

China and the Circular Economy: Movement of Used Goods, Recyclables, and the Basel Convention

China EHS Roundtable

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April 11, 2018

Agenda



Updates on the Basel Convention

China's Circular Economy and Recent Regulatory Initiatives Concerning Import Restrictions

Case Study: EU Waste Shipment Regulation and China

EU: What is the Circular Economy?

Minimize generation of waste and maintain value of products and materials

Product design

- Repairability & reusability
- Durability
- Upgradeability
- Recyclability

Sustainable sourcing

- Raw materials
- Improve market for secondary materials

Consumption

- Green claims
- Labeling
- Procurement incentives

Waste management

- Improve recycling rates
- Reduce landfilling
- Expand EPR regimes

Basel Convention and the Circular Economy

Global notice and consent regime governing waste shipped for disposal or recycling

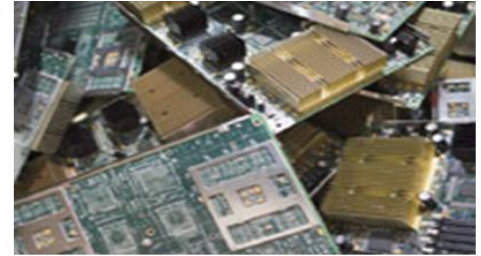
Provides framework for hazardous waste classifications

