

PLASTIC
SMARTCITIES



Working with cities worldwide to
keep plastic out of nature by 2030

A Handbook

for Developing Plastic Smart Cities
in Thailand

As part of the Plastic
Smart Cities – TVA project



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keep plastic out of nature by 2030



The WWF Plastic Smart Cities Program

Plastic Smart Cities (PSC) Thailand is a four-year program (2021-2024) financially supported by the NRK & Norad through World Wide Fund for Nature (WWF) Norway. Plastic Smart Cities are cities that aim to have zero plastic leakage into nature. The program's overall objective is to reduce plastic leakage by 30% in the near term, and achieve no plastics in nature by 2030 in four major cities in Thailand, which are **Surat Thani, Ko Samui, Songkhla, and Hat Yai**.

In Thailand, there are nine key activities implemented under the program. These activities focus on reducing plastic leakage by establishing a clear policy, strengthening community awareness to reduce plastic consumption, implementing effective waste collection in the communities, and establishing plastic recycling entrepreneurship.



Community Waste Bank



Plastic Free School



MRF/ Juckshops Capacity



System integration



Low-Value Plastic market establishment



Take-Back system



PACT



Alternative Materials



Awareness raising and behavior change

Overview of the success in implementing the Plastic Smart Cities (PSC) in Thailand

Project Overview



23 schools
996 students
reduction of 11 tons



48 communities
4,463 members
reduction of 500 tons

plastic waste
processed
reaching



10 MRFs
reduction of 2,000 tons

2,000 tons
6 MoUs

Since the implementation of the activities in the four cities, the project has successfully supported a total of 48 communities in establishing waste banks, with a total of 4,463 members, resulting in the collection of 500 tons of plastic waste. As for the Plastic Free School, the project has engaged 23 schools in the activities, with a total of 996 students participating. This initiative has contributed to the proper separating plastic waste awareness and activities, resulting in the reduction of 11 tons of plastic waste and ensuring compliance with proper waste management practices. Furthermore, the project has supported the enhancement of 10 material recovery facilities (MRFs), improving waste separation and management efficiency. The project's economic and environmental sustainability efforts have resulted in significant achievements, with the recorded amount of plastic waste processed reaching 2,000 tons with 6 MoUs signed with the processors.

Introduction

Welcome to the handbook for developing plastic smart cities in Thailand!

Plastic pollution keeps on growing in Thailand and we need your help to address this crisis. You can be part of the solution in your own local community. From 2021 to 2024, World Wide Fund for Nature (WWF) Thailand has been working in the cities of Surat Thani, Koh Samui, Songkhla, and Hat Yai with communities, government officials, businesses, and schools to develop projects to prevent, reduce, reuse, and recycle plastic waste and create benefits for the environment and society. From the challenges we have overcome and our successes, we believe that these community scale plastic waste management projects can be repeated in other parts of Thailand.

Who can use this handbook?

This handbook is designed for municipalities who can support and promote the creation of community-based plastic waste management projects through policy and regulation, raising awareness and behavior change, technology and innovation, and creating efficient management systems. People from communities, schools, and businesses can use this handbook as a starting point for creating plastic waste management projects at the local level.

How to use this handbook?

Readers of this handbook can use it to create community-based plastic waste management projects in Thailand. This handbook provides step-by-step instructions on how to develop community waste banks, junk shops/MRFs, plastic free schools, and single-use plastics reduction activities in restaurants, cafes, hotels, and other businesses in Thailand. Governments can refer to the last section of this handbook to learn what they can do to support community-based plastic waste management projects and address challenges in general waste management.

How was this handbook created?

This handbook was created by gathering the lessons learned, best practices, and success stories from all the PSC projects implemented in cities of **Surat Thani, Koh Samui, Songkhla, and Hat Yai**. Our team had many useful conversations with the variety of people involved in making these projects happen (communities, businesses, government officials, junk shop/MRFs, schools) to capture their challenges and successes so that others can replicate their projects across Thailand.

What are the Benefits of Plastic Smart Cities?



