

New challenges for MNEs, trade and environment: the point of view of Veolia



PECC, Vancouver, October 2019

Part I – Adapting to the new Chinese regulation on waste imports: the case of plastics markets



After cement and steel, plastic is the 3rd most manufactured material

- In the last 50 years, the production of plastic has increased by 20.
- It is expected to quadruple between now and 2050, driven by demand from emerging and developed economies alike.
- Estimated turnover of the worldwide plastics market: approx. €300 billion.
- Size of the recycled plastics market: 1/15th of this amount, or €20 billion.
- A highly fragmented plastic waste market, with a large part played by the informal sector



330 million metric tons in 2016



of plastic was produced in 2015.



of petroleum worldwide is used to produce plastic.

The under-recycling of plastics is widespread



- The rate of plastic recycling is very low in comparison with other materials: globally, it is just 9%, compared to 80% for ferrous metals, 60% for paper and 50% for glass.

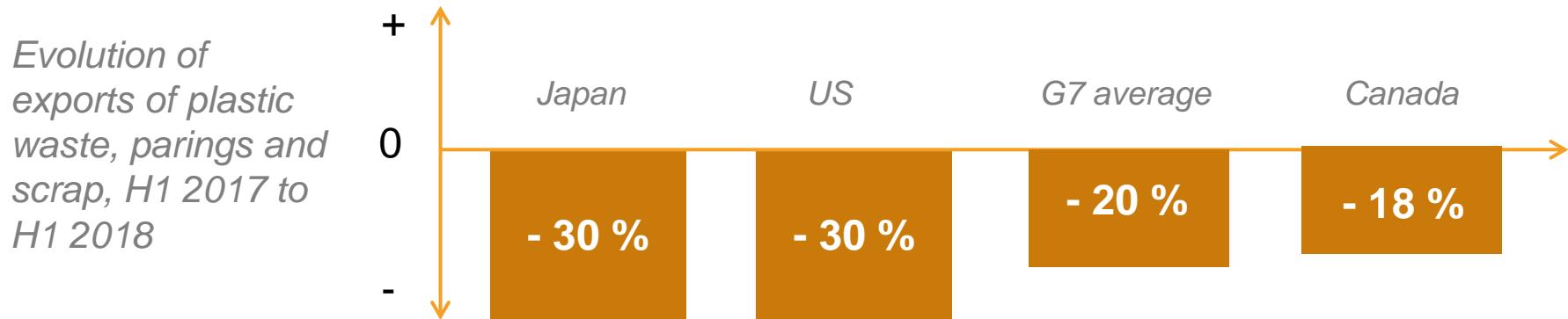
Chinese new trade rules

- In July 2017, the Chinese government announced a new policy named “National Sword”, that prohibits plastic waste and sorted plastic of a certain quality from entering its territory (and the same for papers).
 - *China refusal to become the world dumping ground is not a 100% ban.*
 - *China still accepts scrap, but it has set such a high bar for the cleanliness of the imported materials, that most people in the industry considered it is a “ban”.*
- In April 2018, China's Ministry of Ecology and Environment added 32 types of scrap materials (e.g.: automotive parts, parts for ships, wire scraps...) in the imports' regulation:
 - *16 materials by the end of 2018,*
 - *Another 16 at the end of 2019.*



A cascading effect on the waste recycling system (1)

○ G7 plastic waste exports fell after China's import ban



Sources: US Census Bureau, Japan e-Stat, Statistics Canada. FT

○ In Japan:

- A major impact on Japanese economy, which must cope with a noticeable increase in the volume of plastic waste to be recycled within its borders.

○ In the US:

- According to an American study from the University of Georgia, 111 million metric tons of plastic that was set to have been exported to China by 2030 must find a new destination for treatment.
- Before the ban, only 10 % of the plastic in the US was being recycled.
- Many American companies have to send recycling to landfill, because there is nowhere else to put it.

A cascading effect on the waste recycling system (2)

- o China is no more the centre of the global recycling trade.

