

U.S. Recycling Industry Drivers, Outlook, and Resiliency

Metropolitan Washington Council of Governments
December 6, 2018



Voice of the Recycling Industry™



1,300+
Members

4,000+
Locations

Manufacturers,
Processors
Industrial Consumers,
Brokers, Traders,
Equipment/Service
Providers



Ferrous & non-ferrous metals



Paper



Plastics



Tire & Rubber



Textiles



Electronics

OUR MISSION

To promote safe, economically sustainable & environmentally responsible recycling through networking, advocacy & education.

Workplace Safety



Responsible Recycling



Education, Training & Networking



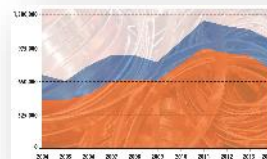
Specifications



Design for Recycling™



Market Intelligence



Awareness



Free & Fair Trade



U.S. Recycling Industry: A Snapshot



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)					



\$117B Economic activity **\$13.2B** federal, state & local tax revenue

Basic Concepts: Successful Recycling

What is Recycling? include reuse? Is waste-to-energy recycling?

What does it mean for an item to be “recyclable?” Is an item recyclable because it has a label? 

What are recyclables?

Who is a recycler?

Households?



Municipalities?



Scrap Recyclers?



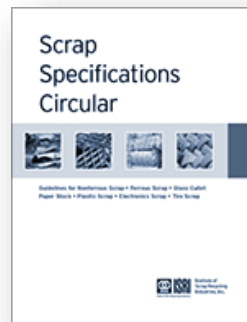
Manufacturers?



#1 - Recycling is a Commodities Business Driven by Demand

It doesn't matter how much scrap is collected and processed, if there is no market on the other end to utilize the material, the recyclables will not move ... and recycling has not occurred.

Manufacturers will only purchase the scrap if it meets quality requirements

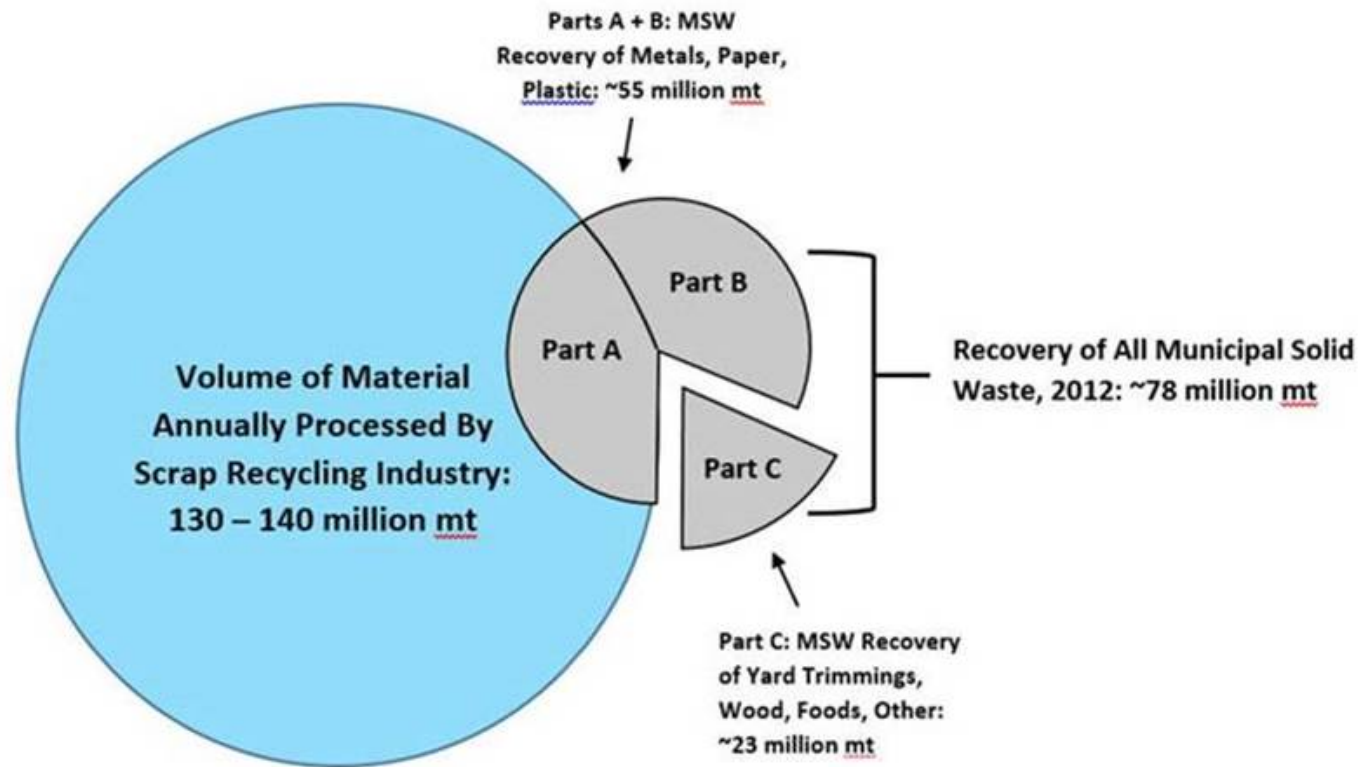


ISRI's Scrap Specifications play a key role

- Provide the global standard for consistency & quality
- Reflect tolerances allowed by manufacturers
- Common language
- Introduced Inbound MRF Specifications last year

Successful Recycling

#2 – Recycling is far more than residential recycling ... it is “Bigger than the Bin”





Successful Recycling

70% of recyclables come from **commercial & industrial** sources

Generally “source separated” therefore ...
... no cross contamination





Successful Recycling

Although only 30-40% of supply, residential recycling is the biggest challenge.



Why?

