

William Freeman Submission to the 2019 Victorian Parliament Inquiry into Recycling and Waste Management

Good afternoon ladies and gentlemen. My name is Bill Freeman and I have been a resident of Campbellfield in the City of Hume for approximately ten years. My home is in the far east of the suburb and abuts the Merri Creek reserve which is jointly administered by Melbourne Water, Parks Victoria and the Merri Creek Management Committee.

With respect to the fire at Coolooroo we were not directly affected as the wind was in the north that day and we are east of where the fire was.

I would like to take this opportunity to inform you that over the years we have made numerous calls to the EPA about a very unpleasant smell covering a very large area of Campbellfield and possibly neighbouring suburbs. It was a rancid, somewhat organic odour of varying intensity that we could detect from time to time in either very still conditions or when the wind was coming from the north. On some occasions we would drive around trying to find the source of it. It could cover an area from north of Barry Road to as far South as Mahoneys road. Whatever it was it must have been from a significant source. The EPA never got back to us about it. Although I am pleased to say its been a couple of years now (except for on instance on 28/4/18 EPA ref#200184199). Some of the EPA reference numbers are 475025, 482998 on 30/5/16 and 482488 on 31/5/16. On those occasions I was assisted by a Mr Ben Harris.

I would also like to make a personal contribution based on the terms of reference of the inquiry.

Given that this inquiry is into recycling and waste management I am defining recyclables as consisting of:

1. Short term: paper and cardboard, glass, aluminium, steel, and the vast array of single use plastics for mostly used for packaging. These are almost invariably for single use and pose one of the greatest and most pressing environmental challenges of our time.
2. Medium term: consumable such as mobile phones and computers
3. and long-term: consumables such as refrigerators and washing machines.

While much of the current controversy is about short term recyclables, I respectfully urge the committee to consider medium and long term recyclables in its considerations and recommendations.

However, it is clear that the current waste management crisis is about short term recyclables and I will speak about that now.

By my reckoning and based on the research I have done, the business model for short term recycling has collapsed and recyclable material is going to landfill. The outcomes are by no means satisfactory for any of the stakeholders. This is a fundamental that must be addressed. I believe that government policy at all levels should aim to place the burden of responsibility for the appropriate disposal of recyclables back down the supply chain as far as possible. Government has a responsibility act for the greater good of society, especially when the free market will not. Legislation and financial incentives designed to create an industry framework to enable a viable business model for recyclers is required.

China's intent to regulate the importation of certain recyclables has been on the table since 2013 when its Operation Green Fence policy was implemented. So, it should come as no surprise that the subsequent National Sword Policy, lodged with the WTO in 2017, has now been fully implemented

adopting 0.5% - 1% contamination acceptance thresholds for 24 categories of recyclable waste. Up until the deadline of March 2018 Australia continued to supply 3 to 5% contaminated product because China was letting it get away with it. In July 2017 China upped the ante and notified the WTO that it would be cracking down on the contamination specs as previously foreshadowed. China has given its suppliers plenty of time to literally clean up their act, but very little has been done. What we are facing today should have been widely anticipated by all levels of government and the industry. However, until now there has been a failure by government and industry to do anything of significance to head off the situation we are currently facing.

In short:

1. There appears to be little connectivity on this issue between the industry and various levels of government. The manifestation of this is the failure to respond to China's warnings with respect to contamination.
2. SKM, a key player in the industry which services 30 municipalities in Victoria is in liquidation and has stopped receiving material. Being unable to meet China's specifications its business model has collapsed.
3. Mountainous stockpiles of recyclables growing around the country, caused by the collapse of the market, are all potential Coolooroos.
4. The City of Hume, where I live, says it's too early to find an alternative to SKM.
 - a. As the entity primarily responsible for waste collection Hume should have seen this coming and taken a leading role in addressing this crisis.
 - b. Their failure to do so, along with other levels of government, has put us where we are today.
5. The recycling industry has fallen into disrepute.
6. There is a real risk that households and industry will start taking recycling less seriously.

To identify short and long term solutions to the recycling and waste management crisis I believe we need to look at the single use recyclables life cycle. I see this as the following 6 stages:

1. Original manufacturer of package or single use item
2. Commercial use of the packaging product or single use consumable
3. Sale by wholesaler/retailer
4. Disposal by consumer
5. Handling by waste management
6. Reprocessing with the aim to return the product to step 1

What can be done at each of these stages of the life cycle.

1. Manufacturers of the package or single use item
 - a. Should minimise the different types of plastics, paper, glass for use in industry to help simplify the recycling process.
 - b. Should facilitate the return to them of single use consumables for recycling eg. Printer cartridges
 - c. Be encouraged self-regulate to for example:
 - i. By using more environmentally friendly materials
 - d. Be subject to legislation to push back to them responsibility for the production of environmentally friendly.

- i. Eg. Require certain % of recycled material to be used
- 2. Commercial users of recyclables
 - a. Must work in cooperation with manufacturers
 - b. Must take positive steps to minimise use of single use recyclables
 - i. Eg. Fruit and veg pre-packaging in supermarkets
 - c. Must use more biodegradable materials
 - d. Must phase in the abandonment of single use plastics
 - i. Through the use of alternative materials
 - 1. Eg. Milk to only be sold in cardboard containers
 - 2. Use glass and adopt container deposit schemes for drink bottles
- 3. Retailers
 - a. Must play a role in ensuring the proper management of recyclables as the interface between the manufacturer and the end user:
 - i. Complete ban of plastic bags in the retail sector.
 - ii. Facilitate container deposit and return scheme.
 - iii. Take steps at every opportunity to reduce packaging.
 - iv. Use their environmentally responsible policies for public relations.
- 4. Final consumers.
 - a. Can no longer abrogate responsibility up or down the chain as ultimately it all passes through their hands. This can be greatly facilitated by government at all levels through education programs.
 - b. Need to be better recyclers;
 - i. The current practice of co-mingling recyclables is not helpful to the recyclable waste industry's financial viability.
 - ii. We need to do a much better job of segregating recyclables at the household level as was the case when recycling commenced decades ago. This poses an enormous challenge to bring about a change in public attitude to this, but I believe is essential for a successful system.
 - 1. There could be different weeks for different recyclables
 - 2. We should at least separate bins for paper waste and all other recyclables
 - 3. The fact that glass has to be segregated by colour need to be addressed at the household level.
 - 4. Recyclable material must be clean or will be rejected
 - 5. Eg. Village of Kamikatsu in Japan
 - c. Reduce use of landfill.
 - i. We must try harder to minimise waste going to landfill as there is still a lot ending up there.
 - ii. Charging by weight for landfill waste may be one option.
 - d. Litter is an enormous global problem.
 - i. Further action needed to stop waste entering streams and oceans.
 - ii. Need to stop littering at the source by encouraging civic responsibility through better education and awareness programs with respect to littering and the harm it is causing. Eg "Don't rubbish Australia"
 - iii. As I mentioned. I live near Merri Creek and it is full of litter that has entered it through the storm drainage system. The water looks sick and polluted and the overall ecosystem of the waterway is in very poor health.

