NRC Quarterly Market Report: Chinese Restrictions on the Import of Scrap

Robin Wiener, President
March 29, 2018



Talking Points





Quick Background on ISRI

U.S. Recycling Industry & the Global Market

China's Environmental Challenge, Leading to an Evolving Scrap Policy/Regulation

Looking Ahead



About ISRI

ISRI is the Voice of the Recycling IndustryTM, promoting safe, economically sustainable and environmentally responsible recycling through networking, advocacy, and education.

21 Chapters 35 Countries

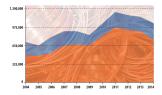
Manufacturers, processors, brokers, industrial consumers of scrap commodities

1,300+ Members

4,000+ Locations

Ferrous and nonferrous metals, paper, electronics, rubber, plastics, glass and textiles

\$117B Economic impact in US









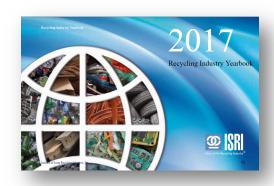




Today's U.S. Recycling Industry: A Snapshot







155,000 Direct Employment plus 378,000 jobs throughout the economy indirectly supported by recycling

130,000,000+ Tons processed annually

Iron/Steel	67.0	Copper	1.8	Plastics	3.5
Paper	47.2	Lead	1.2	Electronics	5.0
Aluminum	5.0	Zinc	0.12	Tire (#)	122
In millions of tons (or other unit shown)					

US - Part of the Global Industry



37

Total exported from U.S. (million metric tons)

\$17.9B

Value of U.S. materials exported

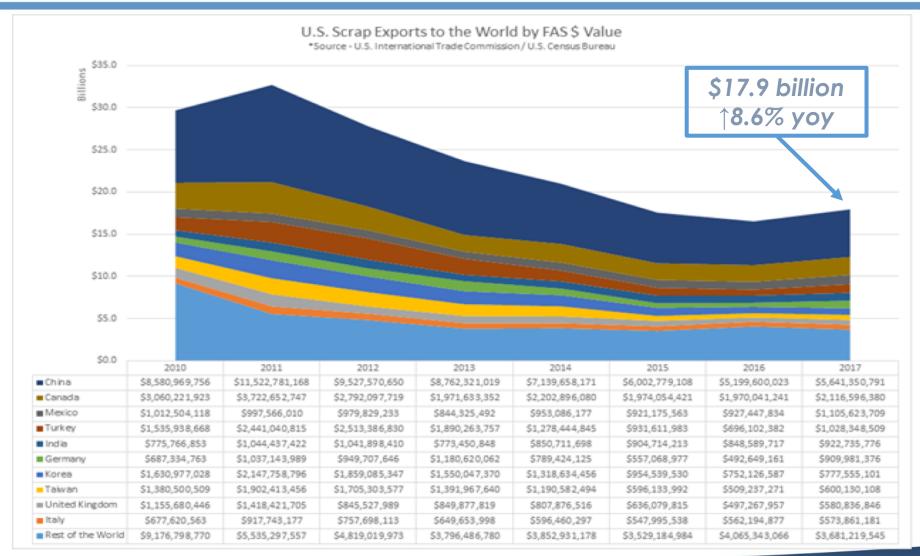
155

Destination countries to which recyclables were sold

- The U.S. is the largest exporter of scrap commodities in the world
 - Global scrap exports: 160 million tons worth \$70 billion
 - <u>Both</u> Quantity and Quality are key to the Strength & Success of that Link in the Supply Chain (scrap sold according to globally recognized specifications)
- With approximately 30% of scrap processed in US destined for export in recent years, the health of the US recycling industry is directly tied to the health of the global economy.

