Activities of BCRC China 2003-2004

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Seminar for Japan-China Society of Environmental Studies

3 December 2004



The Basel Convention Regional Centre in China

Introduction: Shun'ichi Honda

- PhD in Environmental Science at the University of Shizuoka in March 2003
 - · PhD Thesis: Advanced Utilization of Biomass Cellulose in Sewage Sludge
 - Research themes: Bio/eco-technologies for wastewater treatment, waste recycling, bioremediation and monitoring for the polluted environment
- JSPS Researcher at Vietnam National University in August 2001
 - Research Centre for Environmental Technology and Sustainable Development
 - Vietnam and Japan's Core-University Programme for Environmental Sustainable Development
- BCRC China and Tsinghua University (till March 2005)
 - Programme management of the projects of SBC and BCRC China
 - Environmentally sound management of hazardous and other wastes (Ewaste) in Asia and the Pacific.



Outline

- 1. Introduction of the Basel Convention
- 2. Introduction of BCRC China
- 3. Project Profiles
 - Municipality Project
 - E-waste Project
- 4. Seminars and Workshops
 - UNEP Chemicals Mercury Programme
 - Kitakyushu Initiative Network
 - China-Netherlands Seminar on Recycling for Electronics



The Basel Convention

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal



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Introduction and History

- Unregulated trans-boundary movements of hazardous wastes between countries, in particular, from "developed countries" to "developing countries or countries with economies in transition"
- Adopted in 1989
- Entered into force on 5 May 1992
- 162 Parties to the Convention (as of November 2004)



Main Goal of the Convention

Main Goal

 To protect, by strict control, human health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes

Mechanisms for Achieving this Goal

- The control of the transboundary movement of hazardous wastes and other waste
- Environmentally sound management (ESM) of hazardous wastes and other wastes



Key Objectives

- To reduce transboundary movements of hazardous wastes to a minimum consistent with their environmentally sound management
- To treat and dispose of hazardous wastes as close as possible to their sources of generation
- To minimize generation of hazardous wastes in terms of quantity and hazards.



Pillars of the Conventions

- Regulation of the Transboundary Movements of Hazardous Wastes
- Environmentally Sound Management of Hazardous Wastes



- Subject to transboundary movements
- Definition of hazardous wastes
 - Article 1.1a of the Convention (Annex I and Annex III)
 - Article 1.1b of the Convention (nationally defined hazardous wastes)
 - · Article 1.2 of the Convention (other wastes)
 - Annex VIII and Annex IX of The Convention



- Hazardous wastes are
- Wastes that belong to any category contained in Annex I (Categories of wastes to be controlled) of the Convention (wastes streams: Y1-18 and waste having as constituents:Y19-45), unless they do not possess any of the characteristics contained in Annex III (List of hazardous characteristics) of the Convention
- Annexes VIII and IX of the Convention (adopted at COP 4 in 1998)



Annex VIII and IX

- Annex VIII: LIST A
- Wastes contained in this Annex are characterized as hazardous under Article 1, paragraph 1(a), of this convention, and their designation on this Annex does not preclude the use of Annex III to demonstrate that a waste is not hazardous



Annex VIII and IX (Cont.)

- Annex VIII: LIST A
- A1 Metal and metal-bearing wastes: A1010---A1180
- A2 Wastes containing principally inorganic constituents, which may contain metals and organic materials: A2010----A2060
- A3 Wastes containing principally organic constituents, which may contain metals and inorganic materials: A3010—A3190
- A4 Wastes which may contain either inorganic or organic constituents: A4010----A4160



Annex VIII and IX (Cont.)

- Annex IX: LIST B
 - Wastes contained in the Annex will not be wastes covered by Article 1, paragraph 1(a), of this convention unless they contain Annex I materials to an extent causing them to exhibit an Annex III characteristic.



Annex VIII and IX (Cont.)

- Annex IX: LIST B
- B1 Metal and metal-bearing wastes: B1010---B1240
- B2 Wastes containing principally inorganic constituents, which may contain metals and organic materials: B2010----A2120
- B3 Wastes containing principally organic constituents, which may contain metals and inorganic materials: B3010—B3140
- B4 Wastes which may contain either inorganic or organic constituents: B4010----B4030



Article 1.1.b of the Convention

Wastes (....) defined as, or considered to be, hazardous wastes by National Legislation of the Party of export, import or transit.



