



RESPONSE TO
RECOMMENDATIONS
BY THE
#RECYCLERIGHT
CITIZENS'
WORKGROUP

BY THE MINISTRY OF
THE ENVIRONMENT AND
WATER RESOURCES (MEWR)

23 November 2019



Contents page

- 2 Foreword
- 3 #RecycleRight Citizens' Workgroup
- 6 Summary of Recommendations from Workgroup
- 8 MEWR's Responses
- 18 Next Steps
- 22 Annex: List of Subject Matter Experts

Foreword

Environmental issues often have far-reaching impact on daily lives. To ensure that our policies meet Singaporeans' needs, priorities and aspirations for sustainable living, the Ministry of the Environment and Water Resources (MEWR) is committed to work together with Singaporeans to formulate and implement meaningful solutions to environmental challenges.

In 2019, MEWR convened a Citizens' Workgroup to look at how we could improve household recycling. Our objectives were manifold. We wanted to carry out in-depth conversations with a diverse group of Singaporeans on an environmental problem that was important and relatable to everyone.

Through the Workgroup, we hoped to catalyse citizen-led initiatives that would address these issues in practical ways, aligned with the daily lived experiences of Singaporean households.

Over four weeks of extended deliberation and highly-focused discussions, field visits and trials, the Workgroup came up with nine thoughtful proposals. MEWR has studied the proposals carefully, and the following pages outline our response and our plans to co-deliver these ideas going forward.

We propose to do this by working on four pilot projects related to education, design of the blue bin, a deposit refund system for recyclables and an app to encourage the use of reusable containers.

It has been a gratifying experience, meeting with the Citizens' Workgroup, and discussing their ideas with them. The Workgroup members have shown their dedication and commitment in ways big and small.

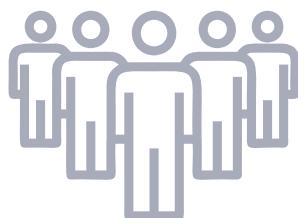
They embody the difference that individuals can make, when they form a community with a cause. We greatly appreciate their efforts, and the knowledge and personal insights that they have brought to the discussions.

My colleagues and I look forward to working with them to see their ideas to fruition.



Dr Amy Khor

Senior Minister of State
Ministry of the Environment
and Water Resources



#RecycleRight Citizens' Workgroup

The #RecycleRight Citizens' Workgroup was convened in September 2019.

To ensure that a diverse group of Singaporeans was recruited for the Workgroup, MEWR worked with the Institute of Policy Studies (IPS) to do a public call for applications in July 2019.

More than 300 people responded. Potential members were shortlisted by IPS, to ensure diversity in age, race, household type, education and recycling behaviour.

A total of 48 people accepted the invitation to be part of MEWR's first Citizens' Workgroup.

RECYCLERIGHT CITIZENS' WORKGROUP SESSION 1



DR AMY KHOR
SENIOR MINISTER OF STATE
for the ENVIRONMENT AND
WATER RESOURCES



60% OF OUR HOUSEHOLDS recycle REGULARLY

40% OF WHAT WE PUT INTO BLUE RECYCLING BINS CANNOT BE RECYCLED

KNOWLEDGE GAP
TURN TRASH INTO TREASURE & CREATE A CIRCULAR ECONOMY

THE FIRST TEAMWORK RECYCLING RING

CITIZEN WORKSHOP
MEET THE EXPERTS IN INDUSTRIAL WASTE WITH RECYCLING
RAISING AWARENESS FOR CHILDREN
• DENVER OF 6R
• COMMUNITIES OF RECYCLING RIGHTS
• VERNACULAR GLASS NATURE

How can we improve the way households recycle?

Members of the Workgroup were given a broad problem statement: How can we improve the way households recycle?

Over the course of a month, the Workgroup met for four full-day facilitated sessions to discuss the issue, and to ideate and propose potential solutions.