- *It has transformed itself from being the world's largest processor of plastic scrap to being the world's largest importer of plastic pellets.*
- *The burden of recycling is shifting back to other countries.*

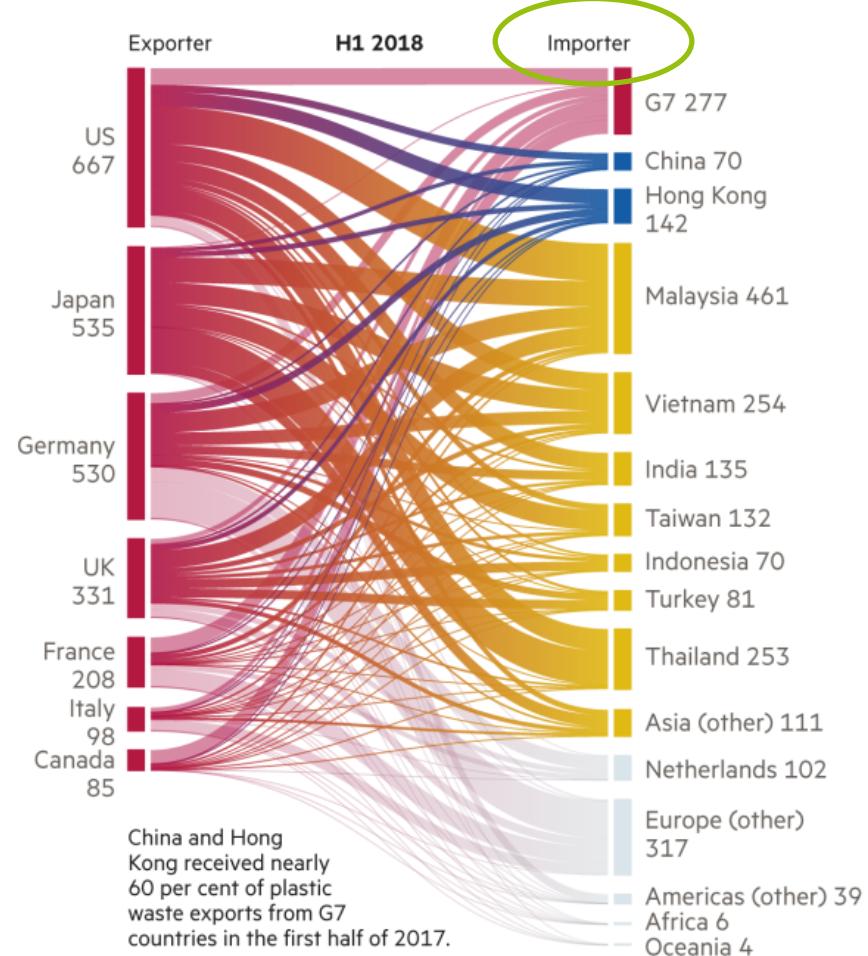
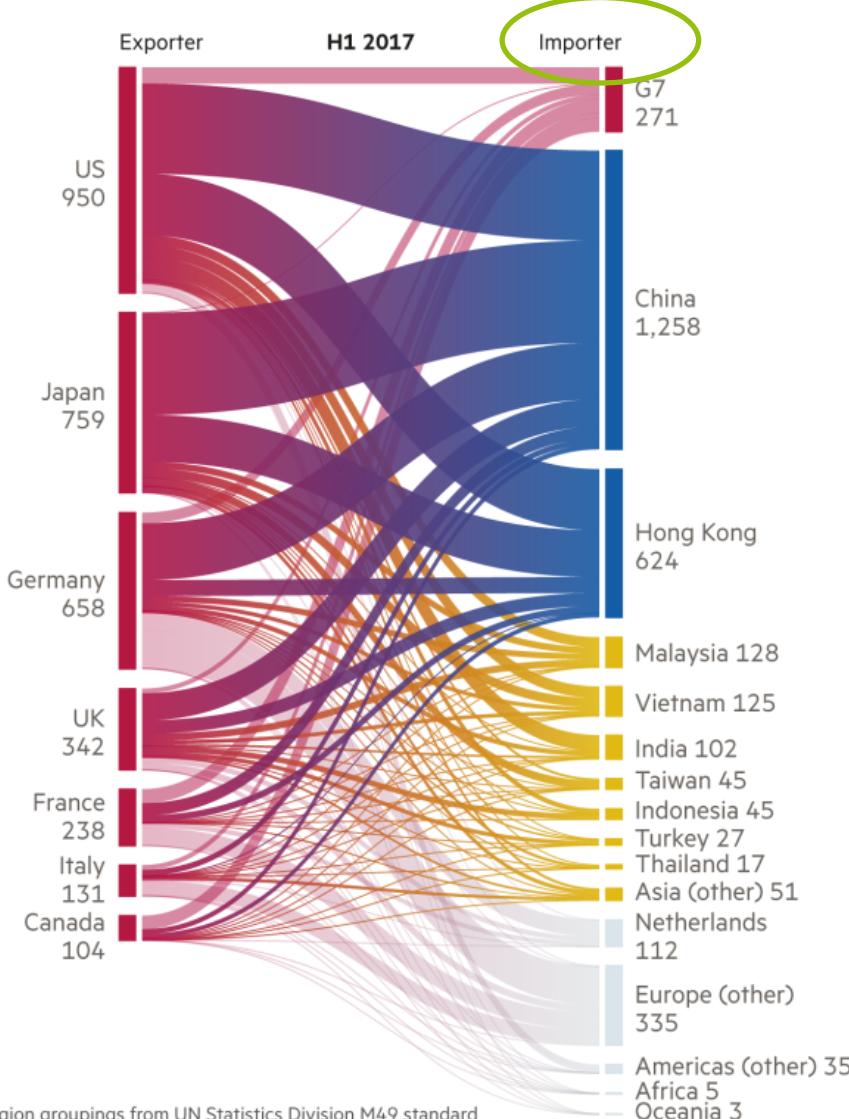
- o Since China closed its doors, Malaysia, Indonesia, Thailand, Vietnam, India..., have seen their plastic waste imports soar.