- Confusion as to what can be put in the bin
- Wishcycling
- Multiple residential collection systems: dual stream, single stream & one-bin
- Residential recycling infrastructure put in place over last 20 yrs designed to produce grades demanded by China (largest customer)



Successful Recycling

#3 - Recycling is a Global Business: health of the recycling industry is based on the market based movement of scrap across borders

800 million metric tons
Commodities

Total Global Consumption of Scrap

180 million metric tons

Total Global trade in Scrap

The U.S. - and China – are/were key players in the global scrap market



37 million metric tons
countries

Total scrap exports from U.S. to 155

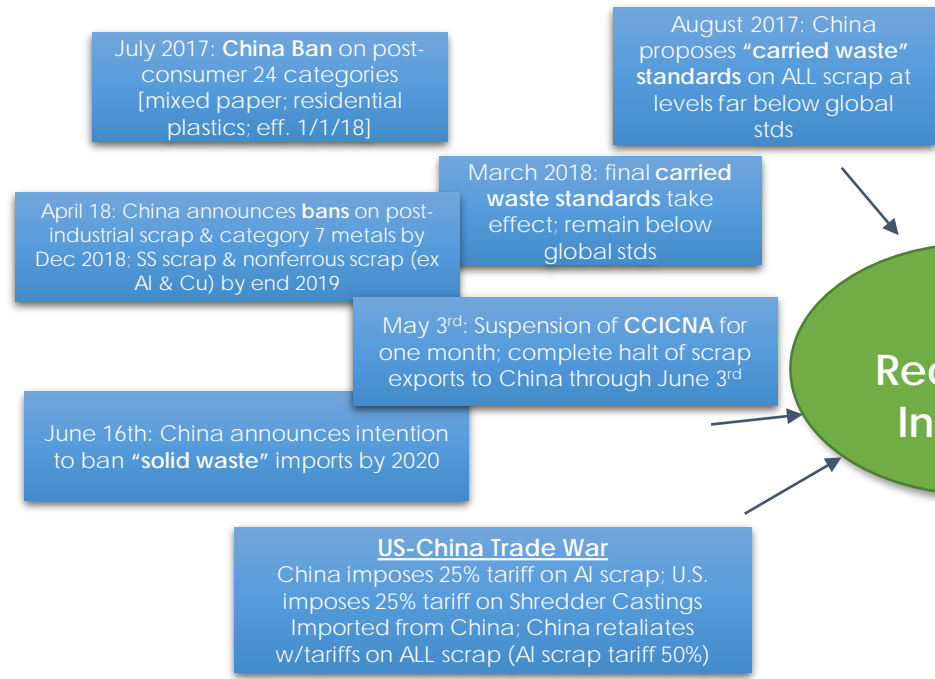
43 million metric tons
World