Definition of other wastes (Article 1.2)

Waste categories contained in Annex II of this Convention:

Y46 Wastes collected from households

Y47 Residues arising from incineration of household wastes



Wastes excluded from the scope of the Convention

- · Radioactive wastes
- Wastes derived from normal operation of a ship



The Control System

The Control System of the Convention

- . Responsibility to notify
- . Prior written consent procedure
- . Re-import obligations
- . Prohibitions and restrictions
- . Definition and control of illegal traffic
- . Documentation: notification, movement document
- . Contract between the exporter and the disposer
- . Insurance/financial guarantees
- . International transport rules and regulations
- . Environmentally sound management of wastes



The Control System (Cont.)

Prohibitions and restrictions

- . Movements between Parties only; Article 11 agreement with non-parties
- . National prohibitions of export to parties having an import prohibition
- . Obligations of environmentally sound management
- . Export for disposal to the area of 60° South latitude



BAN Amendment

The Ban Amendment - Article 4A (adopted in 1995)

- Prohibit export of hazardous wastes destined for final disposal from states members to the Annex VII to States not listed in Annex VII.
- Prohibit export of hazardous wastes destined for recovery and recycling from states members to the Annex VII to States not listed in Annex VII (31.12.97)

Annex VII: Parties and other States which are members of OECD, EC, and Liechtenstein



Environmentally Sound Management

 ESM means taking all practicable steps to ensure that wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes



ESM (Cont.)

Parties must, inter alia:

- Ensure that the transboundary movement of hazardous wastes and other wastes is reduced to the minimum consistent with the environmentally sound and efficient management of such wastes
- Prevent the import of hazardous wastes and other wastes if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner
- Not allow the export if the State of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites to dispose of the wastes in question in an environmentally sound and efficient manner



Strategies for the Implementation

- Designation of Focal Points and Competent Authorities (Art. 5)
- International co-operation (Art.10)
- Regional centres for training and technology transfers (Art.14)
- Transmission of information (Art.13)
- Mechanisms for fulfilment of obligations
- Technical assistance
- Emergency fund (decision of COP5)
 - > The Protocol on Liability and Compensation



Some Important Issues

- Dealing with differences in legal interpretations of waste classifications
- Dealing with illegal traffic
- Monitoring of compliance to provisions of the Conventions
- Funding for emergency situations
- Import of wastes for recovery and recycling



Benefits of Becoming a Party

- Eligibility for technical, financial and legal assistance (projects, meetings, etc)
- Facilitate access to information and technology transfer
- Provides access to liability and compensation provisions
- Provides a global system of rules in managing hazardous wastes (documentations, etc)
- Access to funding for projects on ESM
- Prevention of and networking in cases of illegal traffic of wastes



Benefits of Becoming a Party (Cont.)

- Improved public health and environmental conditions
- Capacity building to manage hazardous wastes internally (reduce movements)
- Framework for synergistic approach in the implementation of related Conventions



Problems in Fulfilling Obligations

- Lack of proper regulatory provisions to control exports/import of hazardous wastes
- Lack of adequate institutional capacity to monitor and enforce regulations
- Lack of policy tools, guidance and standards
- Lack of inventory and statistics
- Lack of financial and other resources
- Attitudinal problems
- Barriers to transfer of cleaner technologies to developing countries



10-year Strategic Plan

Mission statement

• To protect human health and the environment from the harmful effects of hazardous wastes by promoting the environmentally sound management of such wastes through effective partnership and awareness-raising.

Goal

• To achieve the environmentally sound management of hazardous waste.



Objectives and Goals

- Prevention, minimization, recycling, recovery and disposal of hazardous wastes subject to the Basel Convention, taking into account social, technological and economic concerns
- Active promotion and use of cleaner technologies and production, with the aim of the prevention and minimization of hazardous wastes subject to the Basel Convention



Objectives and Goals (Cont.)

