

White Pollution Control

Shanghai's Solution

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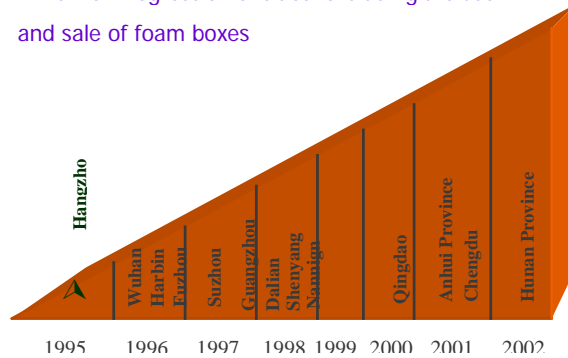
Background

White pollutants—primarily consisting of foam boxes, plastic bags, plastic cups, and other plastic materials—did not draw enough popular attention until 1995. Presently, the presence of white pollution along railways, rivers, and on any corner of city streets, have made people realize the severity of the problem.

Generally speaking, white pollution is a visual problem which poses more threat to the city's appearance than to its environment. A city notorious for this kind of pollution will have its image tarnished and consequently, the city's tourist industry will suffer..

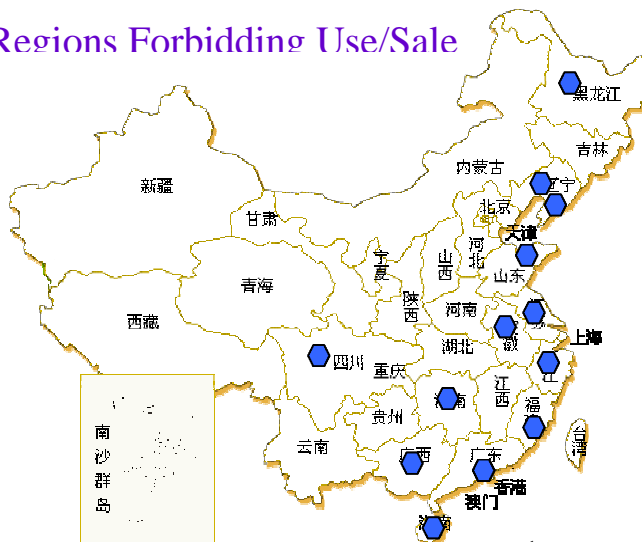
Many cities have taken measures to curb white pollution. Forbidding the use and sale of white pollution is now a widely used policy. In September 1995, Hangzhou became the first city to stop using disposable foam boxes.

Timeline: Progression of cities forbidding the use and sale of foam boxes

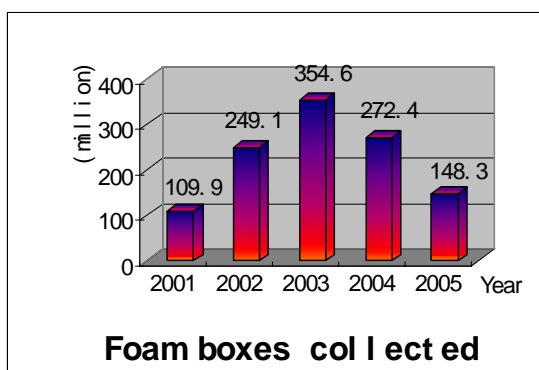


Subsequently, a series of cities and provinces followed suit, taking similar action. Among them were: Wuhan (Sept. 1996), Harbin (Nov. 1996), Fuzhou (Dec. 1996), Suzhou (June 1997), Guangzhou (Sept. 1997), Dalian (Jan. 1998), Shenyang (June 1998), Nanning (Sept. 1998), Qingdao and Hainan province (May 2000), Anhui province (Sept. 2001), Hunan province (Mar. 2002).

Regions Forbidding Use/Sale



Some cities took further action to prohibit the use of undegradable plastic bags or bags less than 0.06 mm (Shenyang) or 0.025 mm (Hainan province) thick. In Beijing, citizens were required to seal their plastic bags to prevent its contents from scattering everywhere. In Sept. 1998 a group of organizations—including the China's National Environmental Protection Bureau, Ministries of



Note: Statistics of the first half year in 2005 only

Construction, Communications, Railway of the PRC, and China's National Tourist Bureau—jointly issued a policy to abandon the undegradable, disposable foam boxes along main communication lines, valleys and scenic spots.

Since Jan. 1999, the State Economic and Trade Commission has passed a couple of policies to outlaw the manufacture, use and sale of foam boxes.

Problems

Do those policies work? The results vary from city to city. Some small cities have succeeded in their white pollution control, but cosmopolitan cities such as Beijing and Guangzhou have encountered quite a few obstacles and consequently haven't achieved satisfactory results.

Plastic materials have their advantages being used as convenient containers or packaging materials.

Visual pollution



Plastics bags caught on public trees: like flags flying in the wind

The lack of environmental awareness amongst the citizenry contribute to the adverse impact caused by plastic materials; they throw away used foam boxes everywhere, unaware of the affect on their city's image and environment.

Using substitutes such as paper or degradable plastic materials cannot eliminate white pollution. No material can be degraded within the required retention period. In this manner, the policy eliminates "white pollution" only to create "grey pollution" or something else.