5. Recyclable Waste managers

- a. Must have a viable business model and it is the role of govt to ensure this with legislation and financial incentives
- b. It is unreasonable to hold waste management 100% responsible for where we are today.
- c. Waste managers need to be connected up and down the recyclables supply chain to help develop and maintain sustainable business models.

6. Reprocessing of recyclables - use of raw recycled material as supplied by the waste managers needs to be encouraged in every possible way. For example

- a. Building materials
- b. Truly recycle eg. For food and beverage packaging
- c. Furniture
- d. Road making

In my view the key stakeholders must share responsibility and work cooperatively.

1. Government:

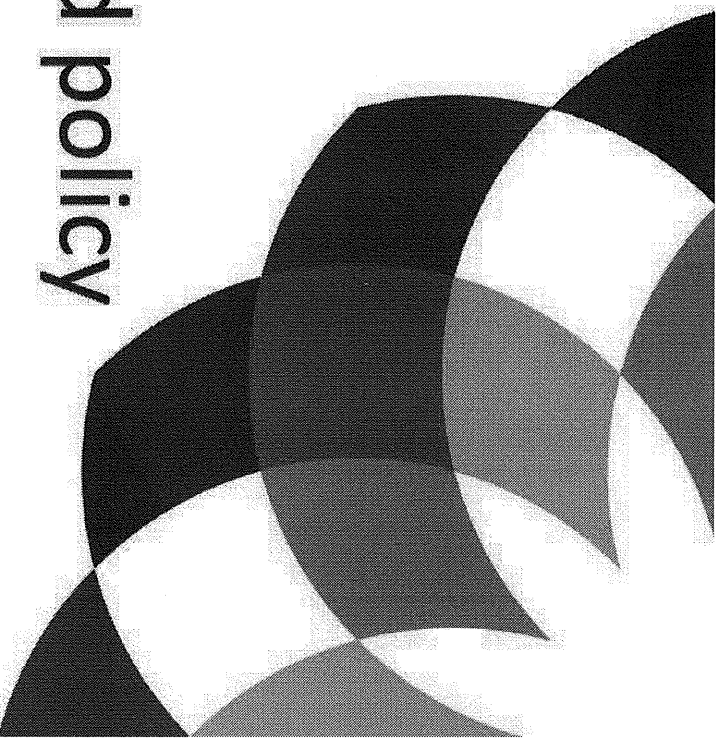
- a. Must take a whole of supply chain approach.
- b. Encourage, incentivise, legislate industry to use recycled material.
- c. Provide cost effective financial incentives.
- d. Continue to work with local government to provide solutions to current crisis.
- e. Facilitate interaction between all stages of the supply chain to ensure best outcomes for the greater good.
- f. Investment in scientific research to find more environmentally products.

2. Commercial Users

- a. Must take some responsibility for ensuring that the maximum amount of recyclables end up in the right place.
- b. Assist in the public education process.
- c. Adopt container deposit schemes.
- d. Use more recycled material.
- e. Help to minimise the number of different types of recyclables being used.
- f. Cooperate with government initiatives.

3. Role of individuals and industrial consumers

- a. Need to be made aware that this is everyone's problem and that each person has a role to play.
- b. Must take the same responsibility as industry for their recyclable waste
- c. Ensure their waste goes to the right place
- d. Ensure their waste is supplied in a manner that allows maximum recyclability. Clean and correctly segregated.
- e. We all must dispel notion that it's not my problem through education, incentives and, if necessary, penalties