- Further reduction of transboundary movements of hazardous wastes subject to the Basel Convention, taking into account the need for efficient management, the principles of selfsufficiency and proximity and the priority requirement of recovery and recycling
- 4. Prevention and monitoring of illegal traffic



Objectives and Goals (Cont.)

- Improvement and promotion of institutional and technical capacity-building, as well as the development and transfer of environmentally sound and proven technologies, especially for developing countries and countries with economies in transition
- Further development of regional and subregional centres for training and technology transfer



Objectives and Goals (Cont.)

- 7. Enhancement of information exchange, education and awareness-raising in all sectors of society
- Cooperation and partnership at all levels between countries, public authorities, international organizations, the industry sector, non-governmental organizations and academic institutions
- 9. Development of mechanisms for compliance with and for the monitoring and effective implementation of the Convention and its amendments



The Basel Convention Regional Centre in China (BCRC China)

Asia-Pacific Regional Centre for Hazardous Waste Management Training and Technology Transfer



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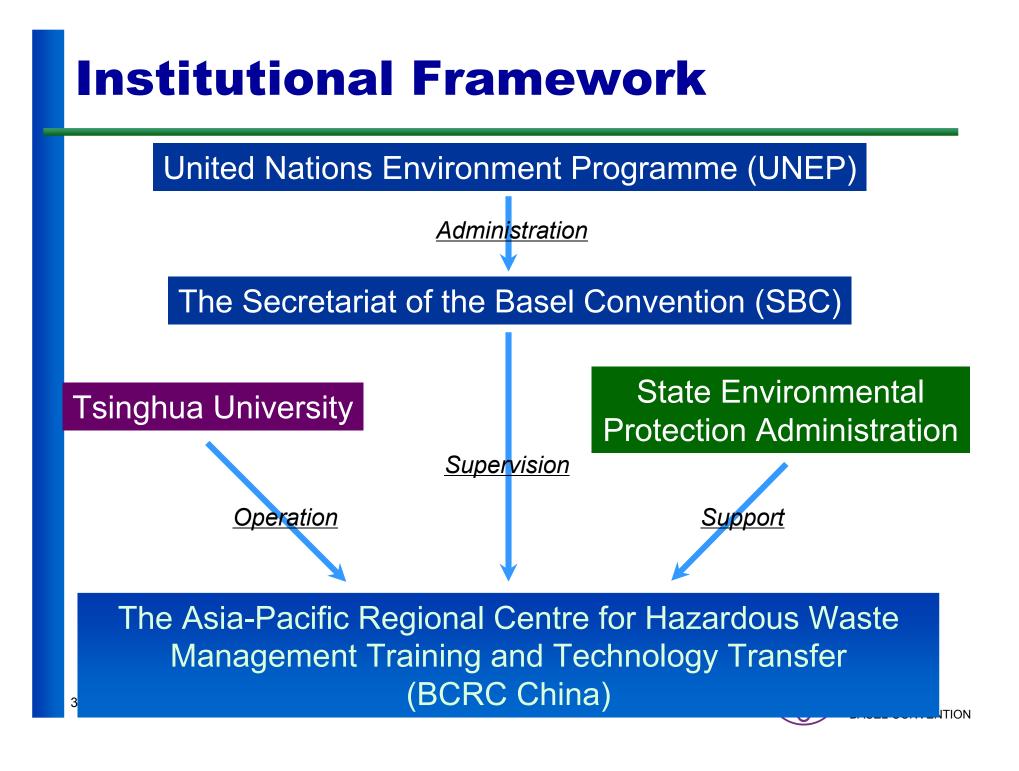