- *Malaysia became the world largest importer of plastic scrap*
- *x 2 plastic scrap imports by Vietnam between the 2017 first half and the 2018 first half*
- *Development of illegal imports, in violation of local environmental regulations*
- *These Asian countries, which have underdeveloped infrastructure, started to limit imports in their turn or to toughen their regulations.*



In one year, plastic waste flows radically changed

Exports of plastic waste, parings and scrap from G7 countries



Region groupings from UN Statistics Division M49 standard
Data as of Sep 19-Oct 1, 2018
Sources: US Census Bureau; Japan e-Stat; Eurostat; Statistics Canada
© FT

Source: FT

Following a Chinese crackdown on imports of plastic waste, which came into effect at the beginning of 2018, exports from the G7 fell by more than 20 per cent overall. The share of the remaining exports that went to China and Hong Kong fell below 10 per cent, with other Asian countries – particularly Malaysia – making up much of the shortfall.

Visual journalism: David Blood, Liz Faunce, Aendrew Rininsland

Plastics recycling markets are undergoing an unprecedented disruption

Closure of Chinese market for waste imports

Saturation of recycling waste infrastructure in developed countries and diversion to landfill or incinerators

Cities that received revenue from recycling programs now have to pay for the disposal of plastic waste

Plan to build hundreds of new sorting facilities and recycling plants in developed countries