09/03/2018

China's National Sword policy

The impact on Australia's recycling

Presented by Mike Ritchie

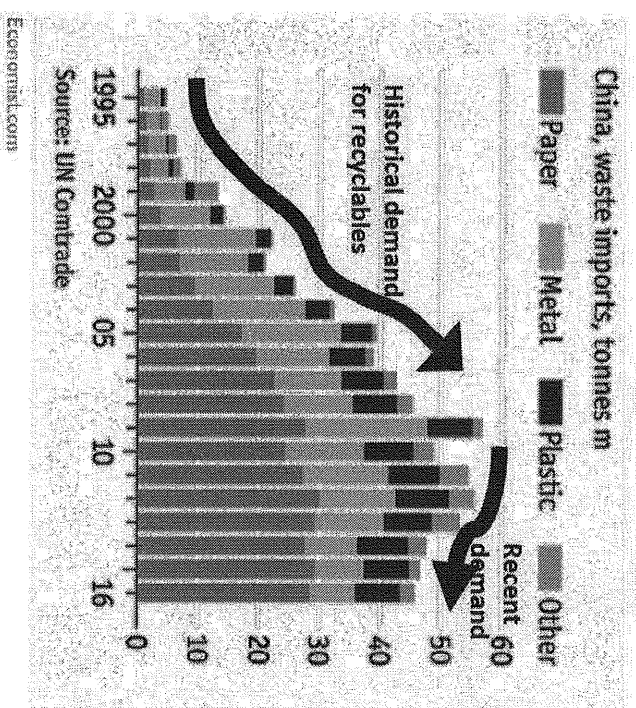


The specialists in recycling, waste and carbon

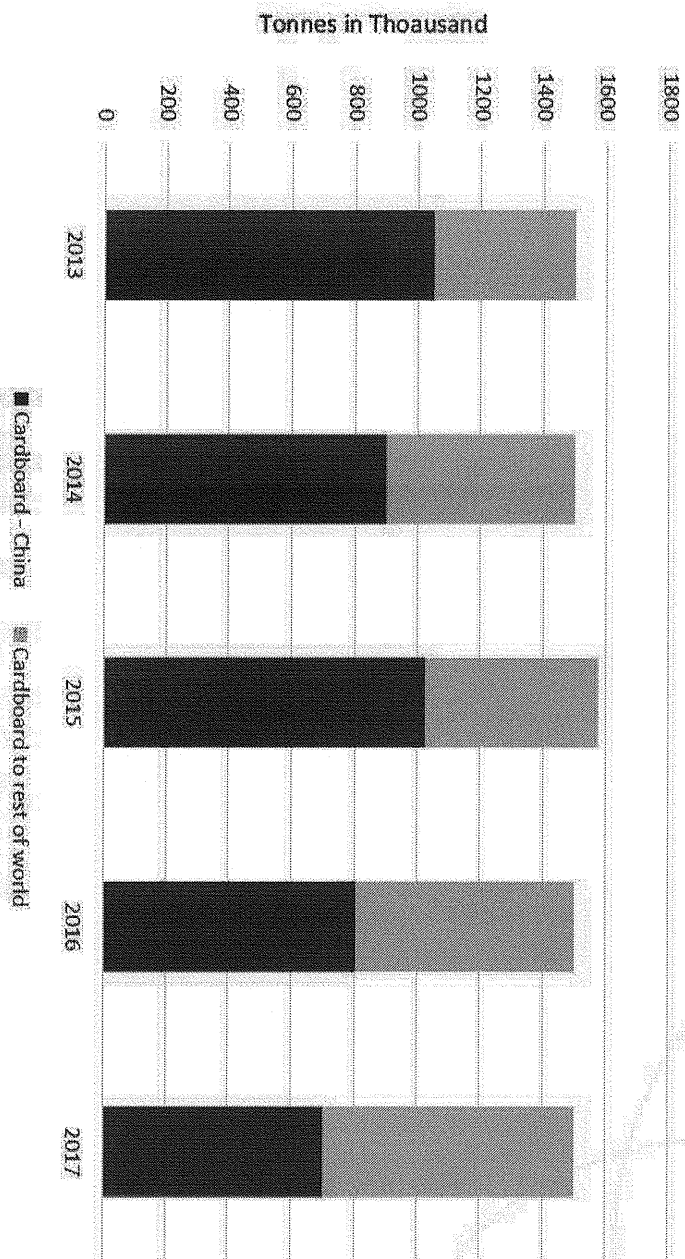


The role of China in global recycling markets

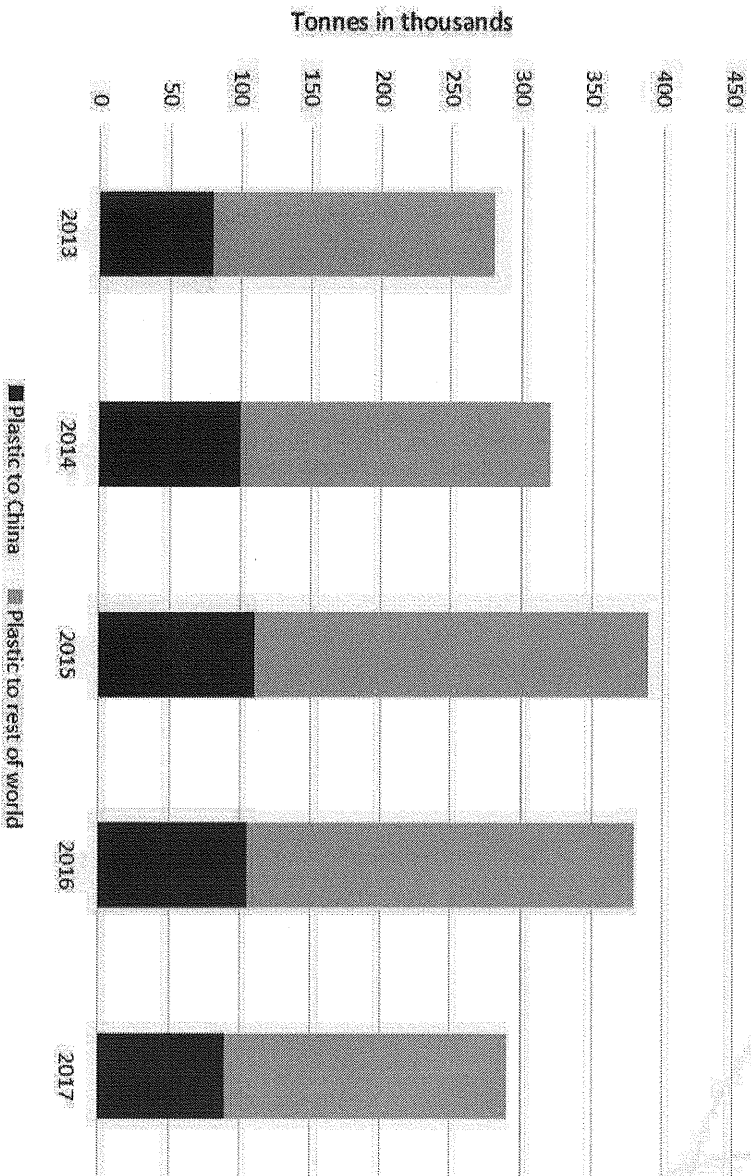
- China's **economic boom** was fueled, in part, by the **import of recyclables** from around the world.
- China imported over **\$US18bn** of recyclables in 2016.
- In 2016 China took in **half the world's exports** of:
 - Recovered paper
 - Used plastics