Total imports into China from the

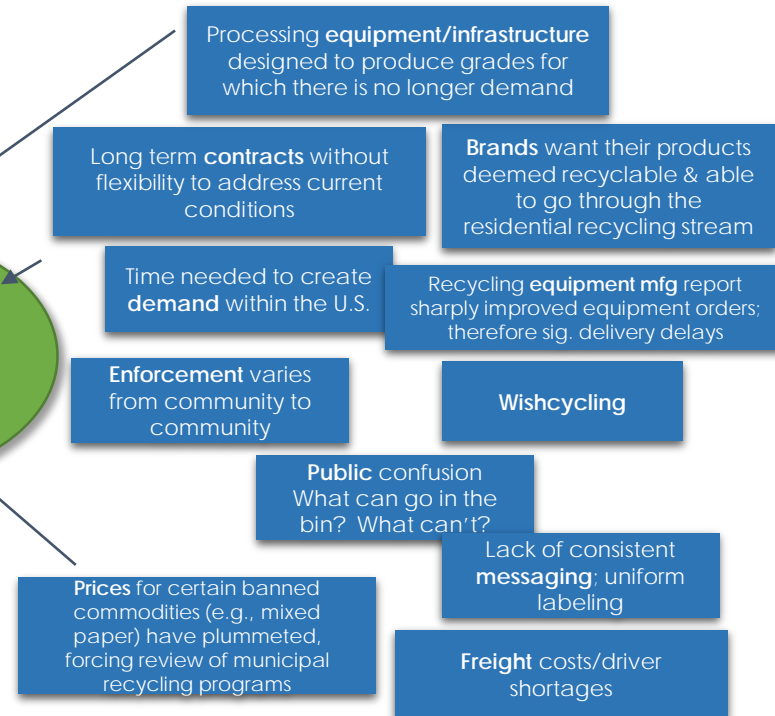


Recent Pressures Placed on U.S. Recycling Industry

7/27/17: Chinese State Council Policy Statement



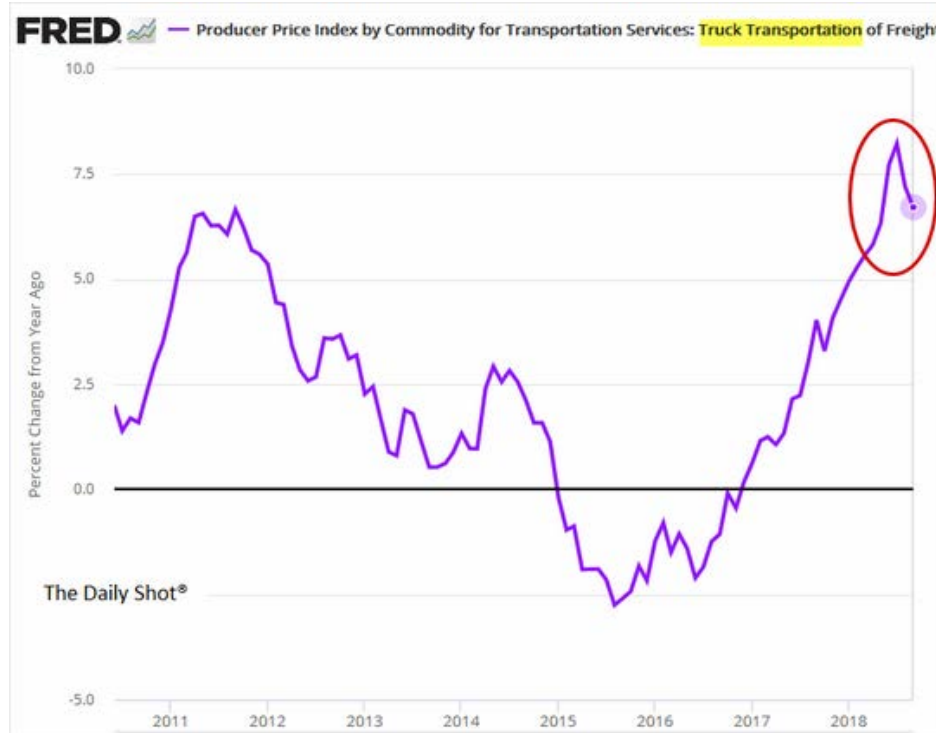
Exposes Domestic Challenges



Spring/Summer 2018: Other Int'l Markets

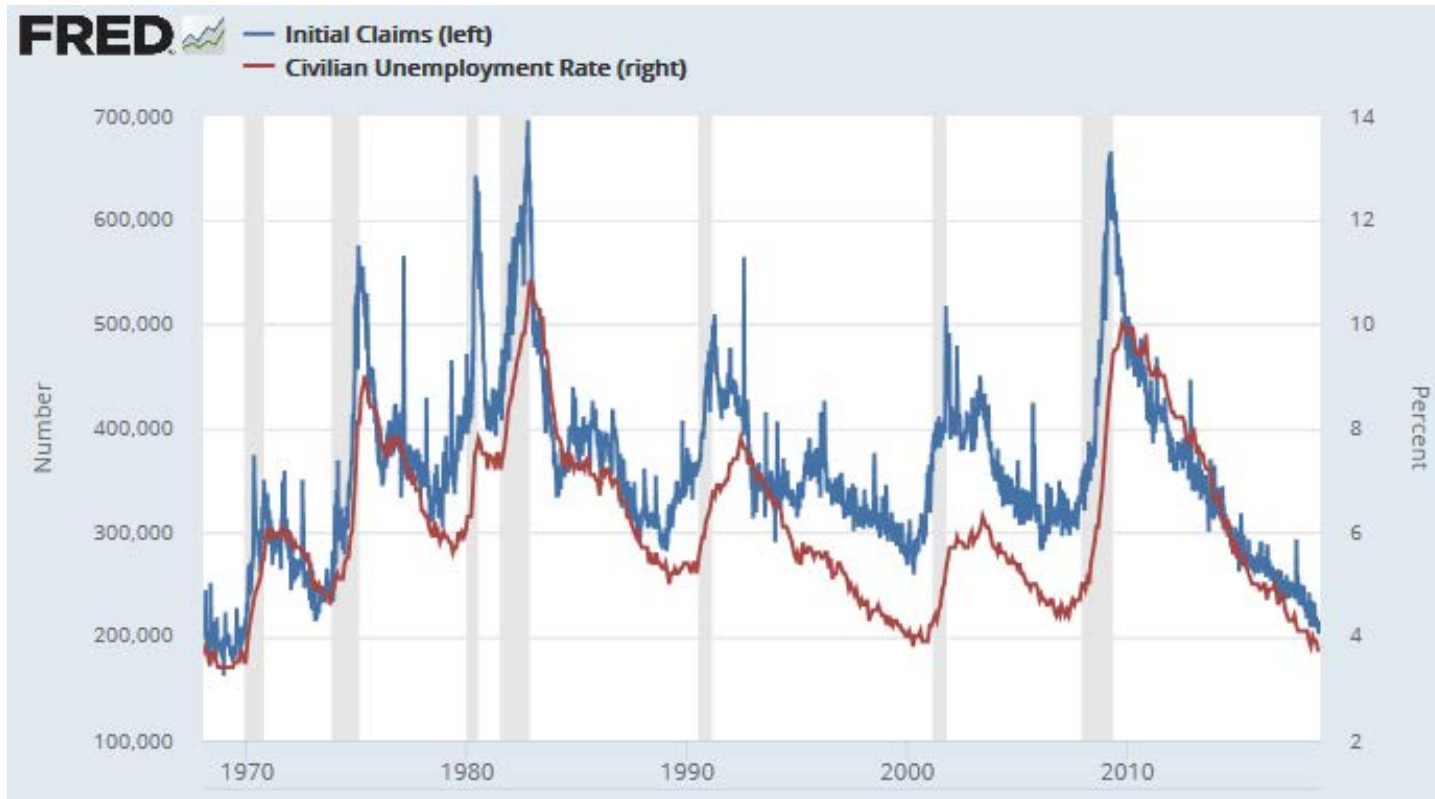
August 2018: US announces doubling its import tariffs on **Turkish steel** (50%) & Al (20%) at time of heightened Turkish market volatility

Other pressures: Transportation Costs



According to the Bureau of Labor Statistics, the producer price index for truck transportation has moderated recently, although as the Wall Street Journal reports, “transportation/logistics bottlenecks remain, {but} they don't appear to be worsening.”

