

Conversations on Sustainable Singapore

Waste and the 3Rs (Reduce, Reuse, Recycle)



Conversations on Sustainable Singapore: Waste and the 3Rs (Reduce, Reuse, Recycle) is co-organised by:

Nature Society (Singapore), <http://nss.org.sg>

SMU verts, <http://www.facebook.com/SMUverts>

Green Future Solutions, <http://www.greenfuture.sg>

on 4 May 2014 at the Singapore Management University.

We would like to thank everyone who helped us in this conversation, especially:

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Published in May 2014. This publication is free for download. Feel free to share this.

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1 INTRODUCTION

1.1 Background

The first “Our SG Conversation for the Green Community” was held in Jan 2013, and was initiated by Faizah Jamal, Nominated Member of Parliament (Environment and Heritage) People and Civic Sector, and Eugene Tay, Director, Green Future Solutions. The diverse views of the green community, which included environmental NGOs and groups; individual environment, animal and wildlife activists; and environmental businesses, associations and research academics, added an important voice to the overall national “Our SG Conversation”.

After the conversation, there was feedback that the conversation format was useful in seeking and discussing views and issues, and that there should be more conversations focusing on specific environmental issues and to open them to the public. Subsequently, the second “Our Singapore Conversation on Green Spaces” was organised by Nature Society (Singapore) and Young NTUC in Nov 2013 to focus on green spaces and their importance and conservation.

We hope to have more such conversations on specific environmental topics for the public, as a follow-up to the first and second green conversations. So when we heard news that the review of the Sustainable Singapore Blueprint (published in 2009) is being conducted this year by the Ministry of Environment and Water Resources (MEWR), we thought this was a good opportunity to carry on with the conversations and have the inputs submitted for the review.



1.2 Objectives and Format

To complement other dialogues organised by MEWR, we organised three Conversations on Sustainable Singapore with the objectives to understand people’s thoughts and stories, and to generate constructive and specific suggestions for the Sustainable Singapore Blueprint review.

The Conversations on Sustainable Singapore are held over three sessions and focus on the following topics:

- Energy and Climate Change (energy efficiency, clean energy, and climate change) – 26 Apr 2014
- Waste and the 3Rs (waste management, reduce, reuse, and recycle) – 4 May 2014
- Food Security (food supply and food waste) – 24 May 2014

For each session, 50 seats were opened up to the public, and divided into 5 small groups of 10 people each, with a facilitator and scribe for each group. Participants were also given a 2-page reading material on the topic so that they can read up and come prepared for the session.

For the Waste and the 3Rs (Reduce, Reuse, Recycle) session, the small group discussions first focus on the concerns:

- What are your personal thoughts and stories on this topic (positive/negative)?

Next, there were 2 experts from the public and private sectors sharing more about the topic.

After a break, the second small group discussions focus on the suggestions and solutions:

- How can Singapore do better on this topic? Give SMART (Specific, Measurable, Achievable, Relevant and Time-bound) suggestions on policies, programmes, initiatives or campaigns. The suggestions could involve the public, private and people sectors working together.

Next, the small groups came together to form a big group, and each small group representative shared their top five suggestions. This is followed by a big group discussion on what has been said and what can be done.

1.3 Report Submission

The discussions and suggestions for the second session of the Conversations on Sustainable Singapore: Waste and the 3Rs (Reduce, Reuse, Recycle) are compiled in this report, for submission to MEWR as potential inputs for the Sustainable Singapore Blueprint review.

This report will also be sent to the National Environment Agency (NEA) for their reference and consideration for action.



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Small Group Discussion ...
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2 THOUGHTS AND CONCERNS

The first small group discussions focus on what are the thoughts and concerns of the participants on the topic of Waste and the 3Rs. The questions include:

- What are your personal thoughts and stories on this topic (positive/negative)?

The discussions are summarised and divided into the following categories:

2.1 Reduce and Reuse

“Reduce must be the first of the 3Rs. If we reduce in the first place, all the waste management problems won't occur.”

“National awareness on reducing is not there.”

“We have too many things and our consumerist culture generates lots of waste. There is a need to create more awareness.”

“The 3Rs in Singapore is not well taken up. Before you can recycle, you have to reduce first.”

“Singapore's population is growing but waste is not reduced.”

“All the waste is properly eliminated in Singapore which is very positive. Waste is collected daily unlike other countries. The negative aspect is that Singaporeans take this for granted and don't realise it's very convenient for them to dispose waste.”