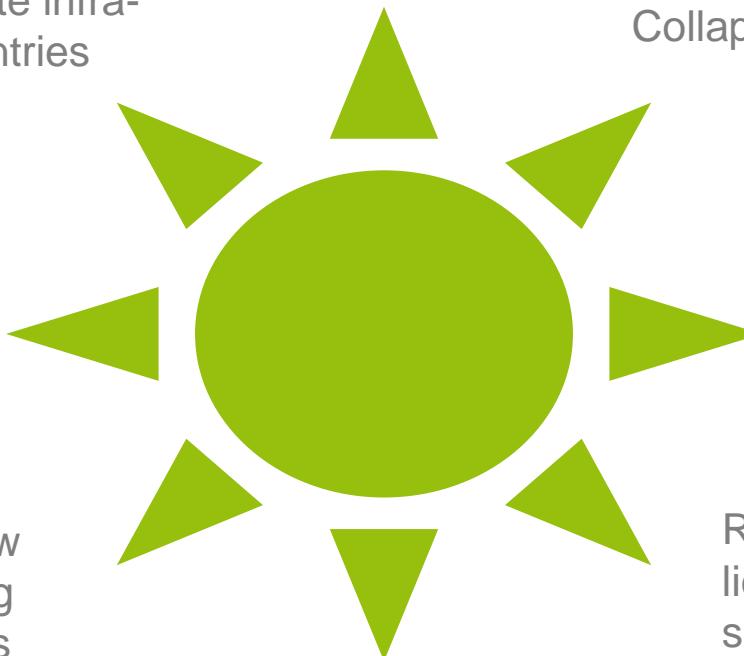
Purchase of American mills or plants by Chinese recycling companies, unable to meet demand for plastic pallets at home.

Collapse of the price of plastic scrap

Exports of low quality plastics waste to neighbouring countries: Malaysia, Vietnam, Indonesia...

Relocation of Chinese licensed plastics importers to south-east Asia

Restriction of waste imports by neighbouring countries



Impacts of the Chinese regulation on Veolia activities

- The closure of Chinese borders to the import of plastic waste represents an opportunity to relocate part of the waste transformation industry in Europe, so that what previously was exported to China can be processed there.
 - *Thanks to the investment made over the past years, several countries where Veolia is implemented could become new hubs for recycling materials from all across Europe.*
 - *The toughening of environmental regulations in Europe and Asia reinforces the obligation to recycle materials and the prohibition of landfill.*
- At the same time, this decision will result in the development of the internal Chinese recycling market, so that it can supply local demand.
 - *This will also provide potential opportunities for a Group such as Veolia.*
 - *In 2020, Veolia will build a new sorting and recycling facility dedicated to plastic in China.*
- Veolia is strengthening its positions, especially in Asia:
 - *In Japan, in 2 years, the Group has become number two in terms of market share on the sorting market.*
 - *Currently, 90% of our revenue in the transformation of plastics is achieved in Europe, and 10% in Asia. We want to rebalance our contractual portfolio so that by 2025, we will do 60% of business in Europe, 30% in Asia and 10% in the rest of the world.*

How to promote responsible business and to alleviate its cost in the Asia-Pacific?

- To let sufficient time for industrial companies, in order to adapt their equipments to regulatory changes and to the consecutive new state of play.
 - Less than 6 months is too short for a transition period, since there is a lack of infrastructure for collecting and processing plastics, particularly in developing economies.
- To modernize and expand sorting and recycling facilities.
 - There is currently no or few markets outside China for such products, and transforming capacities are not yet existing.
- To achieve standardization of plastic and plastic waste.
 - States must develop strategies to harmonize product packaging and design.
 - Standardization is required, to create a plastic standard that is valid in most countries.
- To develop cooperation between businesses, so that one person's waste becomes another person's resource.
 - It is essential to increase the outlets for recycled materials. It is not enough simply to reprocess plastic, it is also necessary for industrial companies to buy these secondary raw materials and to incorporate them into their products.
 - This is where the public authorities have a vital incentivizing role to play.

The need to reorganize plastics transformation chains and markets

- The Chinese decision has forced a rethink about the organization of the recycling industry worldwide.
- The escalation in plastic production, along with the closure of Chinese borders to plastic waste, are increasing recycling needs in developed countries.

