

# South-south cooperation: lessons learned from the environmentally sound e-waste management in Asia



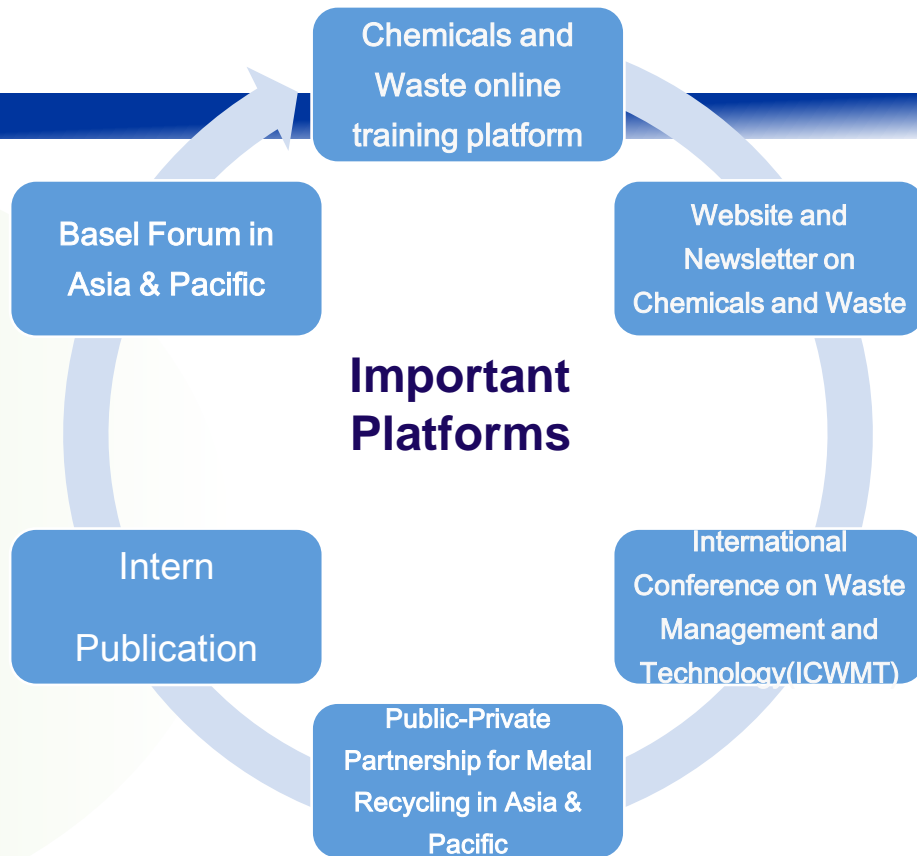
Narendra Singh, Zheng Lixia

Basel Convention Regional Centre for Asia and the Pacific  
Stockholm Convention Regional Centre in Asia and the Pacific