To support them in their work, MEWR made arrangements for the Workgroup members to visit a Materials Recovery Facility prior to the first session. This enabled them to observe first-hand the recycling situation in Singapore.

Members were also provided with relevant

information, such as survey findings on household recycling behaviour, data on household recycling rate, Singapore's Zero Waste Masterplan, and educational materials on recycling put out by MEWR and the National Environment Agency (NEA).

MEWR also arranged for the members to meet subject matter experts from Government, private sector and civil society to tap on their views and experience.

By the end of the first two sessions (on 21 and 22 September), the Workgroup had formed themselves into teams to further develop nine key ideas.

The energy, passion and commitment of the members were evident throughout the process. The teams met outside of the four sessions to conduct further research and pilot testing to explore the feasibility of their ideas.

MEWR supported these efforts by connecting them to the relevant stakeholders, and providing funds for their pilot testing and prototypes.

On 19 October, the Workgroup gathered for the third session, to share and further discuss their proposals with one another.

Voting was conducted for the members to rank the ideas based on relevance, effectiveness, scalability and sustainability. The top six proposals were presented to Dr Amy Khor, Senior Minister of State for the Environment and Water Resources, in the final session on 20 October.

A month later, the Workgroup submitted a report on all of their proposals and recommendations.

MEWR would like to thank every member of the Workgroup for their dedication and enthusiasm, and the careful thought that has been put into the report.

We would also like to extend our appreciation to our subject matter experts, facilitators and partners who helped guide this process.

This journey does not end here. MEWR and NEA will work with members to follow up on their recommendations, and test their ideas to improve the household recycling rate in Singapore. We hope to work with members to see their ideas to fruition, as we collectively realise a Zero Waste Nation.

What is it about?

The #RecycleRight Citizen's Workgroup involves citizens in co-developing solutions to improve household recycling in Singapore through an immersive, participatory process.

Open Call for Participation

More than 300 members of public expressed interest in being part of the Workgroup.



Forming the Workgroup

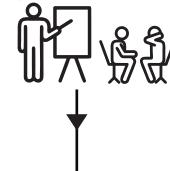
48 citizens from diverse backgrounds

— including non-recyclers — committed to join us on this month-long journey of co-creation.



Immersive & Intense Engagement

Over four sessions from 21 Sep to 20 Oct, Workgroup members came together to learn from subject matter experts and stakeholders, deliberate and **come up with recycling solutions** they would like to implement.



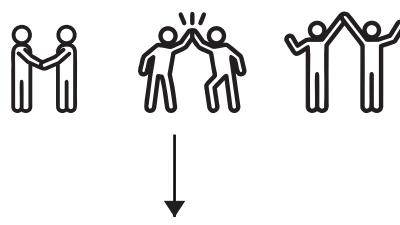
Citizens Presented Recommendations to MEWR

After the final session, the Workgroup members submitted **nine ideas** in their final report to the Ministry of the Environment and Water Resources (MEWR).



Bringing Ideas to Life

We will continue to work closely with the Citizens' Workgroup to **bring their ideas to fruition**.



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Summary of Recommendations from the #RecycleRight Citizens' Workgroup





Education and Building Awareness

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|------------------------------|--|
| 1. Blue Bin & You | Recommended a national campaign to raise awareness of the blue recycling bin, with suggestions on the target audiences, possible mediums, content and ideas. |
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| 2. Nurturing the Next Generation | Recommended raising awareness amongst children through inclusion of environmental education in school syllabus and providing educators with resources. |
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Community Support