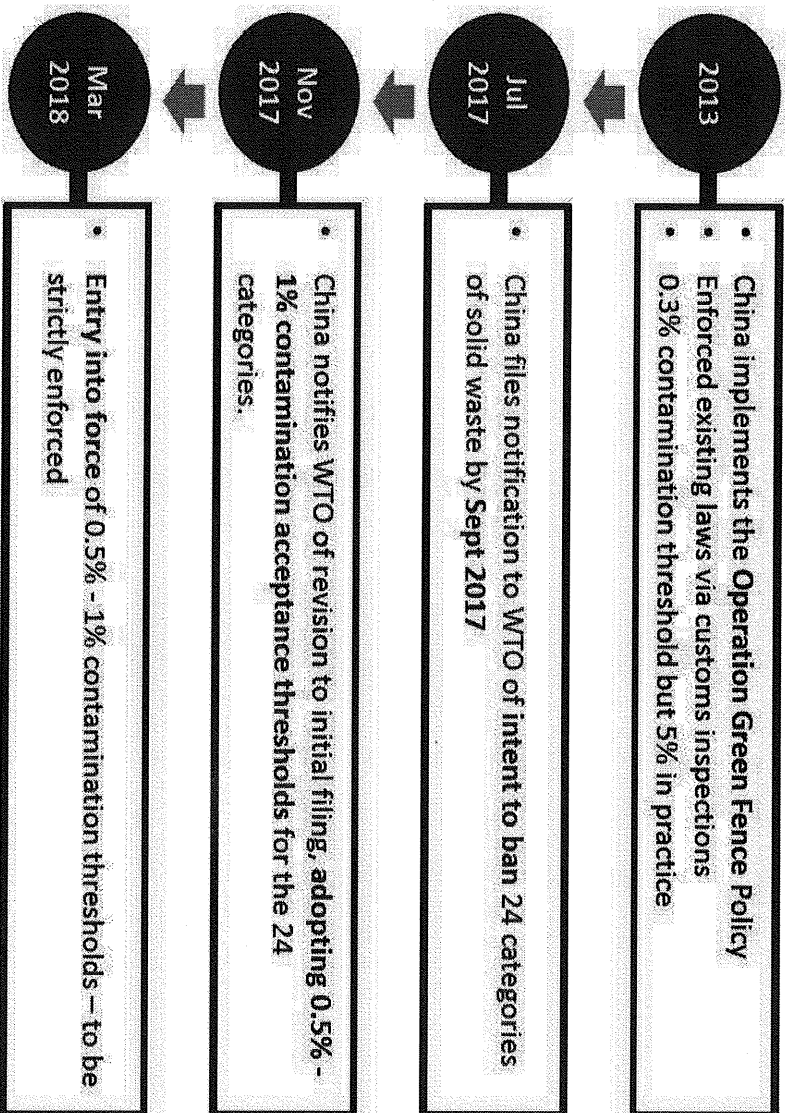
Australian exports of Cardboard



Australian exports of Plastics

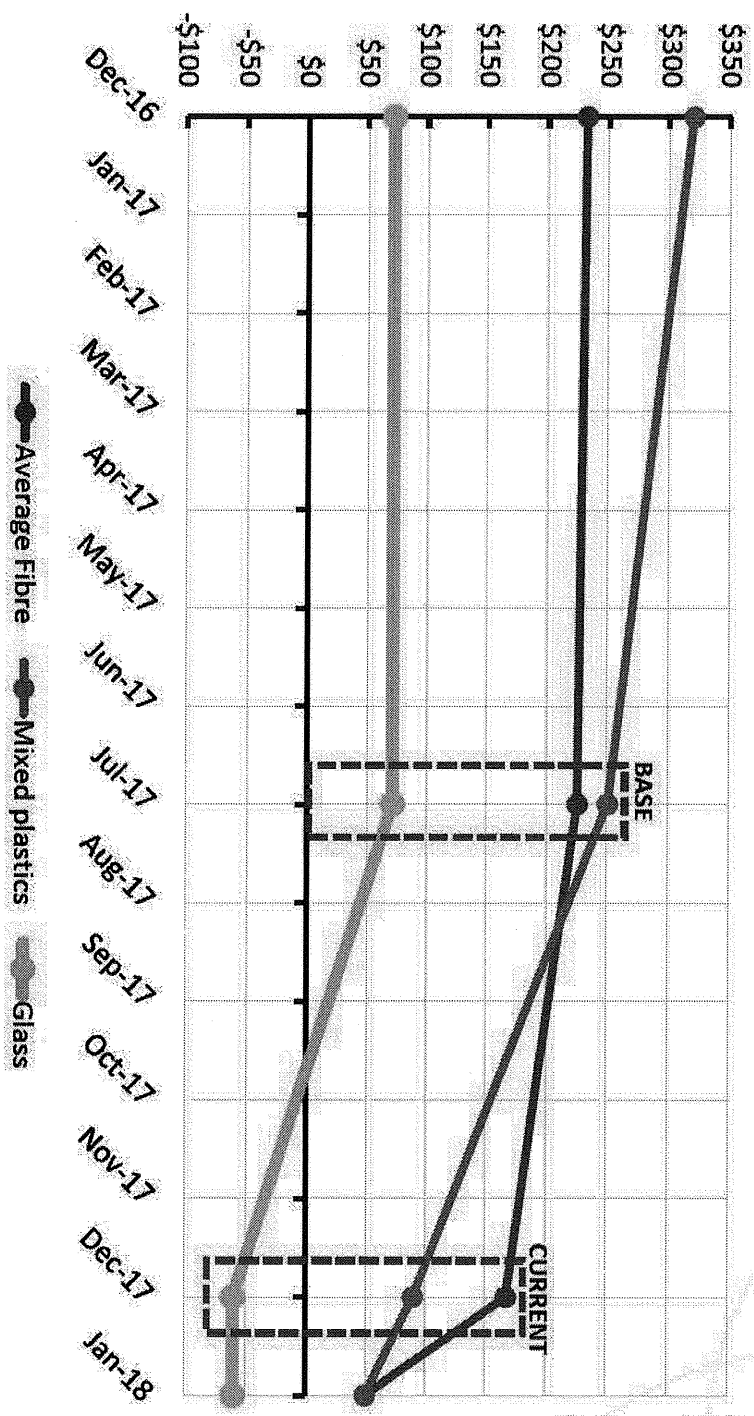


Timeline of key events



National Sword policy

The impacts on recycling commodity prices – China Product Glut



- The impacts:**
- Reduced intake licenses
 - Oversupply
 - Crash in price globally