# BCRC/SCRC China

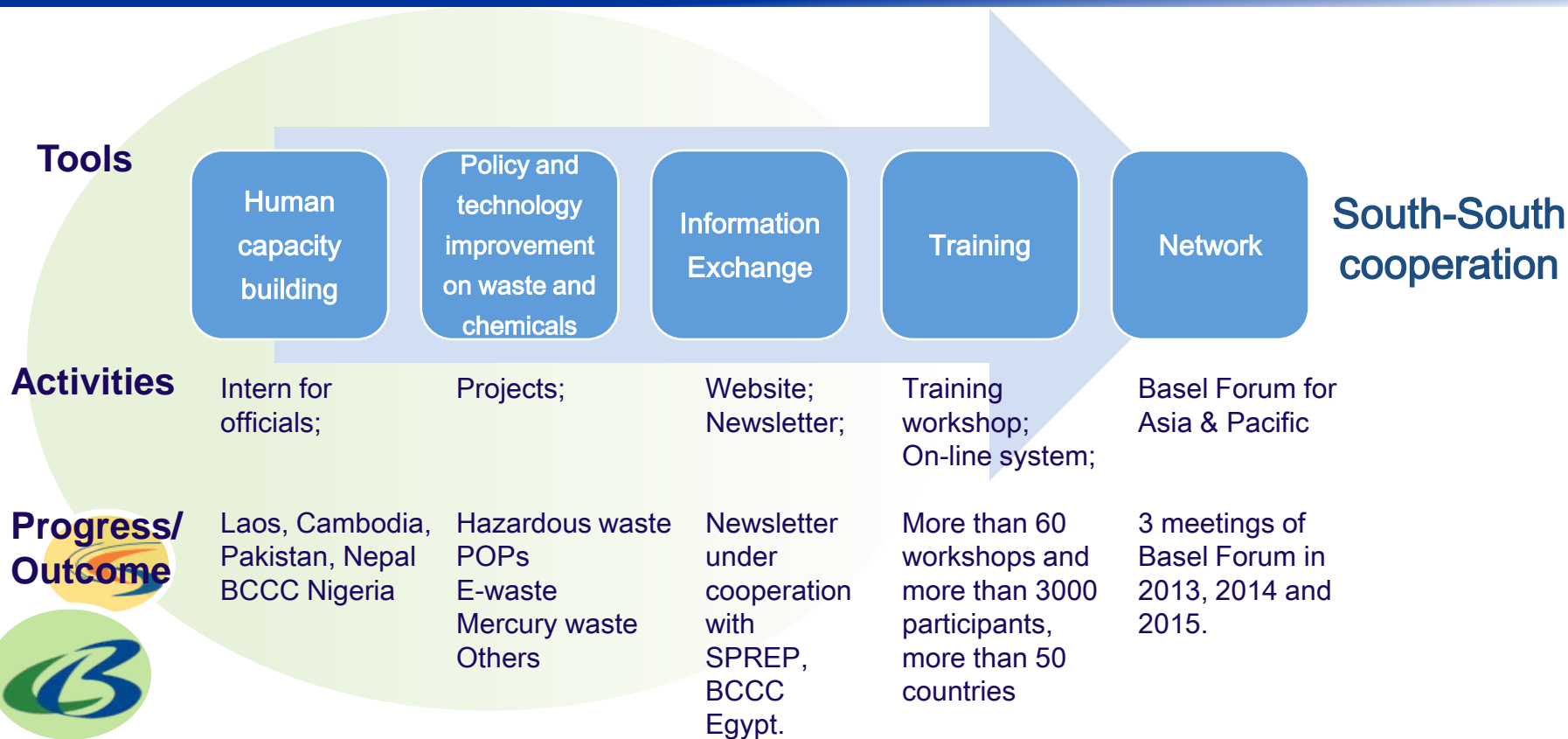
BCRC/SCRC China was established in 1997, one of the 14 Basel Convention Regional and coordination Centers and one of the 16 Stockholm Convention Regional Centers.

More than 28 parties have received services from BCRC China, and 21 parties accept services from SCRC China.



**Training , Information, Awareness Raising, Consulting , Technology Transfer**

# South-south cooperation: the environmentally sound e-waste and chemicals management in Asia



# The South – South Cooperation Visit between BCRC China and BCCC Nigeria

E-waste  
Case

**BCRC China provided the technical internship position for one researcher in BCCC Nigeria in 2013**

## **Objective:**

Aiming at the cooperation between BCRC Beijing and BCCC-Africa, and promoting the capacity building and experience sharing on chemical and waste management

## **Main task:**

- Assist to implement the project related to e-waste
- conduct e-waste recycling technology research
- learn e-waste recycling technology in China

**Participant:** Dr. Gilbert U. Adie, BCCC Nigeria / University Of Ibadan

**Time:** 6 months in 2013

## **Output:**

One joint article on *Levels and trends of toxic and precious metals in printed circuit boards of TVs (under submission)*



# Activities of BCRC China on E-waste

E-waste  
Case

Case Projects: 1) Amendment of 'Technical Policies on Pollution Prevention and Control of Waste Household Appliances and Electronic Products', 2013-2014;  
2) 'Regulations on the Management of Recycling of Waste Electrical and Electronic Products', 2010.

Policy  
Research

Environmenta  
l Sound  
Management  
Review

Case Project: Assessing the Status of E-waste Recycling in Selected Countries in the Asia-Pacific Region and Facilitating the Environmentally Sound Management of E-waste, 2014.

E-waste

Collection  
Demonstratio  
n

It has been nearly 20 years that BCRC China committed to the research and development of E-waste treatment technologies.

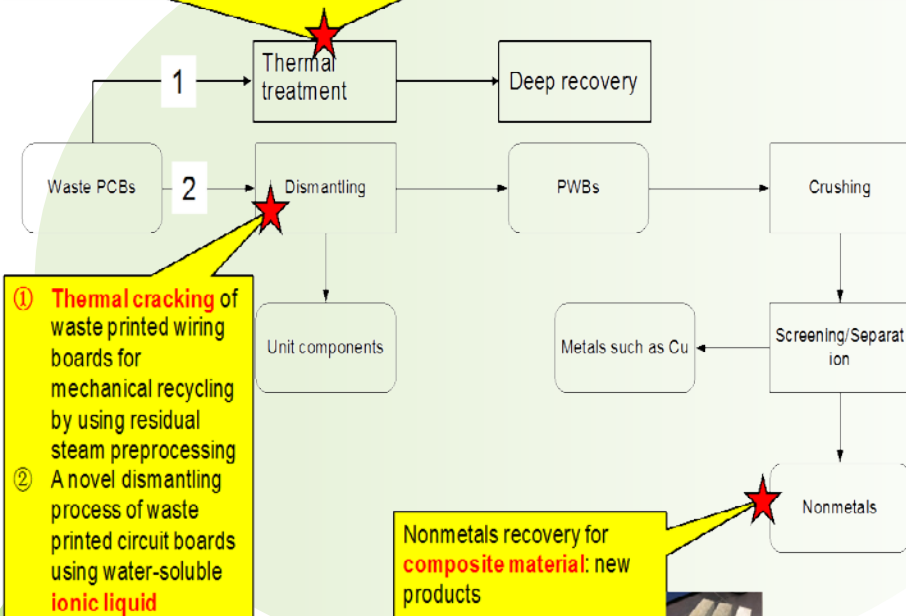
- 1) E-waste treatment technology
- 2) E-waste treatment demonstration
- 3) Recycling products (CRT glass, PCB nonmetallic material)