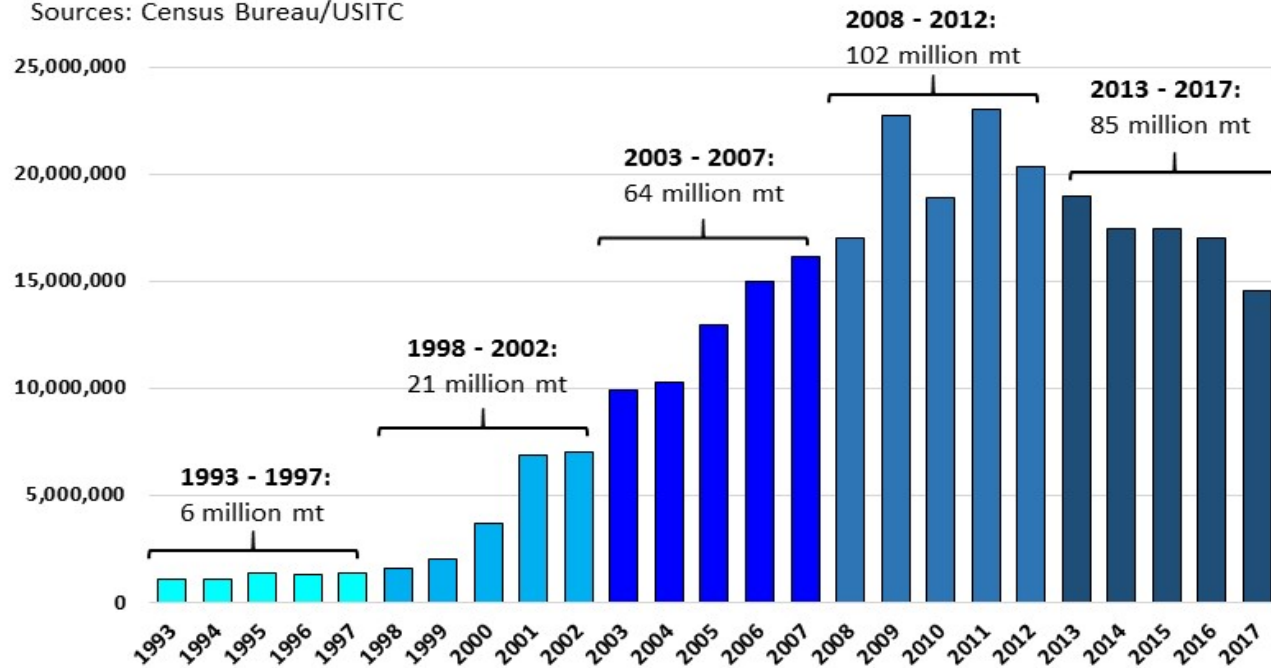
Other Pressures: Tight Labor Markets



Snapshot of Scrap Trading with China

U.S. Exports of All Scrap Commodities to China (incl. Hong Kong) 1993-2017 (metric tons)

Sources: Census Bureau/USITC

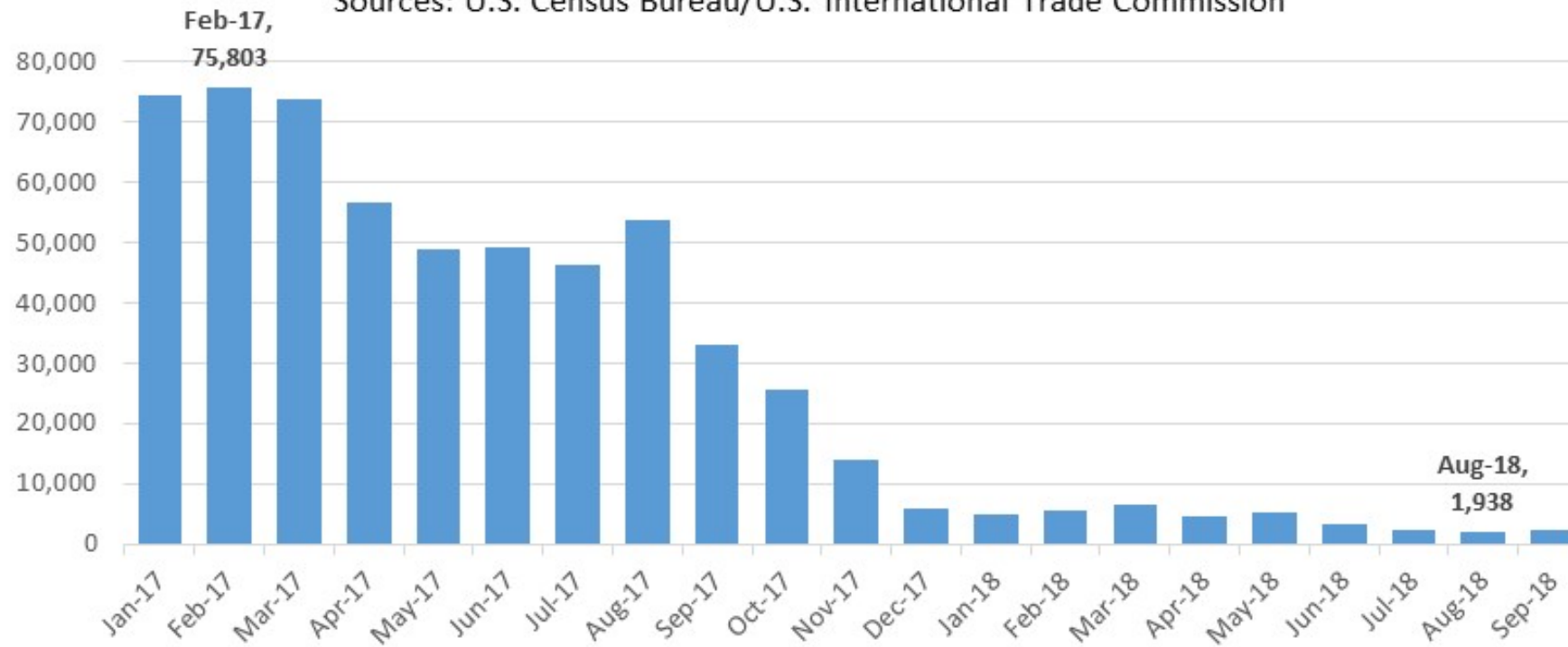


U.S. Scrap Exports to Mainland China	
Jan-Sep 2017	11.3mmt
Jan-Sep 2018	6.8mmt
YTD % CHG	-40%