Impacts on MRF gate fee

Material category	input %	BASE			CURRENT			DIFFERENCE			Weighted loss in output value (\$/t MRF input)
		Historical average sale price (\$/t)	Jan18 average sale price (\$/t)	Drop in price (\$/t output)	Historical average sale price (\$/t)	Jan18 average sale price (\$/t)	Drop in price (\$/t output)				
Paper and paper products (mixed fibre)	55%	\$225	\$50	\$175	\$225	\$50	\$175	\$96	\$96		
Plastics (mixed plastics)	8%	\$250	\$50	\$200	\$250	\$50	\$200	\$16	\$16		
Glass	30%	\$72	-\$60	\$132	\$72	-\$60	\$132	\$40	\$40		
Ferrous material	2%	N/A	N/A	N/A	N/A	N/A	N/A				
Non-ferrous material	1%	N/A	N/A	N/A	N/A	N/A	N/A				
Other	2%	N/A	N/A	N/A	N/A	N/A	N/A				
TOTAL	100%							\$152	\$152		

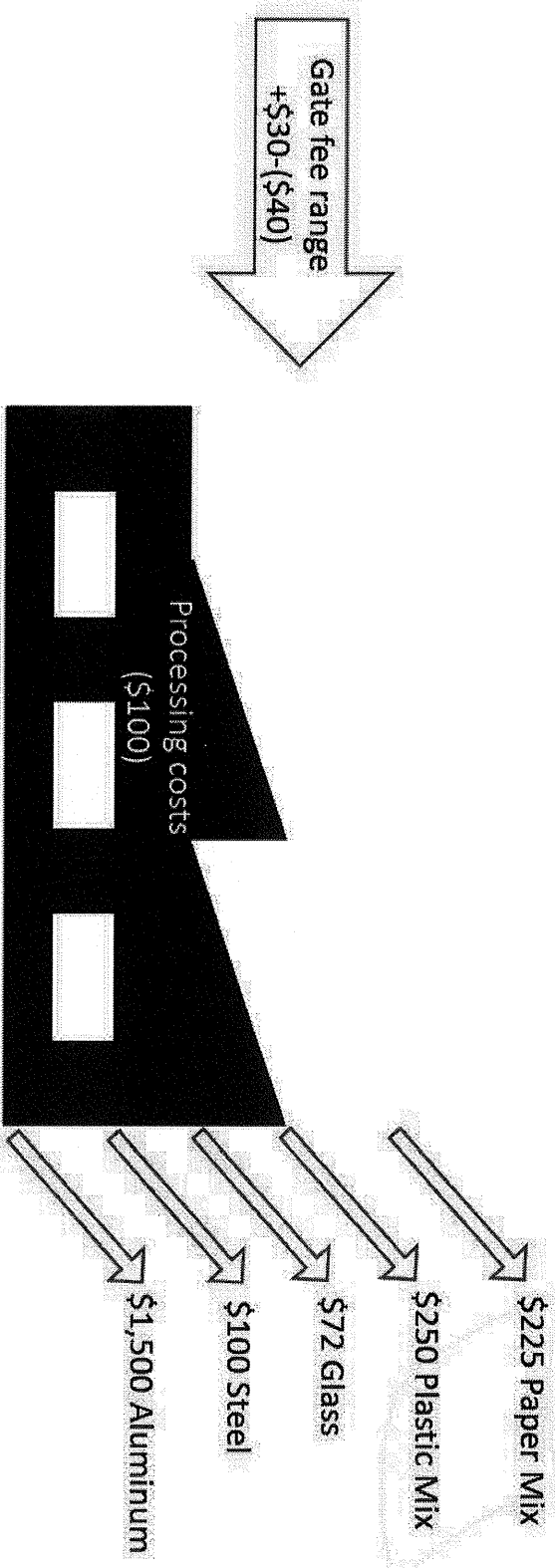
National Sword

Or \$110 without glass...