Covered shipments subject to prior notice, consent, documentation

Trade bans: party to non-party; OECD/EU to non OECD/EU (pending); national laws

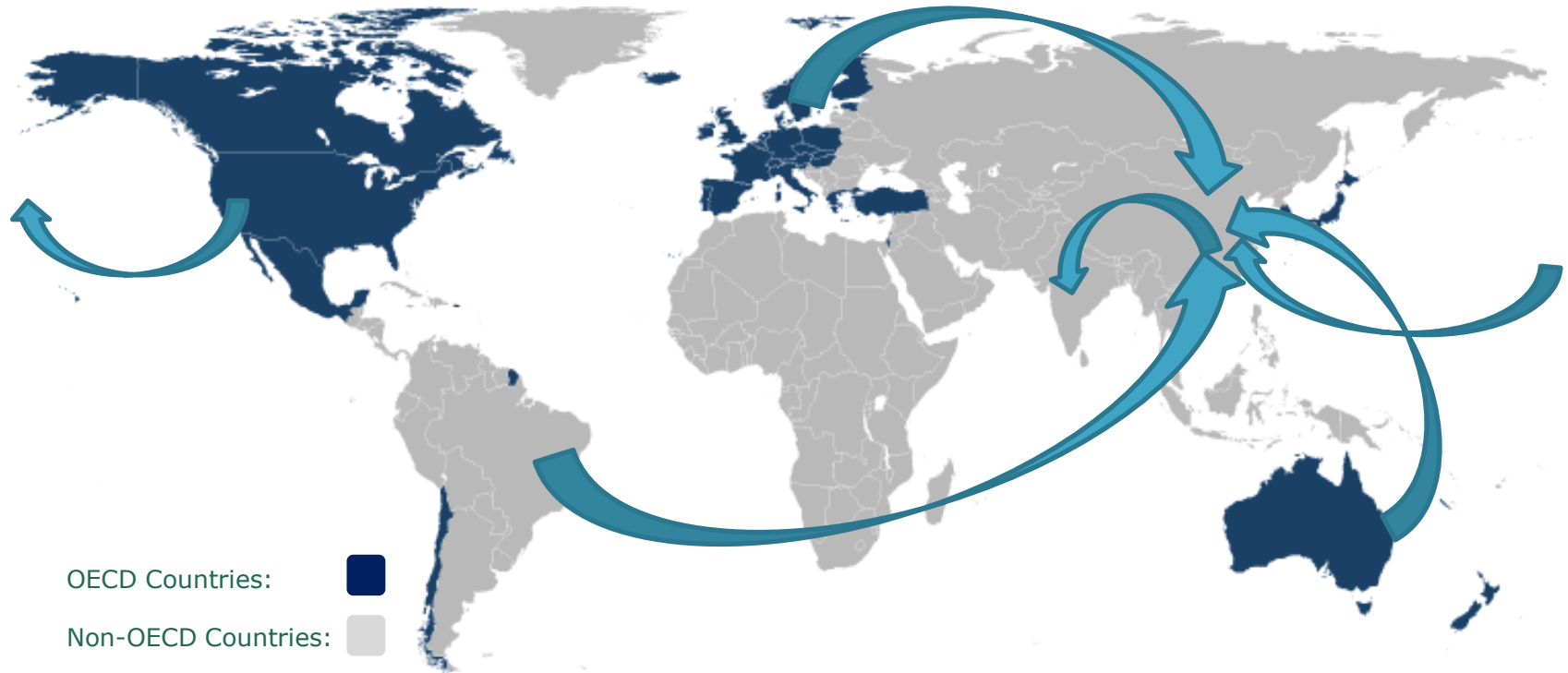
Implications for circular economy

186 parties (but not the U.S.)



BASEL CONVENTION

Basel, China and the Circular Economy



Scope at a Glance

“Hazardous wastes” under the Convention:

- (a) Wastes that belong to any category contained in Annex I, unless they do not possess any of the characteristics contained in Annex III; and
- (b) Wastes that are not covered under paragraph (a) but are defined as, or are considered to be, hazardous wastes by the domestic legislation of the Party of export, import or transit.

“Wastes” are substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law.

“Disposal” means any operation specified in Annex IV to this Convention.

Basel Convention Expert Working Groups (EWGs)

Technical Guidelines

- Criteria for determining legitimate shipments of electrical and electronic products for repair (non-waste)
- Highly influential on national waste/non-waste determinations
- Some unresolved issues
- China leads EWG
- First meeting of the EWG on the TGs January 25-26, 2018 (Beijing)
- Second meeting April 17-19 (Geneva)

Negotiations on Annexes

- Negotiations on amendments to the Convention Annexes
- Revise Annexes I and III (covered waste streams and constituents/ hazardous characteristics)
- Revise Annex IV (waste management activities (reuse))
- Revise e-waste listings in Annex IX
- Canada and Chile co-chair EWG
- First meeting of the EWG March 20-23, 2018 (Geneva)

ESM and Legal Clarity

- Legal Glossary
- Manuals for the promotion of environmentally sound management of wastes
- New fact sheets on specific waste streams
- Preparing manuals on EPR and financing systems for ESM
- Recent EWG meeting held November 13-15 (Accra)

Basel Technical Guidelines (TGs)

Adopted on an “interim basis” at COP-12 in 2015

New criteria (packaging, testing and documentation) for demonstrating that shipments of functioning used equipment **for direct reuse are non-wastes**

New criteria (packaging, documentation, contracts) for demonstrating that shipments of used equipment for **failure analysis, repair and refurbishment are non-wastes**

Parties are slowly integrating the new criteria into national legislation and policies (with variations)

Open Issues

Recent Meetings in Beijing

Regional Workshop for the Asia-Pacific Region on the Environmentally Sound Management of E-wastes (Jan. 21-23, 2018)

Forum on the transboundary movements of used EEE and e-waste (Jan. 24, 2018)

First meeting of the Expert Working Group (EWG) on the e-waste technical guidelines under Basel Convention (Jan. 25-26, 2018)

Second EWG meeting planned for April 17-19, 2018 (Geneva)

Negotiations on Open Issues in TGs

Narrowing from Seven to Three Open Waste Criteria Issues

Management of hazardous waste from failure analysis, repair and refurbishment

Age and residual life time and age of used equipment (+documentation)
(Supported by China)

Equipment contains CRTs / Obsolete Technology (w/exceptions)

Negotiations to Amend Annexes

At COP-13, Parties established a new EWG to review Annexes, and propose possible amendments

- **Annex I:** Waste streams and constituents considered hazardous
- **Annex III:** Hazardous characteristics
- **Annex IV:** Final disposal and recycling operations
- **Annex IX:** Waste entry for non-hazardous electronic waste (and related references to reuse and repair)

Legally binding on 186 Parties

EWG held in March (Geneva); Parties to discuss at OEWG-11 (Sept. 2018) and at COP-14 (April 2019)

Proposals to Expand Scope of Annex I (Presumptively Hazardous)

New proposals to expand scope of Annex I (hazardous wastes) include:

- Aluminum, aluminum compounds (AZERBAIJAN)
- Brominated flame retardants (NEW ZEALAND)
- Electrical and electronic assemblies (BURKINA FASO)
- Lithium/lithium batteries (EU, CANADA)
- Nanomaterials (ARGENTINA, PERU)
- Ozone depleting substances (BAN)
- Wastes and compounds of silicon "Si" (chemical constituent of glass, glass pane) (MADAGASCAR)
- Tin and tin compounds (BAN)
- Nickel and nickel compounds (BAN)
- E-waste and waste arising from production or use of electronics (NZ)
- Other waste consumer items (NZ)

Proposals for Concentration Values for Annex I Constituents

Several parties have proposed consideration of minimum concentration or limit values for Annex I constituents (e.g., *de minimis* values) (EL SALVADOR, COLOMBIA, INDIA, TUNISIA).