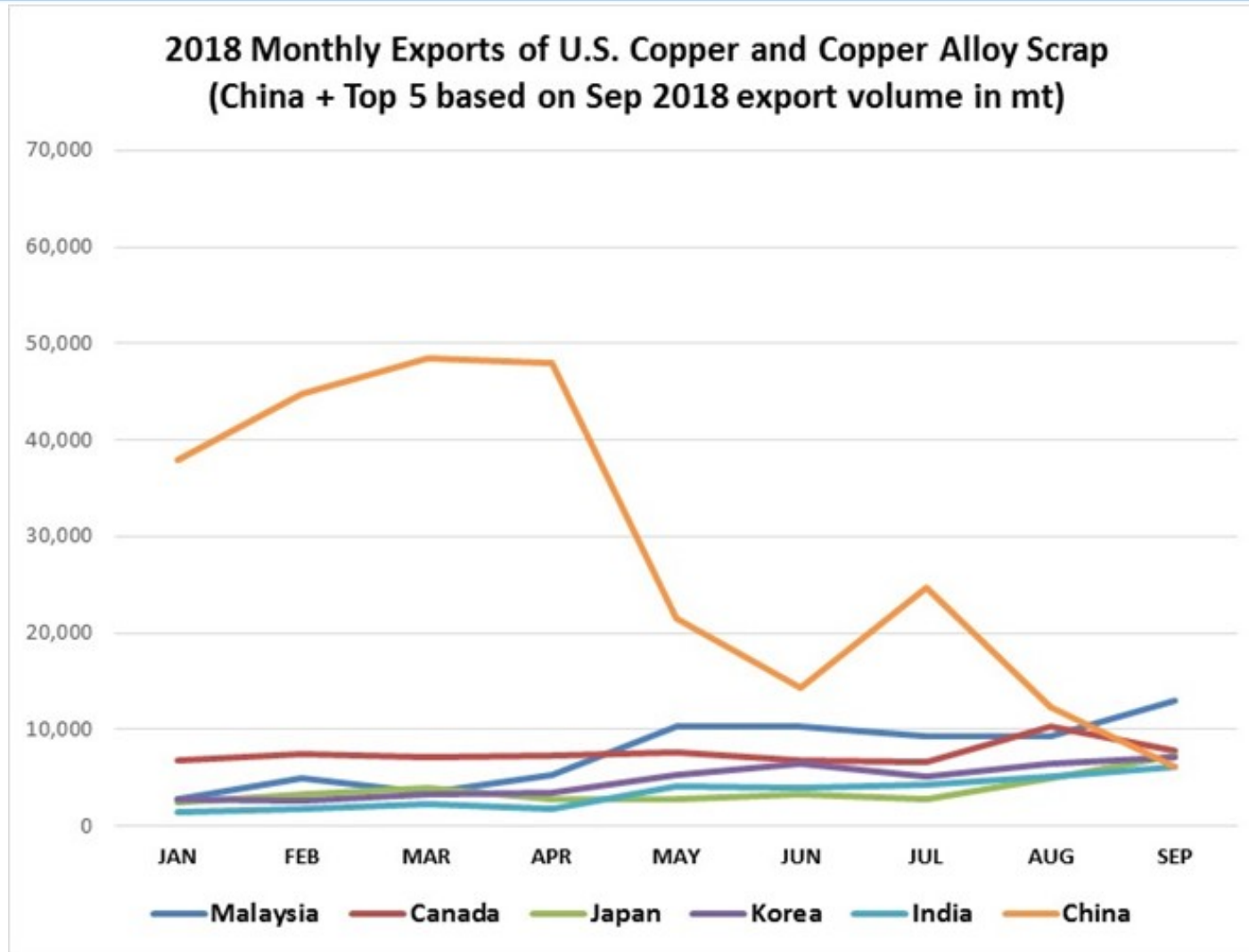
Over-reliance on China Has Come at a Cost

Monthly U.S. Plastic Scrap Exports to Mainland China, Jan 2017 - Sep 2018 (metric tons)

Sources: U.S. Census Bureau/U.S. International Trade Commission



Over-reliance on China... (cont.)

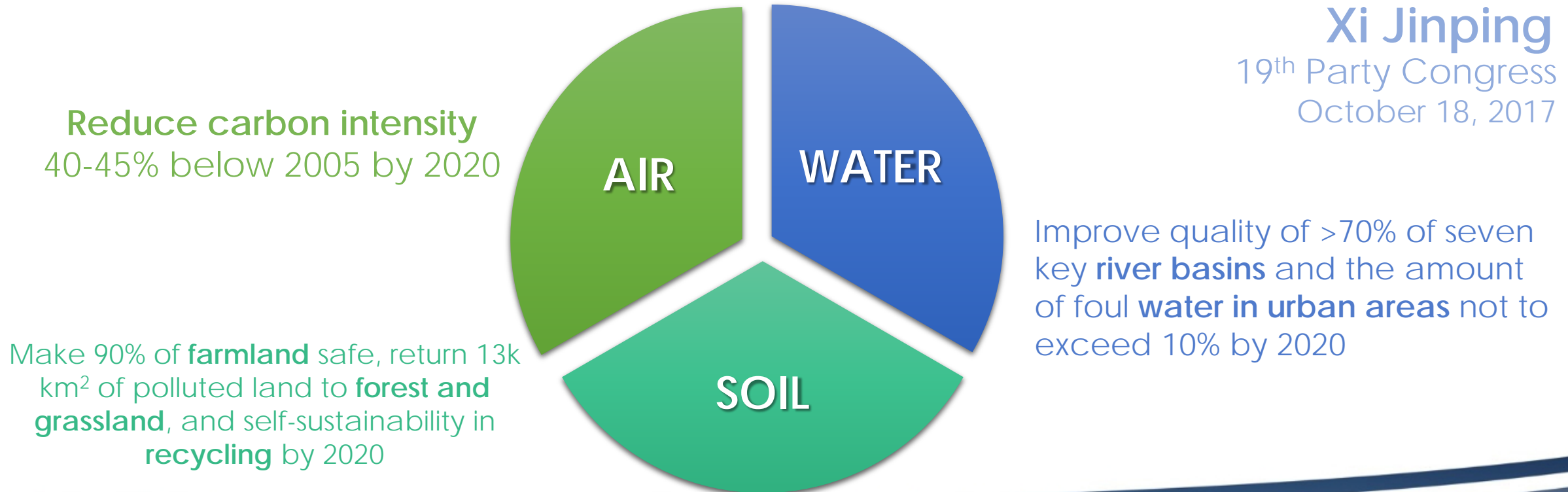


China's Environmental Challenge

"The modernization that we pursue is one characterized by harmonious co-existence 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