The Basel Convention Regional Centre in China

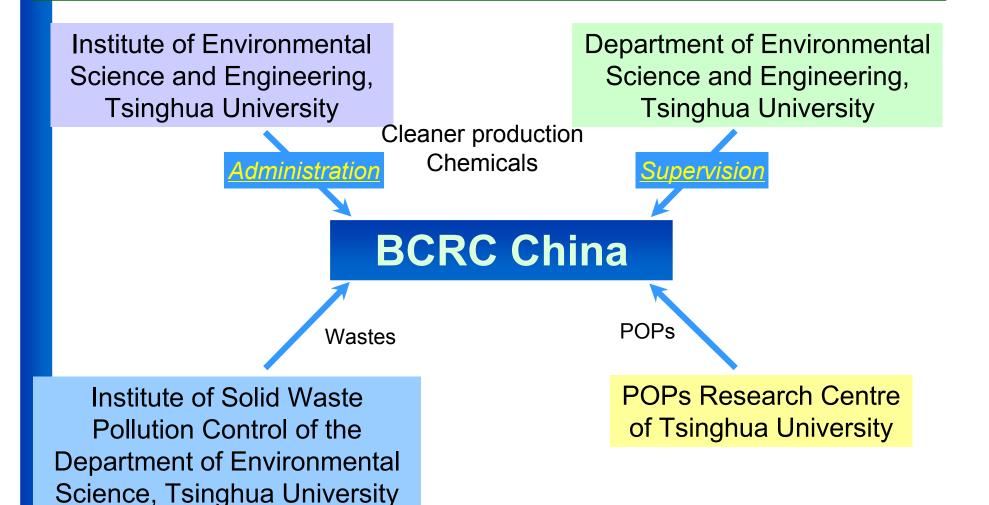
Introduction of BCRC China

- Official name: Asia-Pacific Regional Centre for Hazardous Waste Management Training and Technology Transfer
- Common name: The Basel Convention Regional Centre in China
- Operated since 1997
- Operating by: Tsinghua University, Beijing
- Centre Location: Environmental Engineering Building, Tsinghua University, Beijing 100084
- Geographical scope: Asia and the Pacific





Framework in Tsinghua Univ.





Core Function of BCRC China

- The role of the Centres is to assist developing countries and countries with economies in transition, within their own region, through capacity-building for environmentally sound management, to achieve the fulfilment of the objectives of the Convention.
- The description of the core functions of the Centres is as follows:
 - 1. Training;
 - 2. Technology transfer;
 - 3. Information;
 - 4. Consulting;
 - 5. Awareness-raising.



- The explanations of the core functions of the Centres are as follows:
 - a) Developing and conducting training programmes, workshops, seminars and associated projects in the field of the environmentally sound management of hazardous wastes, transfer of environmentally sound technology and minimization of the generation of hazardous wastes, with specific emphasis on training of trainers and the promotion of ratification and implementation of the Convention and its instruments;
 - b) Identifying, developing and strengthening mechanisms for the transfer of technology in the field of environmentally sound management of hazardous wastes or their minimization in the region;



- c) Gathering, assessing and disseminating information in the field of hazardous wastes and other wastes to Parties of the region and to the secretariat;
- d) Collecting information on new or proven environmentally sound technologies and know-how relating to environmentally sound management and minimization of the generation of hazardous wastes and other wastes and disseminating these to Parties of the region at their request;
- e) Establishing and maintaining regular exchange of information relevant to the provisions of the Basel Convention, and networking at the national and regional levels;



- f) Organizing meetings, symposiums and missions in the field, useful for carrying out these objectives in the region;
- g) Providing assistance and advice to the Parties and non-parties of the region at their request, on matters relevant to the environmentally sound management or minimization of hazardous wastes, the implementation of the provisions of the Basel Convention and other related matters;
- h) Promoting public awareness;
- Encouraging the best approaches, practices and methodologies for environmentally sound management and minimization of the generation of hazardous wastes and other wastes, for example, through case studies and pilot projects;



- j) Cooperating with the United Nations and its bodies, in particular the United Nations Environment Programme and the specialized agencies, and with other relevant intergovernmental organizations, industry and non-governmental organizations, and, where appropriate, with any other institution, in order to coordinate activities and develop and implement joint projects related to the provisions of the Basel Convention and develop synergies where appropriate with other multilateral environmental agreements;
- k) Developing, within the general financial strategy approved by the Parties, the Centres' own strategy for financial sustainability;



- Cooperating in mobilization of human, financial and material means in order to meet the urgent needs at the request of the Party(ies) of the region faced with incidents or accidents which cannot be solved with the means of the individual Party(ies) concerned;
- m) Performing any other functions assigned to it by the decisions of the Conference of the Parties of the Basel Convention or by Parties of the region consistent with such decisions.