“Consumerism has generated a lot of waste in Singapore. Growing the economy has also generated a lot of waste. The industry for managing waste still has lots of room to grow. But we should look at recycle as the last resort.”

“There is a lot of over-consumption and recycling is energy intensive. We should aim to reduce the amount of materials that go into trash and recycling.”

“Reduce should be the first of three Rs. Do people really want free gifts? Singapore should do away with the practice of free gifts - starting with the civil service who should also adopt sustainable procurement practices. Currently, government agencies will have their budget cut next year should this year's budget have surpluses. Such practice should stop. There are currently no incentives if government agencies save money.”

“The government should walk the talk. How do we go about procuring in a green manner?”

“There is a lack of emphasis on all 3 Rs. Recycling is currently most emphasised and has more response because there is no need for a lifestyle change. But it is more effective to reduce than reuse and recycle. Should there be a shift in focus for this? Does reduce run against the purpose of businesses to increase consumption?”

“Waste is an industrial problem. So industries need to think about the materials used and the entire life cycle of materials used in manufacturing.”

“Obsolescence - every product is designed with short lifetime so people will buy more. New products spoil more easily.”

“All products are made for consumers, so hope to see change in product design from cradle to cradle.”

“Companies should email corporate clients to thank them for their contribution to the organisation, instead of giving a useless calendar.”

“Marketing activities are wasting paper. Do we really need pamphlets on the street and in the letterbox? Would a public survey that asks consumers if they respond to pamphlets help change companies’ perception on the usefulness of these tactics?”

“We are buying based on wants instead of needs. We should have a movement where the sense of novelty from making things makes you cherish it and not throw it away.”

“Some countries are transiting to the 6Rs, including Refuse, Rethink, and Repair.”

“There is a lack of repair facilities and hands-on skills. But you can still learn from tutorials online to turn waste into useful stuff.”

“There is no waste mascot, ambassador or logo to constantly remind people.”

“It is too convenient to throw away rubbish, e.g. rubbish chutes in HDB. People are used to it and it’s hard to change habits.”

“It is hard to change mindset, so we have to start from young. In schools, children learn and teach parents. Companies can also teach staff.”

“It’s possible to change our mindset in one generation.”

“We have to bring initiatives to the people, and learn how to turn ideas into actions.”

“In Singapore over the past 10 years, the community has been more responsive to green issues. There is a growing number of groups that trade things - which is reducing and reusing. The government and NEA are now more proactive. There is also a growing number of green groups. But all these are not happening fast enough.”

“Singapore has made progress but much more needs to be done. For example, Taipei has done more than us in certain areas, e.g. although it is very hard to find trash bins around, the place remains quite clean.”

“There is a need to have education on waste starting from primary schools and pre-schools. Have regular and engaging activities in schools.”



2.2 Recycle

“Rubbish chutes in households make Singaporeans stop thinking about waste once they throw it into the chute. Out of sight, out of mind. We should change the mentality of Singaporeans and make them think about segregating waste.”

“Singaporeans’ mentality about waste management is too simplistic - burning of garbage and recycling is all done after they throw the trash in the bins. Makes Singaporeans not see that they need to take an active role in recycling. The concept of out of sight, out of mind makes people not recycle.”

“The main challenge is mindset and mentality. People don’t recycle much but claim they recycle.”

“Singapore has a good image - 61% of all items recycled. But if you look at the statistics for recycling, the numbers don’t take into account where the materials come from. A large percentage comes from manufacturing and construction, and very low contributions from households.”

“In Singapore, there is lots of advocacy for recycling from the government, unlike other countries like Malaysia.”

“Many urban dwellers don’t know how waste is processed, and what can be recycled, and that when waste goes into the chute, nothing is segregated except for ferrous metals after incineration. We should look at trash as a potential resource.”

“There is the lack of a comprehensive campaign to tell people what to recycle and how to do it. Recycling is by nature user-unfriendly. Why are there no TV ads on recycling?”

“Waste recycling should be easy and simplified so that consumers can do it without hassle.”

“We lack a common message and consistency. How does everything work? How do I come in?”

“Recyclables are not segregated. This frustrates people who are keen to recycle. Messages to recycle are inconsistent, so people give up.”

“Why don’t people come door to door to raise awareness about recycling, like those for dengue? I don’t know where the stuff I recycle goes to.”

“Recycling culture has to be consciously created. Needs more top-down efforts.”

“People currently recycling are discouraged. Old folks are getting tired of walking too far to get their waste recycled. Feels strange that the company collecting recyclables and waste is the same – there are rumours that the same truck collects and sends everything for disposal, so it affects the intention and motivation to separate. Comingling of recyclables could result in mismanagement of public perception. Communicate more effectively so you don’t discourage people. Small details make a difference.”