U.S. Scrap Exports



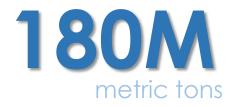


The Global Scrap Market

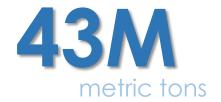




Total Global CONSUMPTION of All Recyclables



Total Global TRADE of All Recyclables



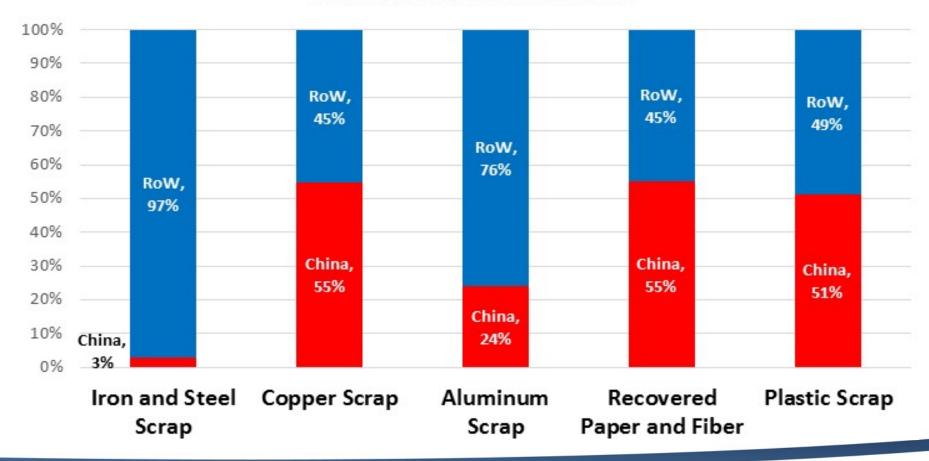
China's Total IMPORTS from the World

Why China is so Important to the Global Recycling Industry?



Mainland China's Share of Global Imports for Selected Recycled Commodities, 2016(p)

Source: UN Comtrade Database

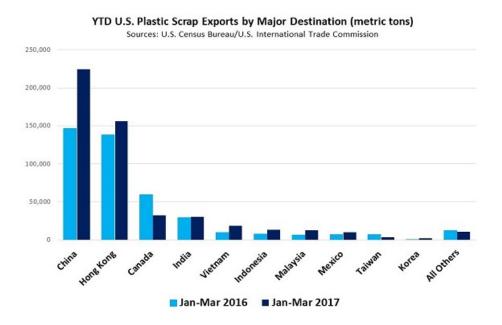


Impact of China on the U.S. Recycling Industry



31% of all US scrap commodity exports – worth \$5.6 billion – shipped to China in 2017.

- Recovered fiber: China is by far our most important market
- Plastics: China 67% of exports (although declining y-o-y)



U.S. Recovered Paper and Fiber Export Volume Top 15 Destinations (short tons)					
Country	2014	2015	2016	% Change 2015 to 2016	
China	14,292,148	14,979,164	14,527,207	-3.00%	
India	1,747,162	1,654,495	1,728,272	4.50%	
Mexico	1,321,855	1,298,741	1,646,529	26.80%	
Korea	1,112,355	1,120,781	1,140,405	1.80%	
Canada	710,905	650,515	717,540	10.30%	
Indonesia	368,863	318,884	419,583	31.60%	
Thailand	202,426	308,477	324,618	5.20%	
Taiwan	257,226	191,092	281,739	47.40%	
Vietnam	74,237	111,118	133,807	20.40%	
Italy	89,894	112,536	102,700	-8.70%	
Japan	51,910	84,342	101,228	20.00%	
Netherlands	80,373	90,650	88,467	-2.40%	
Colombia	73,428	81,788	88,309	8.00%	
Germany	36,122	53,761	52,949	-1.50%	
Chile	65,279	43,963	45,048	2.50%	

World's Largest Plastic Scrap Exporter: U.S.



Top 20 Plastic Scrap Exporters	2011	2012	2013	2014	2015
USA	2,127,877	2,011,095	1,909,535	2,172,382	2,043,124
Japan	1,631,455	1,673,620	1,681,733	1,670,228	1,606,271
Germany	1,462,561	1,511,349	1,324,863	1,453,609	1,376,833
United Kingdom	880,577	811,509	648,614	764,404	791,554
Netherlands	381,131	428,666	464,294	431,322	505,903
France	502,826	508,034	454,119	483,026	468,754
Mexico	442,197	522,143	517,067	862,744	449,974
Belgium	414,619	456,860	471,666	437,310	430,720
Spain	192,363	236,880	225,844	333,466	329,937
Thailand	232,170	263,128	317,540	346,912	265,390
Italy	269,601	228,019	191,621	175,859	223,076
Canada	197,638	203,046	170,783	193,037	208,939
Australia	151,209	193,087	155,085	185,705	206,060
Rep. of Korea	161,358	182,975	183,291	192,851	187,609
Malaysia	153,865	197,598	250,809	247,007	182,271
Poland	102,736	101,301	99,431	138,834	166,378
Austria	133,556	170,389	172,440	182,299	149,306
Indonesia	166,430	204,750	231,747	193,842	148,735
Other Asia, nes	164,825	157,914	120,210	146,153	145,125
Czechia	102,361	115,307	128,813	120,879	123,793
Hong Kong*	863,754	308,016	190,491	82,698	90,808
Rest of World	1,755,980	1,660,216	1,934,263	1,946,799	1,740,598
Grand Total	12,491,089	12,145,903	11,844,060	12,760,676	11,841,157

^{*}Domestic exports, does not include re-exports

Source: UN Comtrade database.