Could be adopted in Annex I or in the waste listings in Annex VIII and IX.

Potential to remove barriers to trade in recovered materials and advance circular economy business models world-wide.

Proposals to Expand Annex IV.B

New proposals to expand Annex IV recovery operations (scope):

- Recovery of components not covered by other operations (e.g., separation of materials for recovery from used vehicles and e-waste)
- Re-use of components in manufactured items
- Preparing for reuse (e.g. checking, cleaning, repair, refurbishment) (*EU*)
- Repackaging prior to submission to any operations in Section B
- Dismantling, selection, sorting or preparation treatments for recycling, reuse / use intended, totally or a part of waste 's components
- Recycling of used electrical and electronic equipment
- Proposed revision of existing R7 and R8 listing – combined and changed to read as follows:
 - Cleaning, replenishing, repair or refurbishment of equipment or components in order to re-use them

Benefits and Risks to Circular Economy?

Benefits

- Final TGs and related changes to Annexes should remove barriers to repair, refurbishment and promote consistent approaches
- Proposals for concentration values or “limits of contaminants” for Annex I constituents could reduce scope of hazardous waste classifications

Risks

- Proposals to expand of Annex I (presumptively hazardous):
 - E-waste as a category of waste
 - Listing lithium or other constituents in Li-ion batteries
 - Other new constituents
- Expand Basel to cover repair / reuse operations

Circular Economy in China: Laws, Regulations, Standards, Guidance...

Solid Waste Environmental Pollution Prevention and Control Law

- Waste regulation

Circular Economy Promotion Law

- Elimination of outdated techniques, products, and equipment
- Material restrictions and product packaging requirements
- Water, energy, mining resources conservation
- Some re-used and recycled product requirements
- Some re-manufactured and refurbished product requirements

Cleaner Production Promotion Law

- Mandatory recycling (products and packaging)
- Clean production audits

Other Laws

- Import and Export Commodity Inspection Law (product import)
- Product Quality Law

Circular Economy in China: Laws, Regulations, Standards, Guidance...

Ministries and administrations design and administer specific programs

- WEEE / more general EPR programs
- Product repair and remanufacture
- Import control of waste for raw material uses / used products

Technical standards may apply

"Plans," "guiding opinions," "circulars" to conceptualize future policies and highlight the rulemaking (and sometimes enforcement as well) priorities and timeframes

- Circular Economy Leading Action Plan (NDRC 2017)
 - Circular industrial system: eco-design, 3R and cleaner production audits, refined planning of industrial parks, circular connection of different industries;
 - Circular use of resources: circular use of industrial wastes, upgraded recycling system to promote the recycling rates, development of the remanufacture industry;
 - Laws and regulations: EPR, use of recycled products and raw materials, limits of single-use products, assessment and certification systems for circular economy (standards and guidelines for operations and products), green credits for fiscal incentives, etc.

Where Are We Now?

Extended Producer Responsibility

- China WEEE (starting from 2011)
- State Council Promotion Plan for the Extended Producer Responsibility System (2016)
 - WEEE, automobile, lead batteries, packaging
- New administrative measures for recycling of batteries for new energy vehicles (February 2018)

Imported used electronic products for repair / remanufacture activities

- Born out of China's regulation of imported used mechanical / electrical products
- AQSIQ issued a circular in 2008 directing pilot regulatory programs for special regulation of M/E products imported for remanufacture purposes
- Additional circulars and guidelines since 2013 and 2015 on various aspects, including inspections, capability assessment for repairers / remanufacturers, quality verification, etc.

Regulation of waste for recycling / raw material uses and their imports

- Born out of China's waste regulation
- Inventory / standards for waste / hazardous waste definitions
- For import regulation, the Solid Waste Law categorized waste into three categories: ban, restriction, automatic permission (later amended to be "no restriction")
- Government promulgates inventories and regulatory measures
- Follow inspection procedure and comply with environmental standards

“Plastics Import Ban”: What is It?