“People do have not enough motivation to recycle. Grassroots leaders are not interested in having specific bins for each item in the common recycling area because it means more work and more responsibility for them. Town Councils’ main priority is not waste management. We are only preaching to the converted. We can design systems better but you need to make people care more as well and show them it’s worth a little effort.”



“There is a lack of communication and infrastructure. Recycling chutes in HDBs is a good idea but communication on the use is lacking. The individual wants to know how to recycle but doesn't know where to start. The locations of recycling bins are not appropriate and not easy to find. Households need to have their own recycling bins.”

“Recycling bin schemes need to be improved. Recycling bins are not situated at our void deck and are inconvenient. Instead the bins are situated along car parks so that it's easier for the waste company to collect. This makes people throw their rubbish there because there are no rubbish bins in car parks. Recycling bins are placed outside instead of inside for people to bring their waste to. Recycling bins are not compartmentalised. Why not put recycling bins next to the trash bin near the letterbox?”

“Need to put recycling bins together with waste bins to increase convenience.”

“The hole for the recycling bins is too small for certain boxes and items. The recycling bins are not available everywhere.”

“There is only one truck coming for all recyclables. So what is the point of segregating recyclables in different bins?”

“Biggest complaints from residents were the access to the recycling infrastructure. Residents are willing to recycle but do not have the facilities to do so. Waste management infrastructure needs to be improved. What programmes to put in place to change the behaviour of the residents? When Nike wants to change the perceptions of consumers, they change their marketing. This can be applied to recycling efforts in Singapore too.”

“The infrastructure for recycling is pretty much established. For example, previously 1 recycling bin for five blocks, now 3 bins to one block. There's also the cash for trash initiative.”

“Have been recycling for years and know that there are changes, e.g. from door-to-door fortnightly collection to recycling bins at every block.”

“Domestic helpers could be taught to segregate waste and be incentivised.”

“We can learn from Taiwan, which has a holistic thinking for recycling, both in terms of pre-school education and infrastructure.”

“In Australia, there is a five or ten cents rebate for empty cans and bottles. Need similar rebates in Singapore to encourage people to recycle, e.g. give them supermarket vouchers or cash.”

“It is part of the suppliers' responsibility to collect back their old products for recycling.”

“Manufacturers are not doing enough. For example, it takes so much time and effort to recycle ink cartridges. They should have more collection points for recycling the cartridges.”

2.3 Plastics and Food Waste

“The plastic bag dilemma - I try to use less plastic bags but I still need plastic bags to line my bins to throw the trash.”

“In Taiwan, they don’t even bother to give you a plastic bag unless you request for it. The shops were required by law not to give out free plastic bags. IKEA does it too.”

“Shopping bags are given too freely here. In some countries, the supermarket charge for bags. But you do get rebates for not using bags in Singapore.”

“There is insufficient awareness. Cashiers in supermarkets are trained to give you many plastic bags for different food, which is a total waste. The service mentality of cashiers is that they will feel guilty by not being able to provide a plastic bag. This is a problem of service habits and can be easily solved by education and retraining. Have a sign that says thank you for not using plastic bags.”

“We should push for no plastic bags and ban NDP goodie bags, and increase awareness in schools. While there is some environmental education, kids have not internalised and implemented green habits.”

“Introduce a policy on paying for plastic bags. People will choose to take it away in their own bags and refuse to pay if it is expensive enough.”

“Should put cute animals on plastic bags to show how plastic bags damage the environment and harm animals by adopting the cigarette packs’ marketing method. Scare people or make people feel guilty.”

“How to harness technology and education to replace plastic bags as the popular choice for carrying goods?”

“There should be more incentives for encouraging the recycling of plastic bags and bottles, such as giving rebates for recycling.”

“Biodegradable bags are useless because we incinerate our waste.”

“Majority of catering events use disposable plastic cutlery.”

“Many people don't know about plastic recycling, e.g, plastics in recycling bins that are contaminated with food cannot be recycled.”

“There is a lot of food waste in Singapore. We need regulations, incentives, education and awareness to solve the problem.”

“There is massive food wastage in hotels.”

“One example is how good food went to waste after a wedding banquet because ‘dapaos’ are not allowed.”

“In Europe, there are recycling bins for organic waste. Would like to compost food waste in Singapore but there’s no such bins.”

“I do my own composting of food waste and use the compost for growing organic vegetables. Local solutions are possible in small spaces like apartments. It takes personal initiative and awareness, although the system does not support it.”