What is Happening in China?



China is facing a Severe Environmental Crisis

- 60% of groundwater unfit for human consumption ... 19% of arable land contaminated with heavy metals ... only 84 out of 338 prefecture-level or higher cities attained the national standard for air quality ...
- Rising social pressure: pollution related social incidents leading cause of social instability

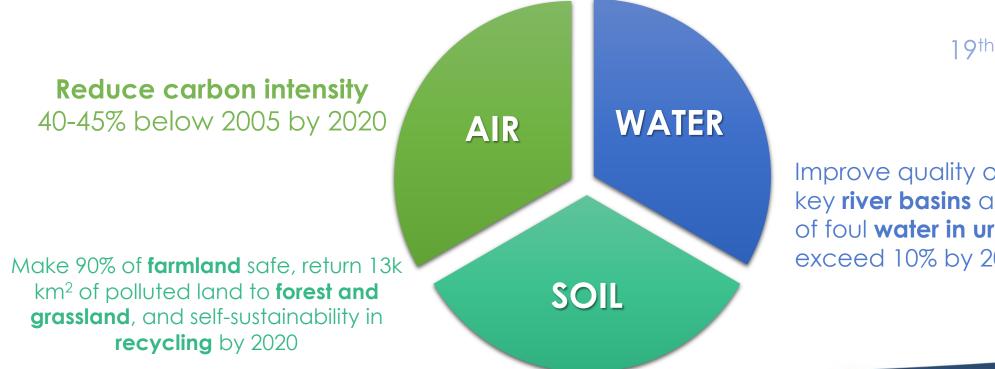
Result of many factors, including:

- Decades of putting economic growth above the environment
- Lack of enforcement of existing environmental laws
- Lack of centralized control
- Staggering increase in urbanization
- 100 million new cars on the road in the last decade

China's Environmental Challenge



"The modernization that we pursue is one characterized by harmonious coexistence between man and nature...We will launch initiatives to make the party and government offices do better when it comes to conservation, and develop eco-friendly families, schools, communities and transport services."



Xi Jinping 19th Party Congress October 18, 2017

Improve quality of >70% of seven key river basins and the amount of foul water in urban areas not to exceed 10% by 2020

Moves by China to "Control" Imports



2004: AQSIQ Export & Import Licensing Requirements Introduced

2016/7: Green Fence & National Sword initiated to focus on quality



April 2017: President Xi-led government reform taskforce approved expanding catalogue of prohibited solid waste materials allowed for import.

July 2017:

- WTO Notification G/TBT/N/CHN/1211 ("the ban")
- WTO Notification G/TBT/N/CHN/1211 (identification standard)
- Revised GB Standards Proposed (0.3% "carried waste" standard)
- "Implementation Plan to Enhance Solid Waste Import Management System by Prohibiting the Entry of Foreign Waste"

Jan 1. 2018: Ban on 24 categories of materials, including post-consumer plastics and mixed-paper

March 1, 2018: Carried Waste Standard went into effect

While Within China ...



July 2017: Country-wide inspection/enforcement actions

- Environmental inspections found 65% of 1,700+ enterprises non-compliant.
- Permits revoked, not issued or with smaller quotas; Smaller or lost orders
- Enterprises closing (e.g., lost customers)

Restrictions on quotas within import licenses

March-Dec 2018: "Blue Sky" 2018

• General Administration of Customs focused on "combating smuggling "foreign garbage" in the forms such as false declaration and concealing as well as transporting by sea or land where there are no customs"



China's Multi-Prong Strategy



"...comprehensively prohibiting entry of foreign waste, and perfecting the solid waste import management system...so as to vigorously develop a circular economy, truly improve environmental quality, and protect the safety of the national's natural environment and the people's health."