Project Profiles

Municipality Project



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Project Identification

- New partnership with local authorities for the environmentally sound management of hazardous and other wastes in urban areas
- 15 months (December 2003 April 2005)
- Pilot city: Qingdao
- Objectives
 - Development of Type II Agreement
 - Establishment of E-waste collection system
 - Development of the Environmentally sound management
 - Preparation of 3 supportive tools



Kick-Off Seminar

- China-Japan Seminar for Establishing Recycled Oriented-Society (15 January 2004, Qingdao, China)
- BCRC China, The Sino-Japan Friendship Centre for Environmental Protection, Qingdao City, City of Kitakyushu and Kitakyushu International Techno-Cooperative Association (KITA)

Objectives

- Introduction of Japanese E-waste Institution
- Current situation of E-waste management in China and Japan
- Consideration on how to establish Recycled Oriented-Society in China



National Forum

- National Forum on New Partnership for the Environmentally Sound Management of Urban Hazardous Wastes (10-11 August 2004, Qingdao, China)
- BCRC China, SEPA, Qingdao EPB
- Objectives
 - Summarization of hazardous waste management
 - Sharing successful stories of HWM
 - Consideration on how to apply the successful stories
 - Discussion of ESM for hazardous wastes



Type II Initiative

- Initiative of Public-Private Partnership for Hazardous Wastes on Environmentally Sound Management in Qingdao (12 August 2004, Qingdao, China)
- BCRC China, Qingdao EPB
- Objectives
 - Strengthening the collaboration of all stakeholders for ESM of HW in Qingdao
 - Establishment of a long-term cooperative relationship for sustainable development of HWM in Qingdao
- Type II Initiative
 - All players on hazardous waste management shall take the best measure of the minimization of the potential of environmental pollution and maximization of the potential for recycling/reusing wastes to reduce the adverse effect to human health and the environment.

E-waste Initiative

- Initiative of the Environmentally Sound Management for E-waste in Qingdao (12 August 2004, Qingdao, China)
- BCRC China, Qingdao EPB
- Objectives
 - Establishment of a local mechanism for E-waste management system on ESM in Qingdao
 - Initiative of ESM for E-waste based on the analysis of the current treatment and disposal situations
- E-waste Initiative
 - All players on E-waste management shall take the best measure, e.g. the reduction of hazardous material use for product, appropriate collection of E-waste, development of E-waste management system on the environmentally sound management.



Three Tools

 Three Decision Supportive Tools for the environmentally sound management of hazardous and other wastes in urban areas in the Asia

Development of public-private partnerships

- Successful techniques and technologies for hazardous waste management in urban areas
- Awareness raising and sensitization campaigns for local communities



Public Works: Hazardous Waste Management in Urban Area

Conventional Bureaucratic Relation		
 Public sector (Player of all tasks) Responsibilities of all tasks (collection, separation, recycling, reusing, supervision, setting up infrastructure and its operation, etc.); Short-term strategy (1-5 years); Less investment; Less awareness; Limited budget; Limited human resources. 	 Private sectors (Subcontractor) Only fulfilment of tasks entrusted by public sector; Less strategy; Short-term contract (1-5 years); Less investment; Less awareness; Less benefit; Limited budget; Limited opportunity of works. 	
 Public sector (Provider/Supervisor of institutional framework) Reduction of responsibilities; Long-term strategy (15-20 years); Solidification of tasks/duties; Reduction of investment; Capacity-building for human resources; Awareness raising campaigns for local communities. 	 Private sectors (Player) Fulfilment of all tasks as business; Long-term contract and strategy (15-20 years); Setting up own facility; Attempt of benefit; High investment; Raising awareness; Improvement/update of expertise and technology. 	
Development of Public-Private Partnership IGOs, Multiple authorities (Catalyst) Awareness Raising and Sensitization Campaigns Successful Techniques and Technologies		
 Local communities (Co-Player) Awareness raising of hazardous waste; Community-based strategy; Community-based approach. 	 International donors (Provider of technology and expertise) Provision of technology and expertise; Investment to local players; Cooperation with local players. 	
 Academics (Co-Player) Research and plan of management system. 		