Technology  
Research and  
Demonstration

Case Projects: 1) Development of a Public Private Partnership for E-waste Collection, 2010.  
2) Joint Implementation on 2007 APFED Showcase Project Entitled 'Collection and Treatment Schemes for E-wastes', 2007-09.

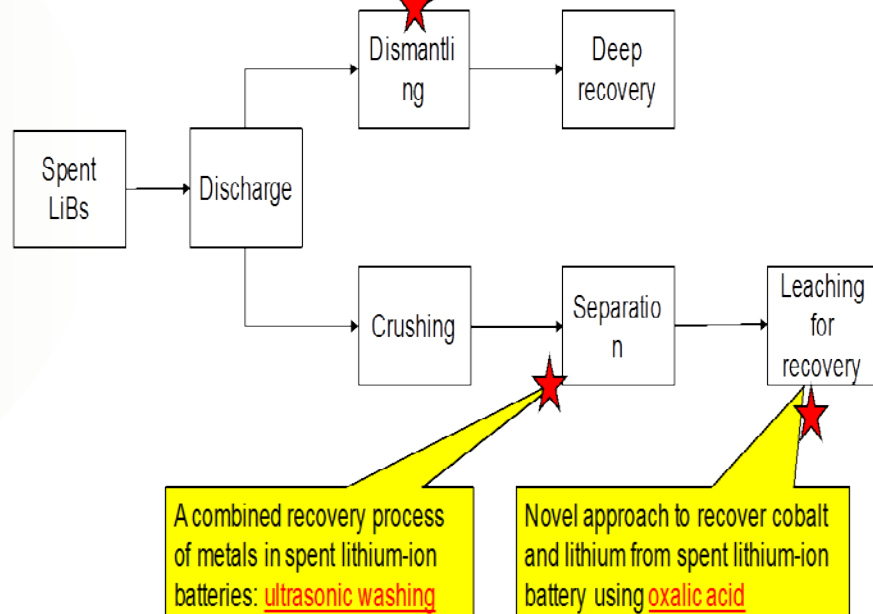
## Key technology of e-waste recycling for recycling enterprises: **Waste PCBs**

- ① Characterization and inventory of PCDD/Fs and PBDD/Fs emissions from the **incineration** of waste printed circuit board
- ② Characteristic of low-temperature **pyrolysis** of printed circuit boards subjected to various atmosphere



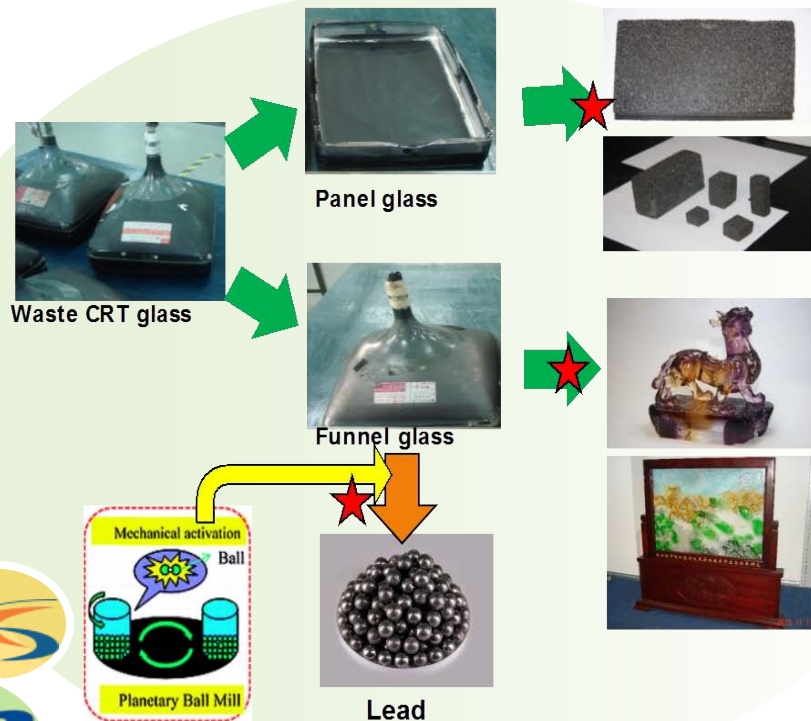
## Key technology of e-waste recycling for recycling enterprises: **Spent LiBs**