Thailand is one of the world's largest contributors to plastic pollution, producing approximately 1.03 million tonnes each year. Combined with **four other countries in Asia** (China, Indonesia, Vietnam, and the Philippines), Thailand is responsible for more than half of the eight million tonnes of plastic waste dumped into the world's oceans annually. Creating **plastic smart cities** can help Thailand reduce the amount of plastics that enter nature. There are many benefits to nature and people through creating plastic smart cities.

1

Plastic Pollution Management

★ **Prevent plastic waste at source:** The PSC program aims to reduce plastic waste at its source by encouraging local businesses to follow the PACT guidelines and running Plastic Free Schools programs. These efforts not only cut down on unnecessary plastics but also help customers of local businesses as well as students in school partners become more aware of how their choices impact the environment. For example, by implementing the PACT guidelines, customers may begin to think more about whether they truly need plastic utensils or extra condiments, contributing to a more sustainable community.



★ **Increase plastic waste collection:** Activities that enhance plastic collection include community waste banks, upgrading junkshops or MRFs, and implementing corporate take-back programs. Community waste banks play a crucial role in increasing households in target areas for accessing at least basic waste collection services. Meanwhile the corporate take-back programs advocate stores in shopping malls to return recycled plastics and low-value plastic waste into the system. These efforts collectively improve waste management systems and support higher plastic waste collection.

★ **Enhance the reuse and recycling of plastics:** All program activities support reuse and recycling efforts. Activities such as PACT and Plastic Free Schools focus on increasing the reuse of plastics, helping to reduce waste at its source. Community waste banks and facilities, including junk shops or material recovery facilities (MRFs), improve plastic collection, thereby enhancing recovery and recycling rates. Additionally, the Corporate Take-Back program engages with private sector to increase collection rate of plastic items.

2

Additional Benefits

Reduction in municipal solid waste

As people become more aware of how to separate waste and collect plastic waste, it leads to less municipal solid waste. This not only helps keep the environment cleaner but also reduces the cost of waste management for the local government. With more waste being separated for recycling, the overall waste disposal process becomes more efficient and less expensive.



Cleanliness of city areas

Due to more awareness of waste management among the citizens and local organizations, the reduction in municipal solid waste helps make the city cleaner. This leads to a better living environment where people can enjoy a higher standard of cleanliness. A cleaner city also creates opportunities for more advanced waste management programs in the future, improving life for everyone in the long run.

Promoting the City's Image making the city cleaner and more livable

With increasing awareness of waste management among citizens and local organizations, reducing municipal waste will contribute to a cleaner city. This will lead to a more pleasant living environment and, in the long run, improve the quality of life for the community.

Better relationships with and between local stakeholders

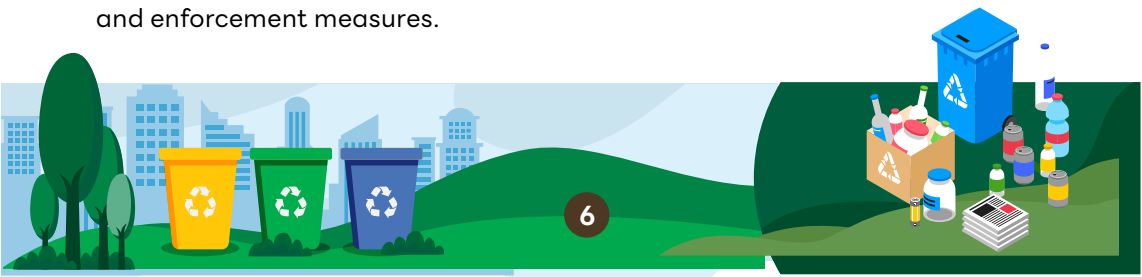
The PSC program encourages more collaboration between local organizations and citizens, as well as among the citizens themselves, to work towards a more sustainable future. This teamwork helps strengthen relationships within the community. As people work together for a common goal, it improves the connections and trust between them.

Guidelines for Municipalities and Local Organizations

Municipalities and local organizations play a crucial role in developing cities that are well-prepared for comprehensive plastic waste management. This involves reducing plastic use, promoting reuse, and enhancing plastic recycling. These efforts can be implemented through various direct and indirect approaches. Each locality can design and adapt the following recommendations based on its specific context and needs.