Regional Forum

- Tentative title: Sustainable Integrated Waste Management in the Asia-Pacific Cities (12-19 December 2004, Kuala Lumpur, Malaysia)
- City of Kuala Lumpur, SBC, BCRC China, UNITAR, CITYNET
- WB, ADB, UNDP
- Objectives
 - Dissemination of an instance of PPP under the project
 - Introduction of approach for the establishment of PPP in urban areas
 - Sharing information of HW management
 - Discussion of the ESM in the region
- Participants

Stakeholders on the project, organizers, national and municipal officers in the countries served by BCRC China



Project Profiles

E-waste Project



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Project Identification

- Survey of the import and the environmentally sound management of electronic wastes in Asia-Pacific Region
- 15 months (December 2003 April 2005)
- Objectives
 - Survey of information regarding E-waste
 - Understanding a current situation and waste stream of E-waste
 - Organization of a national workshop in participating countries
 - Suggestion of ESM appropriate for the region



Participating Countries

- Cambodia
- China
- Malaysia
- Mongolia
- Philippines
- Thailand
- Sri Lanka





Surveying Items

- Statistical data of E-waste (PCs, CRTs, TV sets, MPs)
- National institution
- National situation of E-waste management
- E-waste stream
- National facilities



Expected Recommendations

- Awareness-raising campaigns
- Capacity building, e.g. environmental trainings
- Improvement of the national institution
- Introduction of ESM for E-waste, incl. a institution for Ewaste
- Technology transfer appropriate for the country
- Plan/Establishment of recyclable waste mobilization network in the region



UNEP Chemicals Mercury Programme

Report of Workshop 26-29 April 2004, Bangkok Thailand



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Workshop Background

- Regional Awareness-Raising Workshop on Mercury Pollution-A global problem that needs to be addressed (Bangkok, Thailand, 26-29 April 2004)
- UNEP Chemicals, the Ministry of Natural Resources and Environment of the Kingdom of Thailand
- Objectives
 - Raising awareness of the global, regional and local nature of mercury pollution problems
 - Assisting countries to identify and prioritization of mercury issues within their borders and within their region
 - Raising awareness of the potential options to reduce exposures, uses, and releases of mercury
 - Promotion of the exchange of information on problems and solutions



Points of the Presentation

- Explanation of the contexts regarding Hg in the Basel Convention
- Hg issues in E-waste management
 - □ Hg in E-product
 - Hg-Measures implementing by E-producers (RoHS and WEEE Directives)
 - Potential adverse effect caused by the Environmentally unsound way of E-waste
 - Suggestion of ESM for E-waste



Main Discussion Points

- Mercury pollution from anthropogenic activities and its adverse effects to human health and the environment
- Regional mercury issues and hot spots of mercury releases
- Environmentally sound mercury management for the region
- Regional action plans



Needs of the Region

- Participants requested to BCRCs to support mercury issues in the region.
 - BCRCs have productive relationships between the Asian countries, based on the Basel Network.
 - However, BCRCs focus on hazardous and other waste, and mercury issue is a small part of the businesses for BCRCs and SBC.
- Collaborative project between UNEP Chemicals, SBC (BCRCs) and other IGOs might be very useful.
- If the countries served by BCRCs hope to implement mercury issues on hazardous waste management, SBC, BCRCs and donor countries might support its actions.



Third Meeting of the Kitakyushu Initiative Network

Report of Meeting 2-4 August 2004, Fukuoka, Japan



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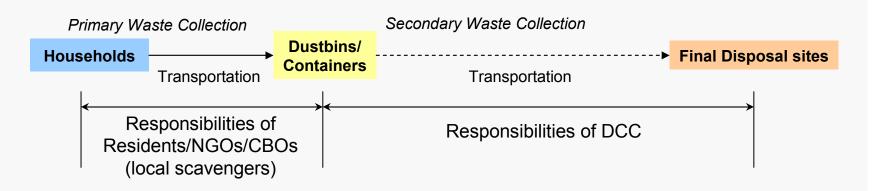
Meeting Background