Reform and Implementation Plan to Enhance Solid Waste Import Management System

July 27, 2017

- Prohibit import of "solid waste with major environmental hazards & intense public reaction by the end of 2017"

 Mixed paper, post-consumer plastics
- Plant imports that can be replaced with domestic resources by end of 2019 Rumors nonferrous metals next to be banned, especially insulated wire & motors
- Raise thresholds for importation
 0.5% "carried waste" threshold for most imports

China's Multi-Prong Strategy



"...comprehensively prohibiting entry of foreign waste, and perfecting the solid waste import management system...so as to vigorously develop a circular economy, truly improve environmental quality, and protect the safety of the national's natural environment and the people's health."

Reform and Implementation Plan to Enhance Solid Waste Import Management System July 27, 2017

- Greater customs enforcement to reduce smuggling/illegal wastes 100% inspection
- **5** Refine laws, regulations & related systems Reductions in import licenses and quotas
- Increase domestic recycling
 Strategic assets

Main Misconceptions of China's Policies



Retaliation against Trump Administration Policy

No – the ban and imposition of strict standards is being imposed on all imports into China, irrespective of source.

Using the catch phrase, "National Sword"

No – "National Sword" targets <u>illegal</u> imports of prohibited <u>waste</u>, which ISRI supports; import restrictions, including the ban and strict quality standards, are imposed on <u>legitimate</u> imports of <u>scrap commodities</u>, which concerns us in terms of global supply chains

Scrap is also a waste, as translated from Chinese

No – <u>Scrap is Not Waste</u> but a valuable commodity used in manufacturing to save energy and emissions that come with the use of virgin materials.

The ban/standards will reverse China's pollution

Not quite – without access to high quality scrap materials, Chinese manufacturers will have to rely on the use of virgin materials, that require energy and emit GHGs in their production.

Biggest Challenges



- Meeting strict quality standards
 - Unclear definition of "carried waste"
- ☐ Inspection inconsistencies
 - Pre-shipment vs Ports of Entry
 - One port vs another
 - One official vs another
- Market competition
 - China's scrap eventually to compete in other markets

MRF Stockpiling
Divert to landfill
Finding new markets

Looking Ahead – What's next



More **environmental compliance** inspections on Chinese enterprises

Low numbers of **approved imports**

Potential **ban** on additional paper, plastics and nonferrous metals



Looking Forward



 Market growth opportunities in Southeast Asia (Vietnam, Malaysia, Thailand, Indonesia), India, Mexico, Canada and the Netherlands

Plastic Scrap Export Growth Markets – PE					
Country	2016 (mt)	2016 YTD (mt)	2017 YTD (mt)	YTD Vol Growth (mt)	YTD Growth (%)
India	61,255	47,884	74,679	26,795	56.00%
Vietnam	18,290	13,516	29,518	16,002	118.40%
Malaysia	17,221	12,809	28,015	15,206	118.70%
Thailand	1,223	810	6,214	5,404	667.00%
Ecuador	192	12	2,297	2,285	19051.10%
Korea	224	101	1,972	1,871	1851.20%
Singapore	1,861	849	1,843	994	117.00%

Demand growth in the United States

What Can/Should we do?

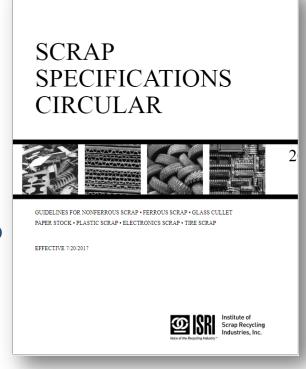


Quality, Quality
Successful recycling is dependent upon Quality

Everyone along the recycling chain has a role:

- Manufacturers need to Design for Recycling™
- Municipalities need to educate the public about what can & cannot be recycled, and design collection systems so as to not mix wastes with recyclables
- Recyclers including MRFs need to continue to innovate, looking for ways to change processes and/or technology to increase yields of high quality recyclables

Most importantly, all of us - industry trade associations, governments, brand owners, industrial consumers and others – need to work together, to identify solutions to the ever changing stream of consumer products entering recycling, while also ensuring we meet the needs of the industrial consumer, at the end of the chain, to ensure a quality commodity product.



www.isri.org/specs

The Conversation Continues...



ISRI2018 | LAS VEGAS | April 14 – 19, 2018



The ISRI Convention and Exposition is the largest event in the recycling industry year-after-year. Nowhere else in the world can you access this many recycling professionals, state-of-the-art equipment and technology, and industry information - all in one place; all for the taking.

FOLLOW US



Institute of Scrap Recycling Industries, Inc.

rwiener@isri.org

