntary participation of the women's association of one apartment complex under the guidance of the president of the Republic of Korea Red Cross-Pusan Chapter.

7) Progress

This successful project was distributed to other communities by educational presentations. The movement was gradually expanded to the whole society of Pusan Metropolitan City. 45%(495,000 homes) of the total 1,100,000 homes are currently participated in this project.

The number (percentage) of homes participating

1995	1996	1997	1998	1999
150,000(13.6%)	224,000(20.4%)	292,000(26.5%)	350,000(31.8%)	500,000(45.5%)

3. RESULTS ACHIEVED

This project has contributed to

1) Changing the eating habits of the citizens
2) Saving food expenses by planned menu and planned purchasing of the food material.
3) Reducing the amount of carrying-in waste to landfill sites and incineration plants by removing the food waste.

Year	1995	1999	The amount reduced:
Amount carrying-in	2,899 ton/day	1,949 ton/day	**950 ton/day**

4) Improving the water quality of the leachate.

Year	1996	1997	1998	1999
Quality(ppm)	34,276	25,299	10,192	5,905

5) Reducing the risk of the 2nd pollution

4. Importance of the project

- Voluntary participation of the local community and intimate cooperation between the city government and comminity group
- Extending landfill site use by reducing the amount of the waste production
- Increasing incineration efficiency by removing wet organic waste
- Decreasing the 2nd pollution of underground water caused by leachate
- Preventing pollution and acidification of soil

5. Applicability of the project in other communities

It can be applicable and recommentdable to any communities.