Implementation Plan for Prohibiting Imports of Foreign Garbage and Promoting the Reform of the Administrative System of Solid Waste Import Regulations

- State Council, July 18, 2017
- Article 2(4): “Adjust the inventories for regulating solid waste imports by end of July, 2017; Prohibit the import of **waste plastics from household sources**, **un-sorted waste paper**, **textile wastes**, **vanadium slag**, and others.”

Ministries responded by revising waste classification inventories (more on this later)

- MEP, MOFCOM, NDRC, GAC, and AQSIQ, August 10, 2017
- Move the following categories of wastes from the restricted class to the prohibited class:
 - Plastics (8 categories): wastes and tailings of PE, PS, PVC, PET, and others (including waste optical discs and other waste plastics) – Note: “Non-industrial sources (including household sources)”
 - Un-sorted waste paper (1 category)
 - Waste textile raw materials (11 categories)
 - Vanadium slag (4 categories)
- Effective on December 31, 2017

“Plastics Import Ban”: Where Does It Come From?

Solid Waste Environmental Pollution Prevention and Control Law

Administrative Measures for Regulating Imports of Solid Waste

Three waste classification inventories

Environmental protection standards

Regulations for licensing and inspection controls

Bottom line

- No imports of: **hazardous waste**, solid waste for heat energy recycling purposes, solid waste generated or stored in a large amount in China, solid waste with no applicable mandatory environmental protection standards or technical rules, solid waste commissioned to be imported to order, **solid waste listed on the import prohibition inventory**
- Determine whether the waste is prohibited from imports, has restriction for imports, or no restriction for imports
- Comply with environmental protection standards
- Pass inspections
- Get licenses as necessary (when there is a restriction)

What is In the Waste Classification Inventories?

Three inventories updated on August 16, 2017

Banned

- Waste animal and plant products
- Mineral slag, dust, dross
- Silicon waste scrap
- Waste medicines
- Miscellaneous chemical waste
- Waste plastic scrap and tailings
- Waste rubber and leather
- Recycled scrap paper and cardboard
- Waste textile raw materials and products
- Waste glass
- Waste metal and metal compounds
- Waste batteries
- Waste mechanical and electronic products, equipment, and un-sorted components, disassembled parts, debris, broken parts
- Others

Restricted

- Metal-containing waste generated from melting, smelting, refining metal
- Waste plastic scrap and tailings
- Recycled scrap paper and cardboard
- Metal and metal alloy scrap
- Mixed metal waste, including waste vehicle pressers and waste vessels

Non-restricted

- Wood and softwood waste
- Metal and metal alloy scrap

Check the specific items by descriptions, customs codes, and notes

Check the applicable environmental standards – for restricted and non-restricted categories

What is Next?

Check the State Council's Implementation Plan...

By end of 2017

- Revise the national environmental protection standards for imported raw-material use solid wastes (*11 updated standards released on December 29, 2017*)

By end of 2018

- Revise the Administrative Measures for Regulating Imports of Solid Wastes
- Reduce the number of ports where solid wastes can be imported into China

By end of 2019

- Adjust the inventories "in batches and categories"
 - That is to say: some adjustments may come earlier than the end of 2019
- Propose legislative amendments to the Solid Waste Law and other laws to increase the penalties for smuggling and unlawful imports of solid wastes

Plus, expect more active enforcement actions for ...

Hazardous wastes

Medical wastes

Electronic wastes

Household garbage

Waste plastics

Waste paper

Waste clothing

Enforcement Actions Against Unlawful Imports and Smuggling of Foreign Waste

China's customs authorities periodically launch anti-smuggling and regulatory enforcement actions against unlawful solid waste imports

Dating Back to Operation "Green Fence" in 2013

- Strict inspections of shipments at ports
- Forcing strict pre-shipment inspections
- Formally implemented for ten months, but with lasting impacts

Recent operations

National Sword

- Customs' general enforcement campaign
- Organized every year in recent years
- "Foreign garbage" was one of the "key enforcement" in 2017
- It is now termed "Project No. 1" in NS 2018

Blue Sky

- Targeted campaign against smuggling "foreign garbage"
- Four rounds of enforcement actions in 2017
- The 2018 campaign runs from March to December