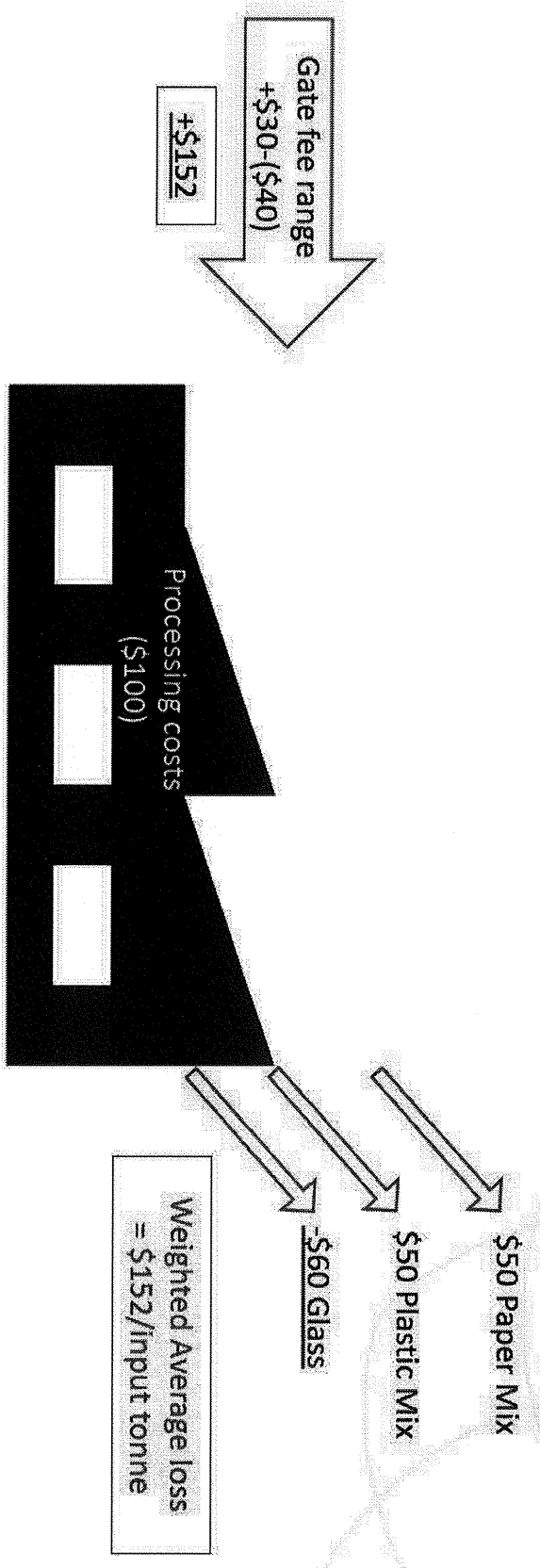


The impacts on Australian recycling

- Materials Recycling Facilities are no longer profitable at new commodity prices and existing gate fees



The impacts on Australian recycling



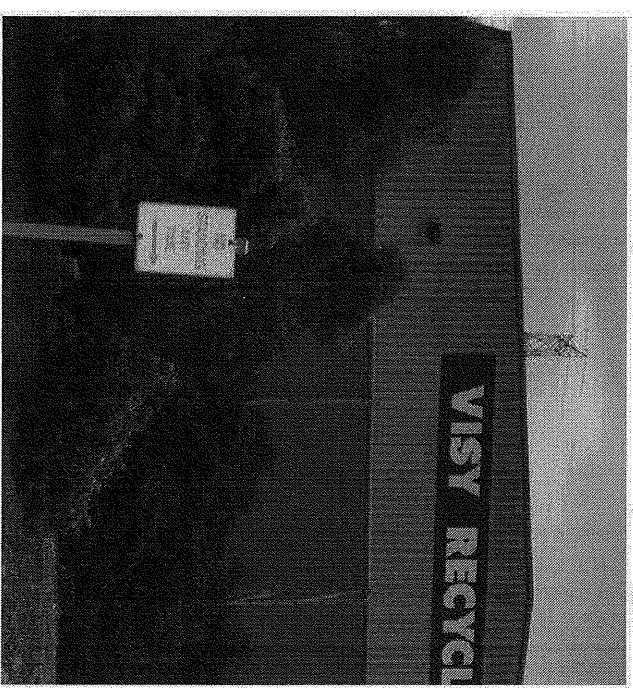
Glass in Australia

- Closed 3 furnaces
- Cheaper to import green bottles from Mexico
- Collapse in glass price: \$72/t
→ -\$60/t



The impacts on Australian recycling

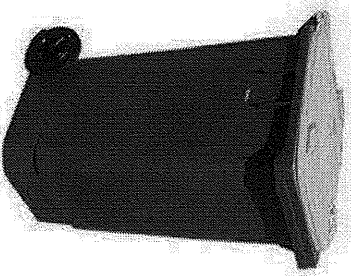
- To stay open, MRF operators need higher gate fees from waste generators, including Councils
- Gate fees are increased under two mechanisms:
 - “Change in Law”; and
 - Force Majeure (“Act of God”)



The impacts on Australian Councils

- Absorb the price increase of up to \$152/tonne.
- Across Australia, the extra cost may be as high as \$100m
- Rates for 2018/19 will incorporate the extra costs – **rate payers**

In NSW ~810,000 tonnes p.a. of kerbside recycling collected



~\$40mil in additional costs between now and 1 July 2018

Source: NSW Local Government WARR Data Report

The impacts on Australian households

- NSW households create on average 5.3 kg dry recyclables / week or 276 kg/year.
- If the price increase is \$152 / tonne and it is passed in full onto households, then the rate increase would be around \$42 per household

BUT:

- Does not include secondary reprocessing
- Some MRFs suggest additional \$250/t processing
- Also some argue for split bin P&C + \$40/hh

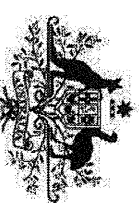
- So cost to Councils could be:

- $(\$150 + \$250)/t = \$100/hh/yr$
- Bin collection = $\underline{\$40/hh/yr}$

\$140/hh/yr

Government responses

- Victorian Government announced a \$13m “rescue package” to cover extra costs to Councils until the end of 2017/18
- This covers extra costs from recycling processing of about \$70/tonne
- NSW urgent meeting held 5th March 2018
 - Equivalent in NSW is \$40 million
- No formal response from Government