China's Multi-Prong Strategy

- 1** Prohibit import of “solid waste with major environmental hazards & intense public reaction by the end of 2017”
Mixed paper, post-consumer plastics
- 2** Halt imports that can be replaced with domestic resources by end of 2019
Prohibitions coming on nonferrous metals (e.g., insulated wire & motors), plastics and other metals
- 3** Raise thresholds for importation
0.5% “carried waste” threshold for most imports
- 4** Greater customs enforcement to reduce smuggling/illegal wastes
100% inspection
- 5** Refine laws, regulations & related systems
Reductions in import licenses and quotas
- 6** Increase domestic recycling
Strategic assets

“Perfecting the solid waste import management system...”
Beautiful China by 2050

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Strategic assets
- “BLUE SKY”**
ISRI does not support
- “NATIONAL SWORD”**
ISRI supports
- 

Govt is directing funding/education towards enhancing domestic recycling and equipment development with view towards total self-sufficiency and potential net-exports

Other Pressures...

- **Reactive Import Restrictions Across Southeast Asia**

Temporary (3mo – 2yr) import bans on plastic scrap and electronics; greater enforcement of import licenses for recovered paper; stricter pre-shipment requirements

- **Proposed Basel Convention Classification of Plastics as Hazardous**

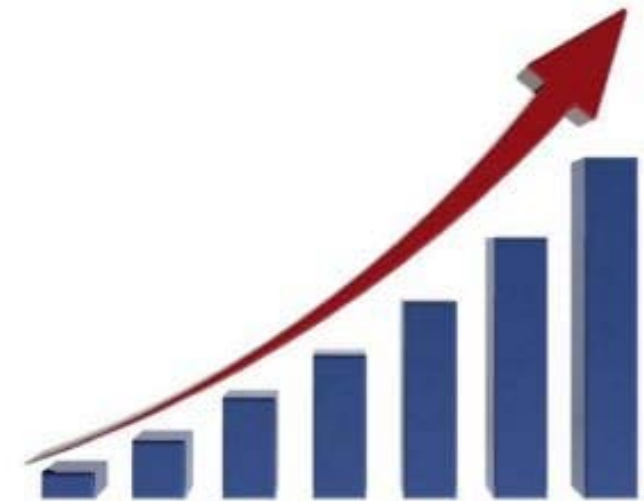
Would impose onerous administrative burdens in the very limited circumstances where U.S. plastic scrap exports/imports would be allowed

Turning Challenge into Opportunity

Market growth in other regions

Market growth at home

Market growth driven by competitive advantages

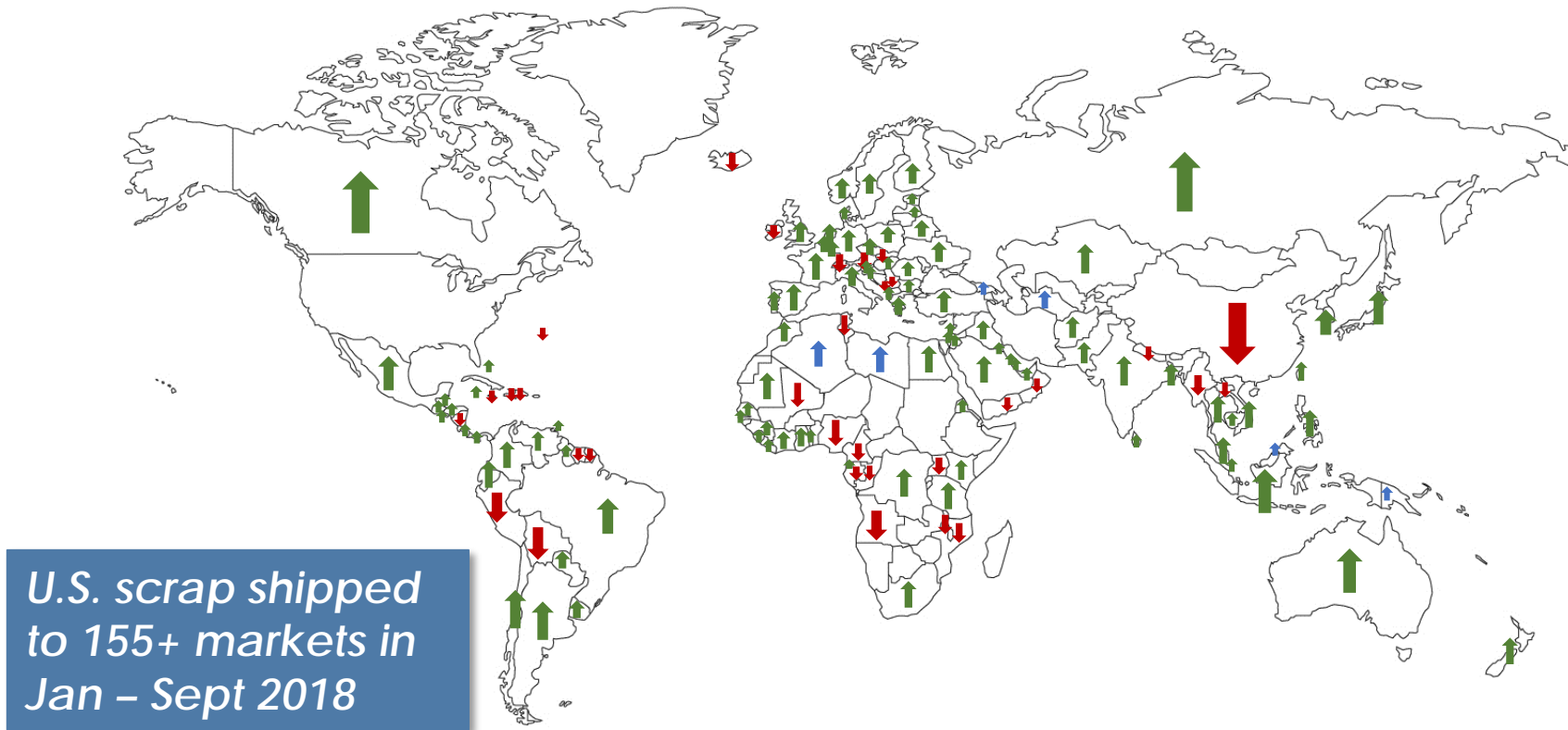


Year-to-Date EU-28 Scrap Exports to Mainland China by Major Commodity (metric tons)