1 Improve the design and support innovation to make it easier to recycle plastic products.



2 Extend and improve the separate collection of plastic waste to guarantee the quality of the materials for the recycling industry.



3 Expand and modernize sorting and recycling capacities worldwide.



4 Create markets for recycled and renewable plastic.



The need for innovation

o Objectives:

- *To reduce the cost of waste sorting in developed countries, compared to China, where labor force is cheap and which formerly had lower environmental regulation*
- *To invent biodegradable or recyclable plastics, and the appropriate processing technologies.*
- *To find process to recycle today non recyclable plastics*



o Example of Veolia innovations:

- *A new generation of autonomous robots, with artificial intelligence algorithms based on neural networks. They make the sorting of waste more reliable, faster and safer. This is an European first and a major breakthrough, because the successful recycling of waste depends on the quality of sorting.*
- *Auto-adaptive sequential optical sorting and remotely operated sorting, which increase productivity and quality of waste sorting*



Part II – The challenge to implement carbon pricing



The role of businesses, to reduce CO₂ emissions

- In its latest report, the IPCC recommends a significant reduction in anthropogenic CO₂ by 2030, of around 45% compared to 2010 levels.
- Companies play a decisive role to achieve this target, because they innovate and can produce lower-carbon goods and services. In this respect, they have a powerful ripple effect on their suppliers, clients and consumers.
 - E.g. the drop in electricity storage costs, a crucial point in the energy transition's success.
- Veolia offers a variety of complementary solutions:
 - energy efficiency; renewable energy;
 - the circular economy (that drastically reduces carbon emissions by turning waste into resources);
 - capturing methane (which is a pollutant when it is released into the atmosphere but a source of green energy if it is converted into heat),
 - etc.
- At the same time, Veolia has set an internal price per ton of CO₂, which is taken into account when determining our different investments (> € 20 per ton of CO₂).
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Giving a price to carbon

- The solutions available to reduce carbon emissions come at a cost, which is not—or not sufficiently—factored into economic activities.
 - Almost 90% of global CO₂ emissions are not subject to any kind of pricing.
- To spread the use of these solutions, it is vital to set a robust, predictable carbon price, that will be high enough to steer investments in the direction of low-carbon processes.
 - It simply means applying the Polluter Pays Principle to greenhouse gases, as has already long been the case for wastewater and waste, to great effect.
- It costs nothing to pollute, whereas it costs a great deal to treat the pollution. An economic system that encourages the emission of greenhouse gases cannot hope to reduce them!
 - None of the numerous solutions that exist to reduce carbon emissions will be deployed on a sufficient scale, unless a carbon price is set, that will be dissuasive to polluters and offer incentives to depollute.
 - A price of €30 or €40 per metric ton of CO₂ would offer a strong financial incentive and trigger a movement toward low-carbon solutions.

What form should take the financial valuation of carbon?