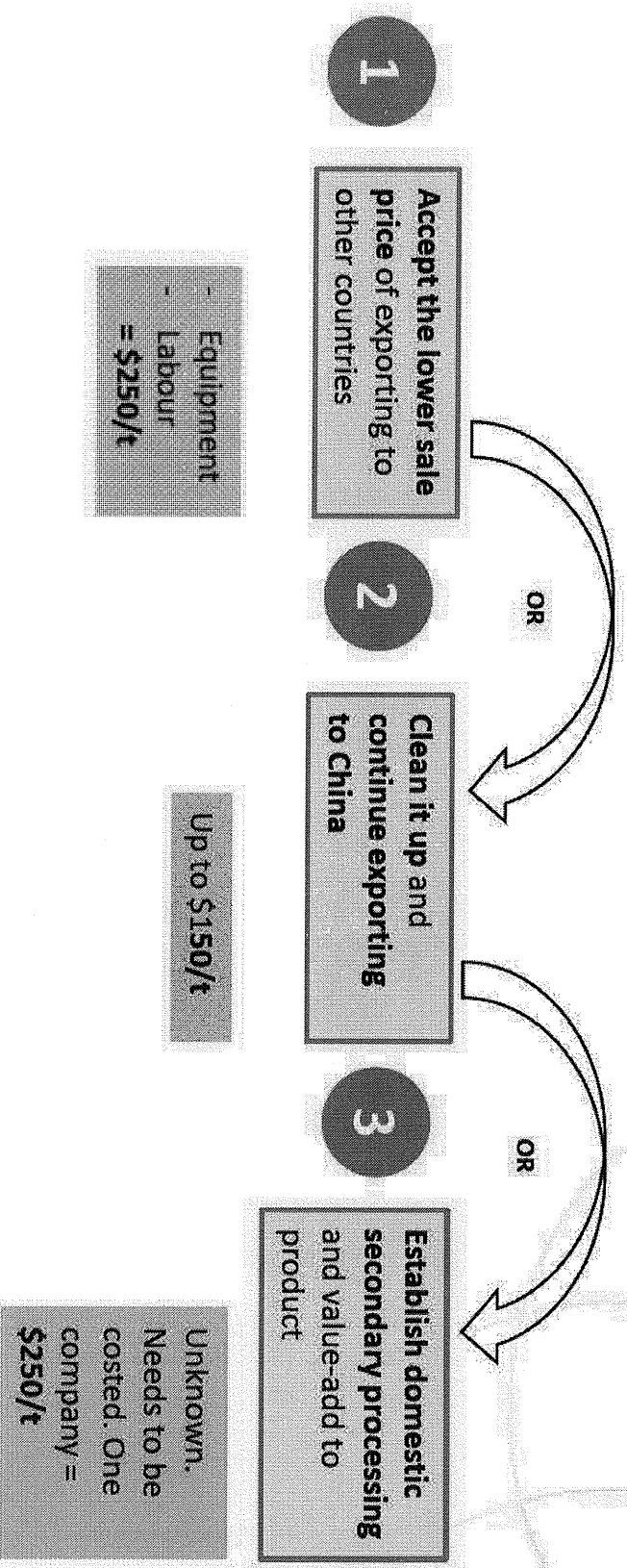
Australian Government



What is actually happening?

- Recyclables ARE still being exported, albeit at lower prices
- Recycling gate fees ARE increasing, but they still remain lower than landfill gate fees in most major cities due to landfill levies.
- Councils WILL need to increase rates for future years
- There IS a short term pain point, where Councils need to absorb increased costs that cannot be passed through.

What can happen?



- Note CDS in NSW worth \$190-300/t

What needs to happen?

Short term	
Mid term	Short term cash float, e.g. Victoria
	Council contract renegotiations to provide for greater responsiveness to changes in markets, and especially the Chinese market.
	EPA allowance for stockpiling of recovered materials.
	EPA relaxation of landfill levies on MRF residuals.
	Capital improvements to achieve the new 0.5% contamination specification. Labour increases to achieve the same.
	Purchasing policies by all levels of government to increase domestic demand for recyclables, especially glass & plastic
	Development of domestic reprocessing capacity for paper and plastic.
	Glass processing into sand – application to roads
	Council adoption of two bin recycling systems (paper and containers) to reduce contamination rates, especially in the paper bin.
	Use CDS in NSW to compensate.

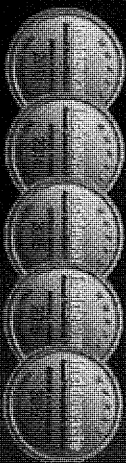
thank you

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The village of Kamikatsu sits among verdant rice fields and mountainous forest on the Western Japanese island of Shikoku. With less than 1,700 residents, it's the smallest village on the island, but for the last few years, has been garnering headlines around the world.

For decades, the village had given little thought to processing its waste, either burning it in an open incinerator or burying it in the ground.

A failed new incinerator project, however, forced the village to rethink its strategy and a lofty ambition was born - to become a zero-waste town by 2020.

Today, more than 80% of the village's waste is kept out of incinerators and landfill, but the transformation wasn't easy or quick.

Lifestyle shift

Kamikatsu's journey towards zero waste started more than two decades ago. The town had recently built, at great expense, a new incinerator to take care of its waste. But it was rendered a health and safety risk by the central government, because of the number of harmful dioxins it released into the air.

So the village had to think again. The most obvious solution was to shift the waste to other municipalities, but this was an expensive move, and it wasn't a sustainable solution for the small economy.

Instead, the village decided to plough its efforts into reducing as much waste as possible, and the Zero Waste Academy, led by Akira Sakano, was born.

In practice, the idea is quite simple: waste gets separated into categories and wherever possible is reused, recycled, or reduced.

But while not necessarily revolutionary - after all, millions of streets around the globe offer up colour-coded bins to the local governments for collection on at least a weekly basis - Sakano's scheme goes well beyond that.



Image: Zero Waste Academy

For one, the rubbish is separated into at least 45 categories. At the top level, food waste, metals, paper, plastics, glass bottles, food trays, furniture, and machines all get separated.

Within that, there are often subcategories, so metal will get separated into aluminum and steel, or paper gets separated into newspaper, cardboard, paper carton, paper carton with aluminum (coated), hard paper tubes, paper cups, and shredded paper.

“By doing this level of segregation, we can actually turn it over to the recycler knowing that they will treat it as a high-quality resource,” explains Sakano, who is one of the Co-Chairs at the World Economic Forum's Annual Meeting at Davos this year.

She says it took some time to persuade the local population at first. Not only did they have to wash and sort their waste at home, but they were also expected to bring it to the waste-collection centre.

“It was a real shift in lifestyle,” she explains. “Lots of people were against the new collection system, asking why they had to bring their own rubbish to our waste-management site. They thought that the municipal government wasn't doing its job properly.”

So the municipal office set about organizing gatherings in the local community where conversations could take place.