	Jan-Jul 2017	Jan-Jul 2018	YTD % CHG
Plastic Scrap	825,836	48,177	-94%
Paper & Fiber	5,026,246	2,186,653	-56%
Ferrous Scrap	241,824	85,874	-64%
Copper Scrap	512,385	318,295	-38%
Aluminum Scrap	136,402	116,625	-14%

Source: Eurostat

As a Result, Trade Shifts



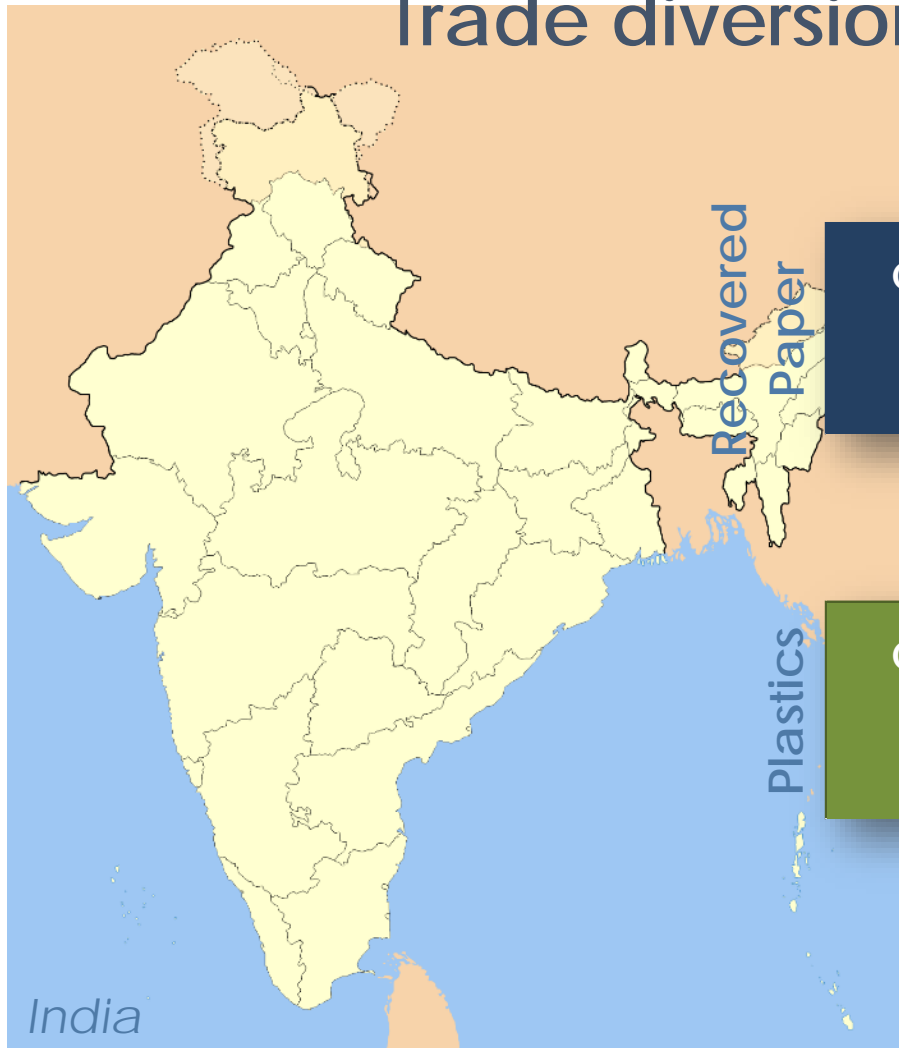
Trade diversion keeps materials moving...



COUNTRY	FAS Value / Metric Tonnage			% Change YTD
	2017	Jan-Sept 2017	Jan-Sept 2018	
Indonesia	\$76,327,142	46,551,127	102,381,872	120%
	438,917	254,372	805,832	217%
Malaysia	\$4,423,641	3,578,492	12,975,437	263%
	23,569	17,317	82,700	378%
Thailand	\$41,992,638	31,103,695	34,339,375	10%
	282,221	204,641	285,816	40%
Vietnam	\$58,125,566	31,114,770	88,745,027	185%
	399,652	209,905	623,890	197%

COUNTRY	FAS Value / Metric Tonnage			% Change YTD
	2017	Jan-Sept 2017	Jan-Sept 2018	
Indonesia	\$5,686,338	\$7,427,410	\$5,282,336	-29%
	18,888	25,162	15,929	-37%
Malaysia	\$15,312,713	16,853,869	53,198,232	216%
	60,814	70,606	188,905	168%
Thailand	\$6,003,468	3,602,836	37,691,272	946%
	18,545	13,764	93,469	579%
Vietnam	\$24,657,318	27,981,835	26,818,534	-4%
	60,300	78,890	73,076	-7%

Trade diversion keeps materials moving...



COUNTRY	FAS Value / Metric Tonnage			% Change YTD
	2017	Jan-Sept 2017	Jan-Sept 2018	
India	\$377,400,921	\$242,852,595	\$401,285,952	65%
	1,924,872	1,139,607	2,549,435	124%

COUNTRY	FAS Value / Metric Tonnage			% Change YTD
	2017	Jan-Sept 2017	Jan-Sept 2018	
India	\$58,343,736	\$47,292,298	\$38,785,048	-18%
	123,134	95,858	102,074	6%

...risk of copycat restrictions...