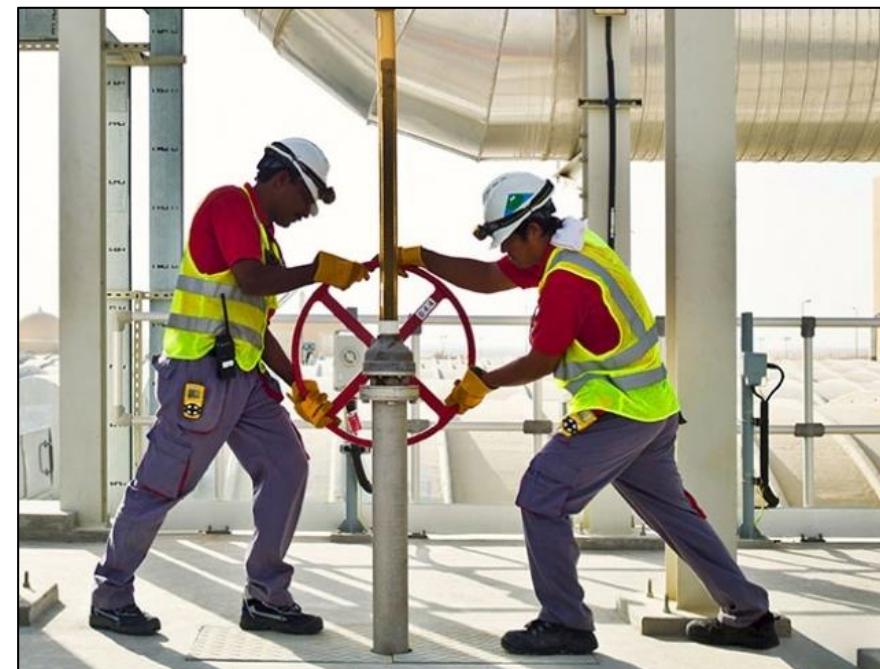
- Organizing a global market for emission permits in the short run is illusory, as this solution requires global governance.
 - *Experience has shown that it is not easy to make this kind of system work: the mechanism put in place in Europe delivered during several years derisory pricing signals, that provide no incentive to businesses to reduce their carbon emissions.*
- In the short term, it is simpler to introduce a charge for greenhouse gas emissions on the scale of a large area (e.g. EU). It would work on the two-fold principle of “the polluter pays” and “whoever cleans up receives help”.
- To avoid distortion of competition, it would be necessary to create, at the entry point of areas that want to do more against carbon emissions, a tax that hits products made in countries that make less effort.

- *Economic theory condemns this type of border tax.*
- *But it is not incompatible with WTO rules.*



Carbon markets versus taxes

- The problem with markets is the free allowance of CO₂ emission quotas.
The problem with taxes is exemptions.
 - The EU market experienced an initial over-allowance of CO₂ emission permits. With 2008 financial crisis, the price of CO₂ collapsed to €7 / metric ton, a price that was ineffective.
 - In Sweden, the carbon tax is approx. €120 a metric ton. But to protect the competitiveness of Swedish companies in the face of international competition, half of business sectors are exempt from the tax.
- In Europe, there is a cultural reticence to linking environmental protection with market forces.
 - Many Europeans fear that the climate problem will be turned into just another marketable commodity. They denounce the use of market forces to deal with environmental issues.
- Whether for taxes or markets, the game rules should reflect as closely as possible the real conditions of economic efficiency.



Principles to invent a low-carbon future

- Ambition, since it is not possible to conduct strong environmental policy with weak regulatory mechanisms.
- Pragmatism, to create groups of countries brought together around efficient formulas for cooperation.
 - Around 40 countries and 20 regions have already put in place carbon-pricing mechanisms. Despite the imperfections of these “climate clubs,” it is better to reinforce them and organize their convergence in the future.
- Anticipation, to spread capital investments on several years, so that to smooth their impact on the price of products and services.
 - Setting a 10-year carbon price is of no use to energy companies, whose power plants have a service life of over 50 years. To plan their investments, they need to know how much the carbon price will be in 25 to 30 years’ time.
- Innovation. How can the economy, high on carbon, be detoxed without new manufacturing methods?
 - If we had to build the future with the same old technology, the war on climate change would be lost in advance.
 - A low-carbon economy will necessarily be an economy of innovation.

Conclusion



Plastics and CO₂ emissions are closely linked.

- Apart from protecting the environment and human health, recycling plastic reduces greenhouse gas emissions.

- When a bottle is manufactured with recycled plastic, 70% less CO₂ is emitted than when one uses traditional raw materials.
- For every metric ton of plastic recycled, 5 barrels of oil is saved.

- The potential of the circular economy is enormous.

- The garbage cans in the cities of developed countries constitute a mine with two remarkable characteristics: cumulatively, they constitute the biggest mine on earth; and they are continuously replenished, so they never become exhausted.
- But much remains to be done before the circular economy becomes genuinely widespread!

- Give us a good policy, and we will do some good recycling!

*Thank you
for your
attention*