Innovative Application of **Ionic Liquid** to Separate An and Cathode Materials from Spent High-power Lithium-ion Batteries



# Key technology of e-waste recycling for recycling enterprises: CRT glass

## E-waste Case





# New-designed facilities in Suzhou

## E-waste Case

Scrap computer dismantling



Furnace for LCD and thermal shock treatment of PCBs



Separating the funnel and panel glass

The treatment of Li-ion battery



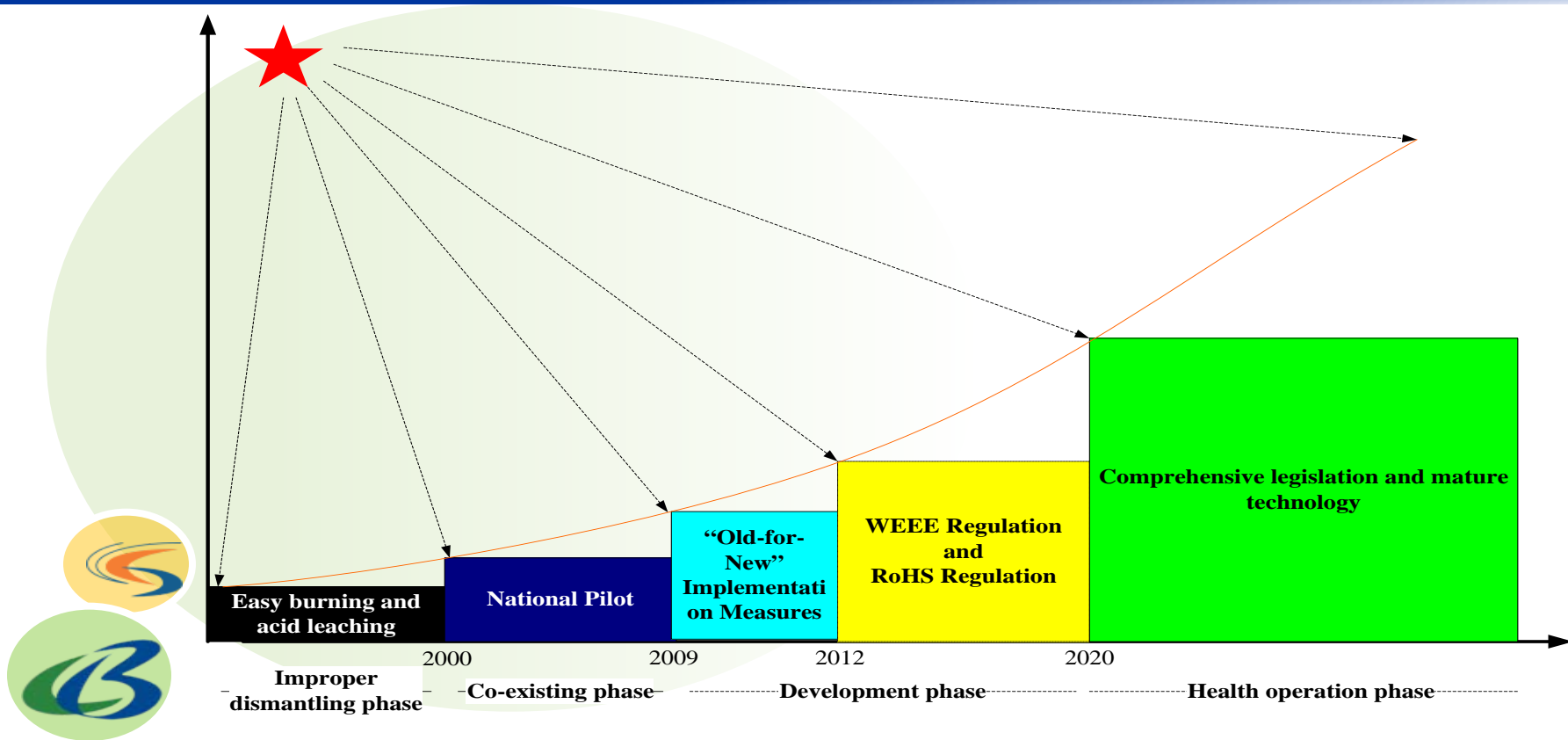
Spent LiBs recycling process



# Movable plant of e-waste recycling in Macau



# Outlining management progress of e-waste in China



# THANKS

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