Vietnam

Port capacity constraints lead first to a moratorium on plastics and later an import ban; increased enforcement of paper import licenses

Thailand

Import ban through 2021 on plastics and electronics

Indonesia

100% Pre-shipment inspections on recovered paper

Malaysia

Three-month import ban on plastics as government investigated illegal recyclers; now considering options for long-term import controls (e.g., quotas); plastic scrap imports allowed only from U.S. and Japan

India

Sensitive to being the next “dumping ground”

Turning Challenge into Opportunity

Market growth in other regions

Market growth at home

Market growth driven by competitive advantages

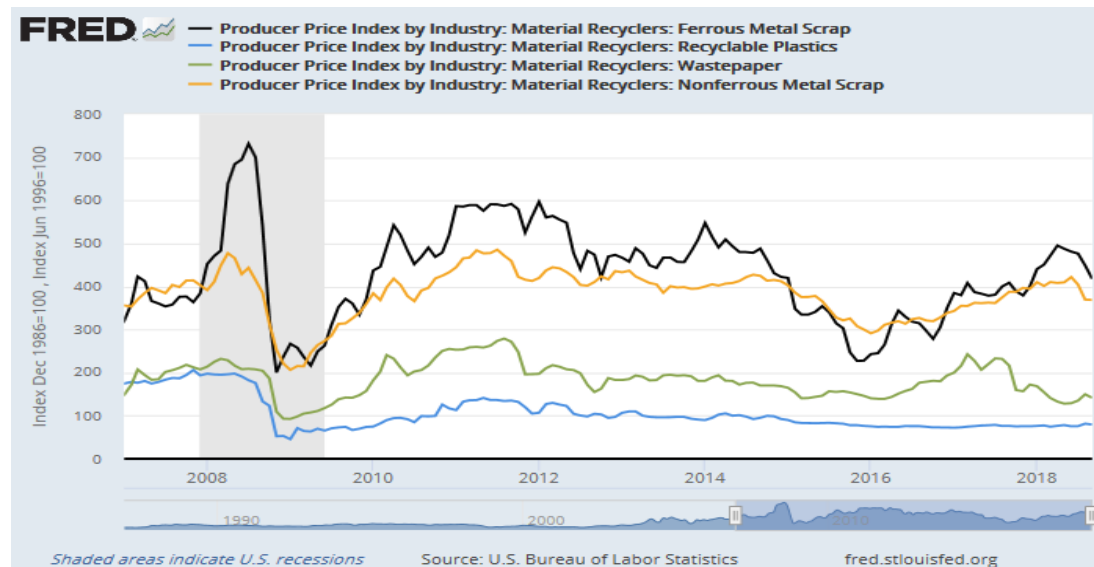


Effect of Strong Economic Growth

U.S. Manufacturing PMI At 59.8 in September

Economic activity in the **manufacturing sector** expanded in September, and the **overall economy** grew for the 113th consecutive month, say the nation's supply executives in the latest **Manufacturing ISM® Report On Business®**.
“The September PMI® registered 59.8 percent, a decrease of 1.5 percentage points from the August reading of 61.3 percent.

But scrap prices have not been keeping pace



Investment in technology upgrades

By recyclers to meet strong consumer demand for a higher quality, recycled product

More recycling closer to home

Build new or upgrade existing consumer capacity that generate demand

U.S. infrastructure spending



Investments being made in new capacity

- New greenfield paper mills planned in North America will use significant amount of recovered fiber from the U.S.
 - Pratt, in Ohio
 - WestRock, in Mexico
 - Green Bay Packaging, in Wisconsin
- Chinese investments in Maine, West VA, Wisconsin, Kentucky
- European investments

Outlook Going Forward

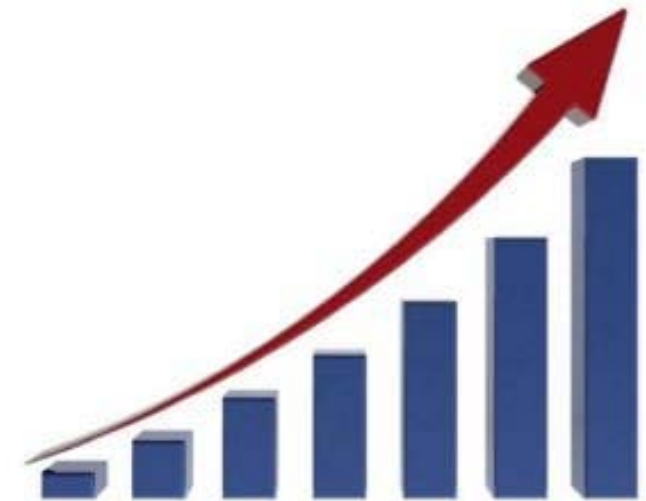
- **The U.S. scrap recycling is in the middle of a restructuring phase.**
- **Focus on **QUALITY** and consistency to meet consumer demands at home and abroad has become the key.**
- **Targeted investment in recycling equipment, technology, and consumption could lead to further consolidation.**
- **Exporters need to develop new overseas markets, but quality concerns are everywhere.**
- **Scrap recyclers are resilient!**

Turning Challenge into Opportunity

Market growth in other regions

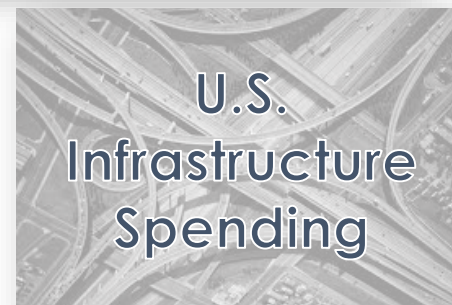
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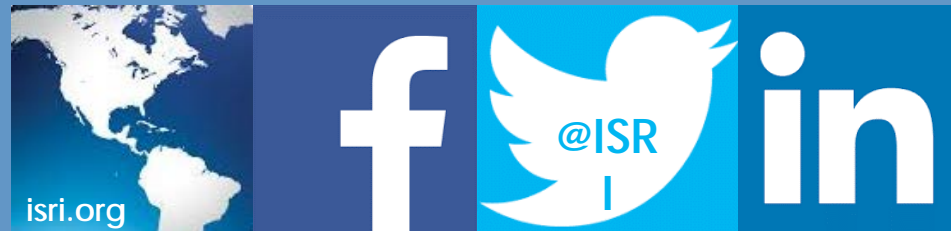




Opportunities



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