3 SUGGESTIONS

The second small group discussions focus on the specific suggestions from the participants on the topic of Waste and the 3Rs. The questions include:

- How can Singapore do better on this topic? Give SMART (Specific, Measurable, Achievable, Relevant and Time-bound) suggestions on policies, programmes, initiatives or campaigns. The suggestions could involve the public, private and people sectors working together.

The suggestions are summarised and divided into the following categories:

3.1 Government and Industry

Improve the waste disposal and recycling infrastructure.

- Standardise the location of recycling bins at HDB estates so that it is easy for residents to find. The location or recycling corner should be convenient for residents and not the truck collector. A standardised location could be near the lift or mailbox.
- Make the recycling bins attractive or have a design that makes people feel guilty if they do not recycle.
- Make it more convenient for residents to recycle inside the house by introducing a suitable recycling bin or bag so that they can put it in the kitchen or the gas stove area. The idea is to make the design of the bins integral to our daily usage habits.

- Place waste bins near to recycling bins to reduce contamination.
- Have bins for 3 streams: recyclable, non-recyclable, and compostable.
- Consider an ERP-like system for waste chute disposal. Residents purchase different colour bags for different waste types. There is a scanner at the chute where you can scan the coloured bag which has a RFID tag. The chute will only open if it is an approved bag, and automatically charges to a credit system for each disposal. The amount and type of waste can be monitored, and residents will be more conscious about how much waste they throw.
- Consider plasma gasification for waste disposal, where no toxic chemicals are produced. By-products include heat, gas for electricity, slag, and solids similar to sand and glass.

Introduce incentives for reducing and recycling waste.

- Have incentives for recycling and disincentives for not recycling. For example, increasing the waste disposal costs, or having rebates for recycling bottles through recycling machines in supermarkets.
- Provide rewards for recycling such as giving vouchers or through a reward system or mobile application, where consumers can redeem points earned from recycling for discounts on items or to exchange for green products. Individuals can save money while companies are attracted to join the system as it gives them more customers.
- Combine incentives for waste with the utilities bill so that households can look at reducing waste, energy and water together.

Introduce waste and green policies for the public sector.

- Set a target to reduce waste per capita by 10% by 2017.
- Introduce mandatory sorting and recycling for waste collection contracts for the public sector by 2018.
- Be a role model on waste reduction actions such as reducing plastic cutlery and bottled water, and waste recycling.
- Introduce green procurement policies to select green products and sustainable suppliers.
- Introduce a Green GDP as an alternative to GDP and including aspects such as waste, recycling and pollution in measuring growth.
- Provide tax incentives on green products to offset the additional cost so that consumers will be more inclined to buy.
- Introduce waste collection for fish farms in Singapore.



Introduce waste policies for businesses.

- Mandate Extended Producer Responsibility (EPR) by 2016, and set regulations where the manufacturer of the product is responsible for its entire life-cycle from take-back, recycling to disposal.
- Make recycling mandatory for businesses, where they have to segregate trash from recyclables, and have open reporting.
- Require manufacturers to produce refill versions of their products to reduce packaging waste.
- Encourage companies to include waste generation and recycling information in training programmes and events for staff.
- Discourage the giving of free gifts, which creates more waste and comes at a cost to the environment. Shame those who take excess gifts. Companies should do away with free gifts or switch to non-physical gifts such as digital coupons or donations to charities.

3.2 Individuals and Education

Introduce a national campaign on the 3Rs by 2015.

- Start a national campaign to educate people on the why, what and how of the 3Rs. Provide specific instructions on recycling, and show the steps clearly and what is acceptable or unacceptable for recycling.
- Provide short tips for the public on how to reuse, reduce and recycle in their daily lives.
- Encourage people to consume based on needs rather than wants. Buy only what you need or buy second-hand. Encourage DIY and upcycling.
- Allocate more government funding for raising awareness through marketing, branding and educational materials.
- Use imagery and visuals instead of just facts and figures.
- Involve the media and use advertisements to spread the message. Create a series of 3R instances that people of all levels can relate to in their everyday life. Launch a viral YouTube video at the next Clean and Green Singapore.
- Create a mascot that appeals to children.
- Hire more people specifically to do outreach and change people's mindsets. Sharing in person is more effective.
- Train retirees, domestic helpers and students on the 3Rs and to share the message.
- Allow reporting and comparison of household waste generation and recycling with neighbours and the national average. Create social pressure to encourage or shame. Different estates will compete on who waste less or recycle more.
- Introduce monthly recycling drive in every constituency to spread the 3R message in the community.
- Make recycling fun through block parties.