- Kitakyushu Initiative Network, mainly conducted by UNESCAP, is a priority implementation mechanism for the Regional Action Programme for Environmentally Sound and Sustainable Development in Asia and the Pacific.
- KIN implements various pilot projects by collaborations between member cities, donors, IGOs, etc focused on solid waste management, air quality management, water conservation and wastewater management.
- 3rd meeting of KIN aimed to review network activities, including pilot projects, thematic seminars and training workshops, dissemination of successful practices and indicators.
- A concrete action plan and massage agreed at the meeting will be sent to the Environmental Ministerial Conference in March 2005 for their consideration.



Successful Story 1

- Community Level Solid Waste Management in Dhaka City in Bangladesh (commenced in Nov. 2003)
- Corroboration between Dhaka City Corporation (DCC) and Japan International Cooperation Agency (JICA)



- Low awareness of residents and scavengers \rightarrow inadequate collection by DCC
- Permission system to allow scavengers to collect \rightarrow increase of illegal collectors

 \downarrow

Survey of Awareness of Residents on Solid Waste Management

High income class \rightarrow High awareness

Low income class \rightarrow Low awareness



Successful Story 2

- Maximization of recycling and minimization of wastes in Nonthabud in Thailand
- Objectives
 - · Separation collection campaign
 - Building awareness for cleaning and procedure management
 - · Creation of awareness of environmental conservation
 - Development of solid waste management
- Activities: Implementation of awareness-raising campaigns at communities and schools

	0 month	After 8 months
Solid wastes (kg/day)	1008	680
Recyclable materials (kg/day)	54.5	138
Recycling rate (%)	5.4	20.3



Messages form All Participants

- Implementation of capacity-building of local governments
 - Thematic seminars, sharing of information and experiences, collection and analysis, pilot activities, etc.
- Undertaking priority areas
 - Solid waste management, air quality management, water conservation, wastewater treatment, integration of urban environmental management
- Promotion of technology transfer
 - Intercity and international cooperation based on local initiatives
- Financial mechanism
 - Local financial mobilization supported by donors, technical cooperation agencies and KIN



China-Netherlands Seminar on Recycling for Electronics

Report of Seminar 16-17 November 2004, Beijing, P.R.China



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Background

- Kick-off activity the joint Delft University-Tsinghua University project
- Focus: Environmentally Sound Technology and Institution of E-waste
- Supported by: Phillips
- Coordinator: The Basel Convention Regional Centre in China



Project Goals

- Bring together environmental and economic data which will allow stakeholders in take back and recycling processes more qualified decisions as regards the organization of systems
- Provide corresponding dismantlement guidelines of electronics recycling for government and treatment facilities
- Provide scientific, high efficient and environmentally-friendly technical solutions for electronics scrap reutilization
- Set up corresponding regulations and industrial standards for recycling of electronics scrap
- Provide easy-to-recycle and cleaner-production scenarios for electric and electronic manufacturers



Contents of the Seminar

- Introduction to take back and recycling
- End of life strategies from a product perspective
- Materials recycling
- Design and end of life
- Experiences with the take back systems in NL and the EU
- Eco-efficiency considerations
- How can China do better than WEEE (and ROHS)?....



What is WEEE and RoHS?

WEEE

- Waste electrical and electronic equipment
- Prevention of WEEE, and reuse, recycling and other forms of recovery of WEEE to reduce disposal
- Improvement of the environmental performance of all operators in the life cycle of EEE
- Taking back systems on the market (Aug. 2005)

RoHS

- Restriction of the use of certain hazardous substances in electrical and electronic equipment
- Contribution to the protection of human health and the environmentally sound recovery and disposal of waste electrical and electronic equipment
- Lead, mercury, cadmium, hexavalent chromium, polybrominated
- biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) (from 1 July 2006)



Main Points (Future Actions)

Based on the instances in Europe

- How to set up a comprehensive recycling system into China
- How to establish a legal framework in China
- How to collaborate between all stakeholders
- How to continue environmentally sustainable development



Thank you for your attention

For further information

SBC: www.basel.int BCRC China: www.bcrc.cn



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