2017: 286 criminal matters registered and investigated nationally (a 6.7-time increase); 866.8 thousand tons of solid wastes were involved

2018 (by April 2): 139 criminal matters registered and investigated so far

EU Circular Economy Package

Waste-Related Legislative Proposals

Initial focus on revisions to *waste legislation*

Proposed changes to WFD will require Member States to:

- Achieve major reductions in municipal waste generation by 2035
- Meet minimum requirements for all extended producer responsibility
- Recycle 65% of household and business waste by 2035
- 70% target for recycling of packaging by 2030, and
- Ban landfilling of recyclable waste by 2030

Likely adoption this summer

EU WSR – Ban of Hazardous Waste Export to Non-OECD

Regulation (EC) No 1013/2006 (“WSR”) – Article 36 prohibits waste exports from the EU to non-OECD countries pursuant to the Basel BAN Amendment:

- Wastes listed as hazardous in Annex V (coextensive with Annex VIII of the Basel Convention)
- Wastes listed in Annex V, Part 3
- Hazardous wastes not classified under a single Annex V entry

Examples include items containing metal alloys (lead, mercury, cadmium etc.); but excludes electronic assemblies destined for direct reuse

EU WSR – Expanded Export Bans by Country of Destination

Regulation (EC) 1013/2006 – Article 37 allows non-OECD destination countries to prohibit, require notification or allow wastes not otherwise prohibited under Article 36

The appropriate procedure must be submitted on the EU Commission Directorate-General for Trade's questionnaire who then publishes it as a binding regulation

EU WSR – Chinese Prohibition Under Article 37 Procedures

China has extensively used this provision to prohibit export, which would otherwise be allowed under the EU WSR

Examples include: rare earth scrap, chromium scrap; electronic scrap (such a printed circuit board or electronic components)

Questionnaire relating to amendments to Commission Regulation 1418/2007

February 2008 version - 1 -

Country reply for the People's Republic of China at (date) Feb. 2012

The country indicated above requests the following positions to apply in relation to the waste items indicated :

List of wastes from Annex III of 1013/2006 Annex IX to the Basel Convention (reproduced in Annex V, Part 1, List B, of 1013/2006) replaced in parts by items from OECD Decision Appendix 3 (as set out in Annex III of 1013/2006) * indicates footnote or further explanation to be found in the regulation	a) import of this waste from the European Community is prohibited	The waste may be exported from the European Community for recovery in the country of destination	b) and a procedure of prior written notification and consent as described in Article 35 of Regulation (EC) No. 1013/2006 will apply	c) and there will be no control in the country of destination	d) other control procedures will be followed in the country of destination under applicable national law
BI METAL AND METAL BEARING WASTES					
BI010 Metal and metal-alloy wastes in metallic, non-dispersible form:					
— Precious metals (gold, silver, the platinum group, but not mercury)	X				Δ (only gold, platinum)
— Iron and steel scrap					∇
— Copper scrap					∇
— Nickel scrap					∇
— Aluminium scrap					∇
— Zinc scrap					∇
— Tin scrap					∇
— Tungsten scrap					Δ
— Molybdenum scrap	X				
— Tantalum scrap					∇
— Magnesium scrap					Δ
— Cobalt scrap	X				
— Bismuth scrap					Δ
— Titanium scrap					Δ
— Zirconium scrap					Δ
— Manganese scrap	X				
— Germanium scrap					Δ
— Vanadium scrap					Δ
— Scrap of Hafnium, Indium, Niobium, Rhenium and Gallium	X (Indian)				Δ (not incl. Indium)
— Thorium scrap	X				
— Rare earths scrap	X				
— Chromium scrap	X				

Source: EC Directorate-General for Trade [People's Republic of China 2012 response to questionnaire](#)

Take Aways

International Trade

- Does trade involve exporting wastes or used products?
- What categories of wastes / used products are being shipped to China? Under which circumstances?
- Obligations of exporters, importers, and receiving facilities?

In-country Operations (in China)

- Circular economy is more than import / export restrictions
 - Product-sphere questions: Product design and extended responsibility
 - Facility-sphere questions: Any operations in China? What obligations do they have?

Looking Ahead

- Basel outcomes will drive national legislation
- Fast evolution of policies and regulations at national level in China
- Expect institutional and policy changes with robust enforcement
- Monitor laws, rules, and standards as well as policy statements and action plans

Questions & Discussion