Policy makers in the Shanghai government have decided, after much deliberation and research, to adopt a policy of extended producer responsibility (PER) to solve the problem of white pollution. Producers should be responsible for their used foam boxes. If they do not possess the ability to collect and recycle the boxes, they have to pay the Shanghai City Appearance and Environmental Sanitation Administrative Bureau a fee for treatment. The Bureau will then deal with the waste.

Who collect the used foam boxes?

- Mainly done by environmental sanitation workers
- Any person can earn from collecting

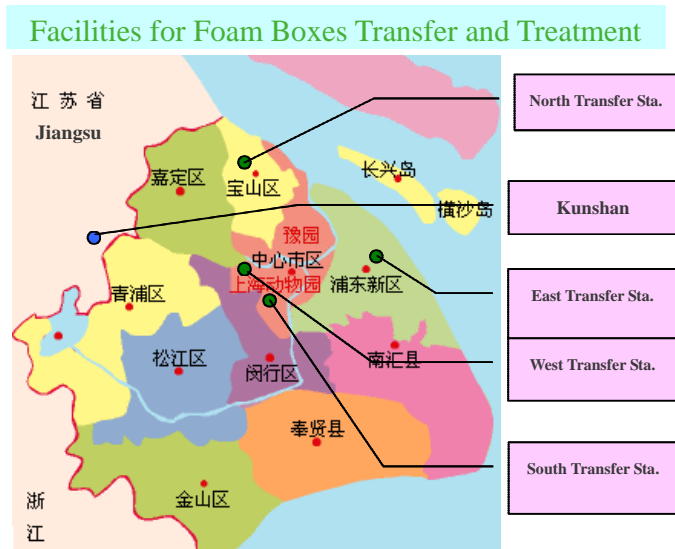


Sanitation workers are the best candidates for collection. When they conduct street cleaning and dustbin washing, they routinely sort the one-cent foam boxes out of the municipal solid waste (MSW). This is both economically and administratively beneficial. Recyclable material collectors also collect foam boxes. One collector is said to have earned RMB 900 a month from the foam boxes. This translates to 90,000 foam boxes that month, or 3,000 per day.

The waste flow

All the districts in Shanghai have selected temporary places to store collected foam boxes. There are waste collecting rooms in residential areas, spare rooms in public toilets, waste transfer stations and so on. Foam boxes there are piled and packed into 600 boxes per bale.

The environmental sanitation administrative dept. in every district does the statistics and then transports the waste to the four specified transfer stations operated by a foam box treatment plant.



The bales are then transported to the plant, which is located in Kunshan, a small city near Shanghai.

Temporary storage



600 boxes packed in to one bag

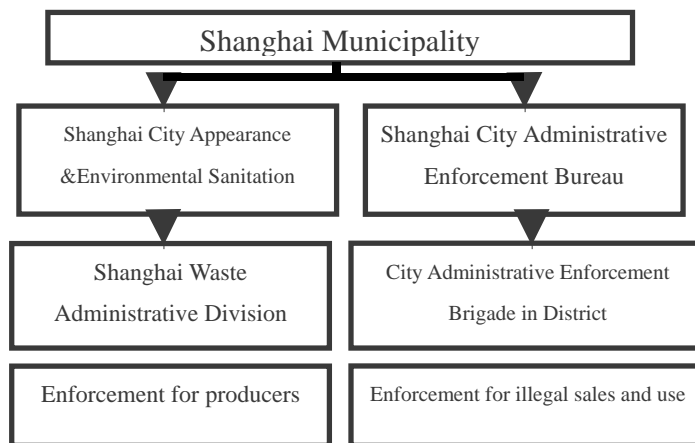


Recycling used boxes to make new products

After weighing, scraping, washing, drying, liquating at high temperature, extruding and granulating, the foam boxes are recycled and can be reproduced into useful plastic commodities, such as plastic chairs, rulers, covers, etc.

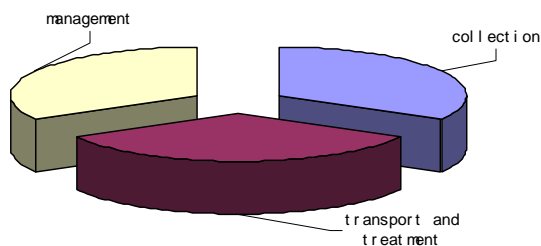
Fund management

Enforcement network



Foam box producers have to pay 3 cents / box to Shanghai Waste Administrative Division.

One cent is for those collectors, one cent for transportation and treatment, and the other one for administration, management, enforcement and educational programs (public participation and information). Shanghai Waste Administrative Division is responsible for fund management.



- One third is used to collect foam box (buy-back)
- One third is used to transport and treat
- One third is used as management cost

The results

- Since the regulation was implemented on 1st Oct. 2000, some 900 million foam boxes, (about 70% of the total quantity) have been separately collected and recycled.
- Visual pollution has been controlled effectively.
- The national forbidding policy about foam boxes will be revised in the near future in response to the unsatisfactory practices in some cities.
 - The EPR policy is widely accepted
 - Waste administrators in Shanghai have taken into consideration electric and electronic wastes, package waste, etc.

Statistics on Collections

Year	Collected foam boxes (million)	Collected foam boxes (tons)	Recycled Products (tons)
2001	109.9	714	357
2002	249.1	1619	810
2003	354.6	2305	1152
2004	272.4	1771	885
2005	148.3	964	482