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| 3. Nurture OuR Influencers | Recommended a supporting structure for in-community influencers to seed a Recycle Right culture. |
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| 4. E-Kampung Recycling Support Group | Recommended launching a neighbourhood e-platform for residents to share tips on recycling, and build a Recycle Right culture. |
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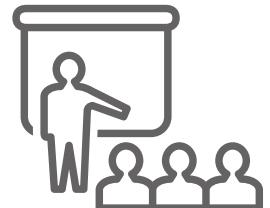
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|-------------------------------------|--|
| 5. Develop 6R Interest Group | Recommended building a 6R (Reduce, Reuse, Recycle, Repair, Refuse, Repurpose) culture through neighbourhood champions, trialling alternative recycling infrastructure and use of targeted messages in campaigns. |
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| 6. Food Waste to Energy | Recommended for food waste to be segregated by each household into plant and non-plant types, and recycled accordingly. |
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Incentives

7. #DabaoRight App

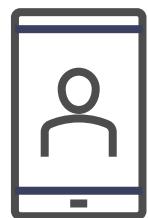
Recommended a new app to incentivise citizens to “Bring Your Own” containers to take away food, thereby reducing use of single-use plastics and lowering the contamination rate of recycling bins caused by food.



Product Design

8. Transparent Blue Bin

Recommended new design for the blue recycling bins to facilitate an intuitive and conscious recycling process.



Legislation/Policies

9. National Deposit Refund Scheme (DRS) for Beverage Containers

Recommended the implementation of a DRS in Singapore, with suggestions on the collection points, refund system, incentives scheme to garner support, education and investments in infrastructure in the long term.





Response to the Recommendations Of The #RecycleRight Citizens' Workgroup





The Workgroup submitted nine proposals to MEWR, with each proposal outlining various recommendations to help improve the recycling rate of households.

MEWR and NEA have studied the recommendations carefully, and grouped them into five themes:

- **Education and Building Awareness**
- **Community Support**
- **Incentives**
- **Product Design**
- **Legislation/Policies**

This section sets out our comments on each of the nine proposals, in no particular order.

Education And Building Awareness

Blue Bin & You

The Workgroup submitted a proposal for a national campaign to raise public awareness of the blue recycling bins, and build a sense of familiarity with them.

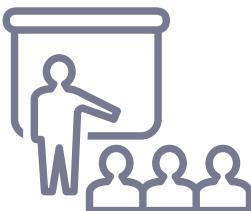
The team included various recommendations on the target audiences, possible mediums and the messages to be used. In addition to information on items that can be placed in the blue bin, they suggested educating the public on the treatment of non-recyclable items that are deposited in the recycling bins.

They also suggested targeted engagement of the elderly population, foreign domestic workers and office workers.

MEWR/NEA supports this recommendation.

MEWR agrees with the recommendations in this proposal to reach both specific segments, and the broader community.

While MEWR and NEA have conducted national campaigns in four languages to raise awareness of the importance of recycling, we agree that there is room to do more.



NEA will look into the suggestion to educate the public on items that should not be placed in the blue recycling bins, and share where the public can bring them (e.g. repair stations or donation points).

NEA also agrees that specific groups such as the elderly and domestic workers play an important role in household recycling, and will look for opportunities to engage these groups.

MEWR/NEA will look to trial the relevant recommendations in a neighbourhood. We invite Workgroup members to work with us on this pilot project.

Education And Building Awareness

Nurturing the Next Generation

The Workgroup submitted a proposal to nurture young Singaporeans to care for the environment.

Their recommendations included incorporating an environmental component into the Ministry of Education (MOE)'s Character and Citizenship Education curriculum, and building a positive mindset and attitude towards protecting the environment through schools.

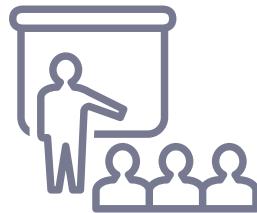
They also proposed creating a one-stop portal that is accessible to all educators, and imposing guidelines on environmental education in schools.

MEWR/NEA supports the recommendation to cultivate green habits in children.

Currently, environmental education is part of our national curriculum, from primary schools to junior colleges. This includes learning about global warming, the effects of pollution and the importance of using resources responsibly.