Image: Zero Waste Academy

“They were dialogue and explanation sessions,” says Sakano. “And while there was still a bit of conflict, part of the community started to understand the context and cooperate, so the municipal office decided to start the segregated collection system. Once the residents saw that it had started, they realized that it wasn’t that difficult.”

Word got around and residential groups got behind the scheme, becoming both supporters and advocates. What started with a few, turned into the majority, and soon, pretty much everyone.

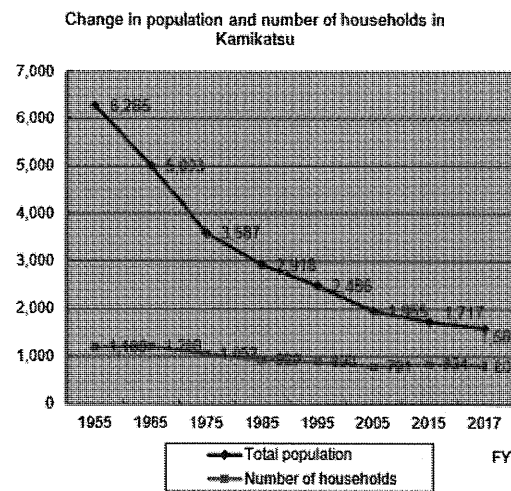
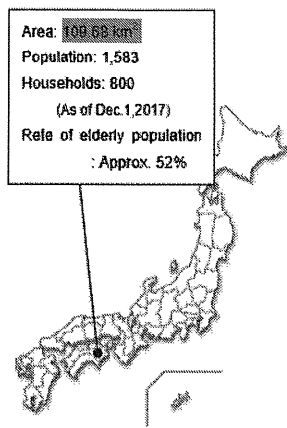
“You’ll now see people segregating around five to 10 categories in their house and then doing the final segregation at the station,” says Sakano.

Having wasted so much money on a defunct incinerator, the town had to think of a cost-effective setup.

The Zero Waste Academy operates under four Ls - local, low cost, low impact, and low tech. There is no big machinery here since residents put their own waste in the correct bin, while some ground staff has been hired to support the segregation and get the full bins ready to turn over to recyclers.

The scheme took off and, by the end of 2018, only 19% of the town’s rubbish had to be sent to an incinerator or landfill. But that wasn’t the only reason for its success.

Community matters



It's that trip down to the waste-management station - the one that so many residents were initially so skeptical of - that sets this recycling strategy apart.

Japan has a rapidly ageing population. Some feel so isolated and alone that they resort to committing crimes because they know that, in prison, they'll have company. Because Kamikatsu is a small, close-knit community, the problem of isolation is not so great. But over half of the population is elderly, and the community gathering aspect of the waste center is critical to their wellbeing. It encourages them to engage with others, stay connected and feel part of the community.

With this in mind, the waste-management centre has deliberately morphed into a hub of the local community.

For instance, the onsite "kuru-kuru" (circular) shop takes clothing, tableware and sundries that are still useable, but no longer wanted by their owners, and gives them to others. People can also borrow more than 8,000 items of tableware every year, eliminating the need for residents to buy single-use plates and cups for special events.

There's also an upcycling craft centre. Residents bring in old kimonos they don't need, then the elderly, mostly local, women make products out of the discarded materials.

“Everyone in the town comes through the waste collection point anyway, so they come not only to discard their waste, but to see some of our stuff and talk with our staff. It’s not just waste collection but a gathering place for communities,” says Sakano.

Those that don’t have the means of transport to reach the centre can register at the local town hall and have their waste picked up.

“They see this not as a waste-collection service, but an opportunity to socialize with the younger generation and to chat. When we visit them, they prepare lots of food and we stay with them for a while, we ask how they are,” explains Sakano.

On occasion, they alert local services if the resident doesn’t answer the door as expected. In one case, the elderly inhabitant was lying prostrate and unmoving, so they called an ambulance for help.

“It’s almost like social welfare,” says Sakano. “It’s an opportunity for Japan to see waste collection services as something that connects with other functions of society, whether that’s good community engagement or policy targets.”



Image: The Zero Waste Academy

Global potential

Sakano believes it would be simple to replicate the idea globally - and says through seeing exactly what happens to their waste, residents understand the circular economy better and want to change their consumer habits.

“The specific elements of what we have is very much dedicated to our location and geography. But how the community is built and the basic idea of how you can move towards zero waste can be copied anywhere,” she says.

“The main issue with waste is that residents rarely have to think about what happens to it or where it goes; it's invisible and out of sight, out of mind. But at the waste-collection centre, we report back on the exact amount that has been recycled, where it has gone and what's happened to it.

“Here they see where it goes, what it will turn into, how much it costs to do that but also, how we can also sell some of the resources and make money for the town. It makes people consider, once they see the price or once they see this is recycled or this is not, that their actions make a contribution towards the town community as well as to future generations.”

The year 2020

As 2020 looms into view, Sakano ruefully admits that their target of 100% zero waste will not be possible without the contribution of the bigger system and wider stakeholders. She believes it's now time to start pressuring others to contribute.

“Our target of 100% cannot be achieved while manufacturers continue to use non-recyclable products,” she says.

“Products need to be designed for the circular economy, where everything is reused or recycled. These actions really need to be taken to businesses and incorporate producers, who need to consider how to deal with the product once its useful life has ended.”

With that in mind, in 2016, Sakano started the Zero Waste Accreditation scheme, where local shops and businesses are given approval according to their effort to reduce waste and avoid as much unnecessary packaging and single-use items as possible.

“Local shops can make a big difference,” she says. “They are also consumers, they also purchase products and pass them down to their customers. If they change their purchasing and even stop using certain products, that feeds back to producers.”

Sakano's ultimate dream is to see the programme replicated on a global scale. She says that that 80-90% progress towards zero waste is achievable - if towns and villages are creative.

“It's important,” she urges, “no matter the obstacles, to keep striving to achieve the 100% goal. It's important that world leaders now take their turn to make circular economy happen.”