Promote the idea of collaborative consumption.

- Promote collaborative consumption or the sharing economy, where people share, swap, rent, borrow or give away physical and non-physical items.
- Town Councils and HDB can promote pass-it-on initiatives in the community and provide a common storage space.
- Put up a noticeboard at housing estates where residents can post items for sharing.
- Encourage the use of platforms such as Blockpooling, Freecycle and NLB's Book Exchange.
- Set up a booth at MRT stations for people to deposit unwanted things and for others to reuse.

Have compulsory environmental education or waste-related programmes for students.

- Start compulsory green education for pre-schools and primary schools by 2018.
- Have recycling or environment-related programme as part of the NE/CIP module from 2016.
- Influence students so that they will value the environment when they are in a position to change things in the future.
- Implement recycling in the schools to teach the kids what to do and the value of recycling.
- Partner with schools to do door-to-door outreach on recycling.
- Involve families in the school recycling activities.

3.3 Food Waste

Set a target of 20% of food waste to be collected for recycling or composting by 2018.

- Convert food waste to biogas for energy or to compost. Compost goes back to community gardens and for landscape plantings.
- Encourage F&B outlets, caterers, and SAF facilities to recycle food waste.
- Have compulsory food waste collection points for all eating outlets by 2015.
- Have weighing machines to weigh food waste at NEA food centres and SAF facilities.
- Introduce food recycling course for food-related companies.

Increase public education and awareness on food waste.

- Educate the public on the impacts of food waste and tips on reducing food waste through television, radio, internet and printed media.
- Display banners, posters and table stickers at eating outlets such as hawker centres, school and factory canteens, food courts and restaurants by 2015, to educate people on reducing food waste.
- Give brochures to households to teach them about recycling and composting food waste.
- Get pre-school and primary school students to separate food waste, and educate their parents.

3.4 Plastics Waste

Encourage the MICE and catering industry to reduce the use of disposables.

- Introduce the mandatory use of reusable cutlery for the MICE industry by 2020.
- Encourage the MICE industry to adopt the STB Sustainability Guidelines, which recommend actions such as using reusable tableware, and avoiding serving individually wrapped condiments and seasonings.
- Discourage the use of individual packets and bottled water. Offer sugar or creamer in bulk containers, instead of individual packets. Offer water refill options for reusable bottles.
- Work with the catering industry association to develop a centralised washing system to encourage the use of reusable cutlery for catering events instead of using disposable cutlery.



Introduce policies and campaigns to reduce the use of plastic bags and disposables.

- Set the guidelines and limit for the thickness of plastic bags and the giving out of plastic bags in supermarkets by 2015. Consider charging more for plastic bags.
- Educate cashiers regularly on not giving out excessive plastic bags.
- Offer five cents rebate for every bag that shoppers do not take. Work with supermarkets to put up prominent signs. Shoppers with small purchases can reject a bag and get rewarded with five cents. Those with large purchases will need bags and they need not pay extra but they can also get five cents if they refuse a bag and stuff more items into fewer bags.
- Introduce a nation-wide campaign to increase the awareness of plastic pollution and enhance public education on plastic recycling. Make use of television, radio, internet and printed media. Set a time frame of three years from 2015, and review results and update the public every quarter.
- Incentivise the use of non-plastics, and help hawkers and businesses to consider their choices for non-disposables.
- Ban the use of polystyrene disposables or increase the cost.
- Have all grassroots events adopt non-disposables within 2 years. Members can bring their own cutlery.
- Regulate plastic packaging and enforce the adoption of the Singapore Packaging Agreement.
- Have a campaign to recycle mineral water bottles.



4 CONCLUSION

For the Conversations on Waste and the 3Rs (Reduce, Reuse, Recycle) session, we had a total of 36 participants (out of the 52 participants who registered). There was a mix of people from companies, organisations and students. Despite their different perspectives on waste and the 3Rs, we feel that they are all concerned about the issue of waste minimisation and recycling, and the need for more action.

This report reflects their thoughts and concerns, and shares their suggestions for a more sustainable Singapore. We hope that their views would be considered for the review of the Sustainable Singapore Blueprint.

Through these conversations, we also hope to increase public awareness, engagement and ownership of sustainability issues in Singapore, and to discuss constructive and specific solutions to address the issues. More importantly, we are planting the seeds that it is possible to nudge or effect environmental change from the bottom-up.



5 PARTICIPANT LIST

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