



**WEEE Recycling and Legislation  
Development in China**

**ELECTRONICS GOES GREEN 2004+**

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# High-Tech trash of WEEE to China

1. **“Exporting Harm”**: released by BAN and SVTC in Feb, 2002.
  2. **50-80% of WEEE collected in the US were exported to China.**
    - ✓ The labour costs are very low
    - ✓ Environmental and occupational regulations are not well enforced
  3. **The WEEE recycling observed in Guiyu Town is seriously polluting the environment and very damaging the human health.**
  4. **WEEE issue has been heated up in China.**
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**Using 19<sup>th</sup> century technology to “recycle” 21<sup>st</sup> century waste!**



# What is happening in GuiYu now?

---Discovered by Greenpeace China in early 2004



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# New tragedy in Tai Zhou



- ✓ WEEE from Japan and Korea
- ✓ Mixed in the metal scraps and plastics

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# WEEE generation in China?

TVs, refrigerators and washing machines entered Chinese families in the middle of 1980s. If a life time of 10-20 years is assumed, from 2003, there will be at least

**5,000,000 TVs**

**4,000,000 Refrigerators**

**6,000,000 Washing machines** come to end of life stage.



China has 35 million PCs and 0.19 billion mobile phones. They entered Chinese families in the middle of 1990s and have very short life time(1-3 years).

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**WEEE represents only a very small percentage in MSW (0.02%).**

**Discarded PCs are 0.06-0.1 million tons and monitors 0.03-0.05 million tons.**

**Where have they gone?**

# Consumer behaviour

What do the Chinese people do with their 15 years old TV?



**Consumer**

1. Sell it (second hand market)
2. Give it to relatives
3. Store it at home
4. Discard it (no separated collection system)



**Street collection**



**Transportation**



**Second hand market**

# Second hand electronics market



# Response from Chinese government



Apr, 2002

- o First meeting between government and industry (A working committee on WEEE joined by several ministries has been set up.)

Aug, 2002

- o Wide ban on import of WEEE (21 categories)

(Ongoing)

- o Chinese customs have seized several cases of illegal import of WEEE.

Aug, 2003

- o SEPA promulgated a notice on strengthening environmental management of WEEE
  - 1) Reporting: WEEE generation, collection and treatment
  - 2) Non-environmental friendly WEEE recycling is prohibited.
  - 3) WEEE recycling plant needs special license.

Jan, 2004

- o Pilot take back and recycling system in Zhejiang Province and Qingdao City

# WEEE like legislation

## National Development and Reform Commission

- o Shared financing responsibility
- o Various methods for WEEE collection
- o Support policy to WEEE recycling industry
- o Role of local government
- o Environmental information to public on WEEE take back and recycling

**Draft version was ready in 2003.**

**Expect year for adoption: 2005/6?**

# RoHS like legislation

## Ministry of Information Industry

- o Scope: IT and telecommunication equipments
- o Product design: environment, health impacts, eco-design
- o Ban of hazardous substances (same as RoHS)
  - ✓ Exemptions are not pointed out
- o Product marking: hazardous substance contained, recycling label
- o Product safe using period

**Draft version published online since Aug, 27<sup>th</sup>, 2003**

**Expect year for adoption: 2004**

# Response from Electronics Industry

## Great challenge from EU WEEE & RoHS Directives:

- Financing, product design and supply chain impact
- First 6 month of 2003, **18 billion** Euros of electronics products were exported to EU which represents **18.9%** of total.



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## Position of Chinese electronics Industry:

The financing of WEEE take back and recycling need to be socialized. Producers should not be the only party to “pick up the bill”.

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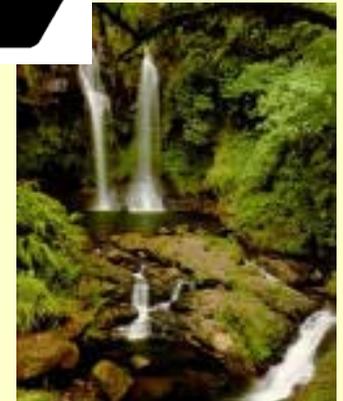
Seven mobile phone manufacturers (Motorola, Nokia, Samsung and Haier) have initiated a mobile phone take back campaign in Nov,2003.

# Japanese Model or European Model?

|                                             | Japan (SHARL)                                                                                                                  | EU (WEEE)                                                                                    |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Scope</b>                                | Four large home appliances                                                                                                     | 10 categories                                                                                |
| <b>Collection</b>                           | Retailer (80%): old for new<br><br>No collection target                                                                        | Municipality (mainly) and retailer<br><br>4 Kg per year per capital                          |
| <b>Management</b>                           | Two industrial consortia<br>Group A: Electrolux, GE,<br>Matsushita, Toshiba<br>Group B: Daewoo, Hitachi, Sanyo,<br>Sharp, SONY | National recycling consortia:<br>SWICO, NVMP, EL RETUR, RECUPEL,<br>EL KRETSEN, UFH, SCRELEC |
| <b>Producer financing responsibility</b>    | Consumer pays                                                                                                                  | Producer pays                                                                                |
| <b>Cost to end user at product disposal</b> | TV: 21 €<br>Refrigerator: 36 €<br>Washing machine: 19 €<br>Air conditioner: 27 €                                               | Free of charge                                                                               |

# Environmental friendly WEEE Recycling in China

- ❖ **China still does not have any professional WEEE recycling plants.**
- ❖ **WEEE recycling should be regulated:**
  - ✓ **Pollution Prevention**
  - ✓ **Valuable materials from WEEE can fit domestic shortage of low cost raw materials. (*Metals, Plastics, Glass*)**
  - ✓ **Natural Resources Conservation**
  - ✓ **Employment Creation**
- ❖ **Several recycling plants are under construction in Wuxi and Beihai.**



# Road ahead!

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- Ban on illegal WEEE trade should be more strictly enforced.
  - A large amount of electronics products are ending their life time. WEEE & RoHS like legislation are urgently in need in China.
  - Environmental friendly WEEE recycling should be encouraged.
  - Extended Producer Responsibility in China:
    - ✓ Producers should be responsible for end-of-life products take-back and recycling.
    - ✓ Producers should design out hazardous substances
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