We agree that it is important to raise awareness on the importance of recycling right, among schools and teachers. Apart from the existing recycling right booklet for schools, NEA is currently developing a more comprehensive 3R Guidebook for Schools, which will be made available for download next year.

We will also leverage on the Environmental Education Advisor (EEA) programme to augment education on recycling. Each school has a teacher, who is appointed as an EEA. NEA works with this network of teachers to develop environmental programmes in schools, and to encourage schools to share best practices with one another.



Community Support

Nurture OuR Influencers

The Workgroup proposed to develop a system that would train in-community influencers across the nation.

These influencers could be leaders in religious, corporate and secular community organisations. The Workgroup recommended setting up an Influencers' Committee to:

- Identify and train first-level influencers on appropriate household recycling techniques;
- Support the influencers in reaching out to second-level influencers; and
- Serve as a long-term platform to host training and publicity modules that influencers can use.

MEWR/NEA supports the proposal to train in-community influencers to build a culture of recycling right.

The Government needs the support of partners across the different sectors to encourage the public to recycle more and recycle right.



We agree that it is important to mobilise influential leaders in different organisations, who can help to spread relevant knowledge and nudge behavioural changes in their networks.

MEWR/NEA is encouraged by the results of the Workgroup's pilot trial, which showed strong support from in-community influencers. MEWR/NEA has also noted the learning points from the trial, such as Semakau's limited lifespan being a strong motivator for recycling, and how gamification can motivate participants and reveal areas for improvement.

We agree that it is important to have a system in place to build up knowledge on recycling among influencers. NEA has a volunteer training and management system, and will explore how to better involve in-community influencers in this.

Some of NEA's partners have already been working with religious and faith-based organisations. We will explore how we can promote the #RecycleRight culture through these partners. MEWR will also consider tapping on existing partner networks to train these influencers.

Community Support

E-Kampung Recycling Support Group

The Workgroup proposed to set up a fun, educational and engaging e-platform for residents in identified neighbourhoods.

The aim is to create awareness and encourage households to adopt correct recycling practices and #RecycleRight as a community. This could also help to connect residents and build a Kampung spirit.

They have recommended for the platform to be managed by community champions in the long run, and to convert the platform into an app for better engagement.

MEWR/NEA supports the proposal to engage residents in the community via an e-platform, and for it to be managed by community champions.

MEWR notes the suggestion that Telegram might be a suitable platform, depending on the profile of the users.

The Workgroup had shared learning points from pilot tests done in three different locations, such as the need for face-to-face interaction to build trust, before residents would subscribe to the e-platform.

We agree that a community e-platform could be helpful in encouraging lifestyle changes, and to build a social norm of recycling right. Residents can be powerful advocates, and can encourage one another by sharing information and nudging the right behaviours.

Residents are also more likely to be receptive to messages from community champions, neighbours and friends. This recommendation could supplement existing efforts in community engagements.

NEA could look to identify community champions under the existing volunteer programme, and work with them to raise awareness in their communities.



Community Support

Develop 6R Interest Group

The Workgroup proposed to encourage households to recycle right by setting up interest groups to drive the adoption of 6R practices – Reduce, Reuse, Recycle, Repair, Refuse, Repurpose.

Their recommendations include:

- Setting up neighbourhood programmes spearheaded by local recycling champions;
- Conducting a waste audit in HDB blocks to pilot different modifications to the recycling infrastructure; and
- Bringing emotional messaging to outdoors and public campaigns, but distributing in-home messages (via the recycling champions or informative labels on home bins) on the specifics of recycling right, where families can refer to the materials at their leisure.

MEWR/NEA supports the recommendation to engage local recycling champions to spread the recycling message and drive behaviours.



We agree that having local recycling champions engage residents personally can lead to a greater sense of ownership and buy-in among residents. NEA will look at ways to identify and support local recycling champions on this.

We also support the recommendation to have targeted in-home messages. This serves as standing reminders to residents on the value and process of recycling right. NEA will explore how we can further facilitate household recycling through these.

We will also continue to explore how we can further enhance our recycling infrastructure.



Community Support

Food Waste to Energy

The Workgroup proposed for food waste to be segregated by each household into plant and non-plant-based waste, and recycled accordingly.

Members suggested that plant-based types can be recycled at community compost hubs, while non-plant based types can be recycled through biodigesters made available at neighbourhoods.

MEWR/NEA supports the recommendation for households to segregate food waste for recycling.

From 2024, it will be mandatory for large commercial and industrial food waste generators to segregate their food waste for treatment.

We will explore encouraging more households to segregate their food waste over time.

There are currently a few community projects on food waste segregation. In 2018, for instance, MEWR embarked on a pilot at Tampines Greenlace to encourage households to segregate their food waste.

MEWR invites the Workgroup to work with us on such community projects.



Incentives

#DabaoRight Mobile App

Inspired by the Health Promotion Board's National Steps Challenge, the Workgroup recommended the development of an app to incentivise users to reduce the consumption of disposables.

Incentives are provided through the app when users bring their own containers. The proposal was aimed at addressing the contamination of recycling bins by food waste.

By reducing the amount of disposables, members believe there will be a reduction of waste at source and this would likely result in a lower contamination rate.

MEWR/NEA supports the recommendation to encourage a "Bring Your Own" (BYO) culture.

We agree that incentivising the use of reusables can help reduce waste at source.

NEA and its partners have been working with merchants to nudge shoppers to reduce the consumption of disposables, e.g. NEA's Say Yes to Waste Less and Zero Waste SG's BYO campaigns.

MEWR recognises that the development of an app requires a substantial amount of time, funding and effort.

The Ministry will support the Workgroup by connecting them to:

- Relevant experts and partners who can help them assess the viability of the app and develop the idea further; and
- Potential sources of funding such as NEA's Call for Ideas Fund if the project is supportable.



Product Design

Transparent Blue Bin

The Workgroup proposed a new design for the blue recycling bin, with suggestions such as a transparent panel, eye-level notices, tailored lids with deposit holes and a fixed location for the blue bins.

These suggestions aim to facilitate an intuitive and conscious recycling process for households.

MEWR/NEA supports pilots to try out new designs for the blue recycling bin.

We agree with the recommendation to have eye-level notices. NEA recently refreshed the recycling bin labels to further raise awareness about the right recycling behaviours. The new labelling includes a “No Food. No Liquids” sign at eye-level.

The transparent window is an interesting and novel idea for the recycling bin. More behavioural research is needed to determine if tailored lids with deposit holes will be effective in improving recycling behaviours. The deposit holes may discourage residents from recycling as more time is needed to deposit the recyclables.

MEWR/NEA will work with members of the Workgroup to pilot the proposed changes to the blue bin design, to see how they influence behaviours.



Legislation/Policies

National Deposit Refund Scheme for Beverage Containers

The Workgroup has proposed to legislate for the implementation of a Deposit Refund Scheme (DRS). Under the proposal, when purchasing a beverage, consumers will be charged a deposit for the container.

The deposit is returned to consumers when they return the empty containers for recycling. The Workgroup has also provided recommendations to aid the implementation, such as identifying convenient collection points, providing tangible refunds and educating the public on the system.

They also recommended investments in local infrastructure to enable local recycling of materials without the need for exportation.

MEWR/NEA will explore the proposal for the DRS to be implemented in Singapore.

NEA recently launched the Recycle N Save programme with F&N with the support of NTUC FairPrice.

Under this pilot, 50 Reverse Vending Machines (RVM) will be progressively installed across the island. This is an example of a possible channel of collection in a DRS scheme.

We agree with the need to make collection points convenient. The RVMs have been placed at malls and community spaces. Under this initiative, incentives are also provided for consumers who deposit a certain number of beverage containers into the RVMs.

We invite the Workgroup members to work with us to further study the proposal for a DRS in Singapore.

On the recommendation to develop local infrastructure for recycling of materials, there are plans to further build up local mechanical recycling capability, as well as explore options for chemical recycling of used plastics.





Next Steps

**REDUCE
REFUSE
RECYCLE**



We are heartened by the hard work put in by members of the Workgroup to formulate suggestions to improve household recycling.

Several of the proposals mooted similar areas of concerns and suggestions, which underscored the need to address these issues.

We look forward to working with the members to further develop and implement their recommendations.

We propose to do this by working on four pilot projects, outlined in the following pages.

Pilot Projects

1. Developing a sustainable community
2. Piloting a new blue bin design
3. Researching into Deposit Refund Scheme
4. Developing the #DabaoRight App

1. Developing a Sustainable Community

The Workgroup put forward several recommendations on educating and building awareness of recycling at the community level.

MEWR/NEA will work with Workgroup members to identify a few communities where we can co-develop and trial recommendations of the workgroup, such as:

- Identifying and training local community champions and influencers to advocate for recycling.
- Setting up community-level e-platforms to raise residents' awareness of how to recycle right in fun and engaging ways.
- Engaging targeted groups such as foreign domestic workers and elderly on recycling.
- Encouraging food waste segregation.

MEWR invites Workgroup members who are interested in contributing and co-delivering these recommendations to sign up to be part of the project team.



2. Piloting a New Blue Bin Design

The Workgroup had suggested a new design for the blue recycling bin, with features such as a transparent panel, eye-level notices, tailored lids with deposit holes and a fixed location for the blue bins.

MEWR/NEA will work with Workgroup members to further develop these ideas, and produce prototypes to pilot in a few locations to observe their impact on user behaviour.

MEWR invites Workgroup members who are interested in contributing and co-delivering these recommendations to sign up to be part of the project team.





3. Researching into Deposit Refund Scheme (DRS)

MEWR/NEA will study the proposal for a DRS and its feasibility in Singapore.

Members of the Workgroup who are interested to have a better understanding of the DRS proposal and to work with us on the study are invited to join this project team.

4. Developing the #DabaoRight App

MEWR will support the originators of the proposal by connecting them to:

- Relevant experts and partners who can help them assess the viability of the app and develop the idea further; and
 - Potential sources of funding such as NEA's Call for Ideas Fund if the project is supportable.

Workgroup members who have suggestions for the team can email them at dabaorights@gmail.com.

ANNEX

List of Subject Matter Experts

In addition to the support provided by officers from MEWR and NEA, members of the Workgroup were also given access to external subject matter experts. MEWR would like to thank the following subject matter experts for their support.

Name	Designation	Organisation
Ms Adrienna Zsakay	CoE	Circular Economy Asia Ltd
Mr Allen Ang	Volunteer	Northwest CDC
Mr Bu Fan	Deputy General Manager, Environmental Strategy	Mitsubishi Electric Asia
Ms Eleanor Quek	Teacher/Environmental Education Advisor	Mee Toh School
Ms Goh Huishan	Co-founder	Save that Pen
Mr Ho Xiang Tian	Co-founder	LepakInSG
Ms Kia Jiehui	Principal Strategist	Forum for the Future
Ms Melissa Low	Research Fellow/Youth Leader	Energy Research Institute, National University of Singapore
Mr Neo Hong Keat	Senior Vice President, Waste Management	SembWaste Pte Ltd
Ms Nora Tan	Manager	Singapore Environment Council
Ms Pamela Low	Founder	Tingkat Heroes
Ms Pek Hailin	Manager	Zero Waste Singapore
Ms Robin Rheaume	Administrator	Journey to Zero Waste Life in Singapore
Ms Susan Tan	Eco-Volunteer	Tzu Chi Foundation



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