Direct Action

- Establishing a Task Force for Integrated Plastic Waste Management** is a crucial step in developing Plastic Smart Cities. This task force should be led by the municipality in collaboration with community leaders and other relevant stakeholders to oversee waste management efforts and implement initiatives that contribute to sustainable waste reduction.
- Raising Awareness and Shifting Public Perception** is essential in reducing plastic waste. Citizens should be aware about proper waste management and the importance of reducing single-use plastics (SUPs) through campaigns. These campaigns should be widely disseminated via accessible communication channels such as Facebook, LINE, Tik Tok, billboards, flyers, and community radio. Additionally, integrating awareness messages into religious activities and working with religious leaders can help reach a broader audience effectively.
- Recognition and Incentives** play a key role in motivating individuals and organizations to participate in plastic waste reduction efforts. Providing awards, certificates, or public recognition to those actively working towards reducing or eliminating plastic use can encourage greater engagement from businesses and consumers alike.
- Developing Policies and Regulations.** Municipalities should implement targeted policies for households, businesses, government agencies, and educational institutions to reduce their reliance on SUPs. Initially, voluntary agreements (MoUs) can be introduced to gain cooperation before transitioning into official regulations and enforcement measures.





- **Allocating Budgets for Waste Reduction Initiatives** is necessary to support programs aimed at minimizing waste in households, communities, businesses, and government institutions. Dedicated funding can ensure the continuity and success of these efforts.
- **Training Local Volunteers** is another effective approach to promoting sustainable waste management. Engaging community leaders, youth, and senior citizen groups as ambassadors can facilitate knowledge-sharing on proper waste segregation and the reduction of SUPs. By empowering these volunteers, communities can build long-term waste management solutions.
- **Promoting Alternatives to SUPs** is crucial in cases where complete elimination is not feasible.
- **Creating SUP-Free Zones.** Designating key locations such as tourist sites, public spaces, schools, markets, and other municipal areas as single-use plastic-free zones can serve as a model for responsible waste management.
- **Supporting Existing Community Waste Banks.** Municipalities should work to establish and standardize waste banks, ensuring their effective operation while expanding them across different city areas. Strengthening these waste banks can provide long-term benefits for waste collection and recycling efforts.
- **Recognizing and Supporting Informal Waste Collectors.** Organizing and officially acknowledging these groups can enhance their role in plastic waste management. Providing financial support or resources can further strengthen their contributions to waste collection and recycling.
- **Developing a Citywide Plastic Waste Database** will enable data-driven decision-making in waste management strategies. Ensuring that this data is accessible to the public through downloadable reports and updates via websites or mobile applications can enhance transparency and encourage broader community participation.
- **Enhancing Digital Innovation for Waste Management** can further optimize waste reduction efforts. Developing or improving digital platforms that facilitate plastic waste trade and waste bank operations can create better connections between buyers and sellers of recyclable plastic materials, making waste management more efficient and sustainable.



Indirect actions

supporting the roles of community involvement, collection shops, schools, and the private sector.

Community Waste Banks

This step is for the municipality or the local government who wants to set up new community waste banks in the city. The municipality should:



The most important component of a community waste bank is a leader. →

Q: Who can become a community waste bank leader?

A: Anyone in the community can become a leader. The person does not need to have any experience, only passion and commitment are essential for the start.

Q: Do I need a committee?

A: This depends on your preference. Both of these options work in its own context:

- Starting with a committee
- Starting without a committee (the waste bank will be operated as an individual business)

Tips: It is recommended to set up a committee for many reasons:

- To have several people to delegate for different roles of the waste bank.
- To create socialization and close-knit connections among community members.
- To allow rooms for increasing capacities in the long term.
- To enhance financial transparency and representation.



3.1 Participants

Q1: Who should be my target participants?

A: This depends on your preference. Both of these options work in its own context:

- Local members within your community: This is the easiest to start with, especially those you know already.
- You can target tourists and visitors in the city. It is more challenging, but not impossible.

3.2 A junk shop / MRF

Q2: Which shop should I sell the collected waste to?

A: You may start with locating the nearest shop(s) you want to partner with. Then, try visiting the shop(s) to learn about their operations, pricing, sorting criteria (e.g. what types of waste are sorted and what are not accepted), and what support they might be able to offer (**see Step 4**) before making the decision.

Tips: Find more than one buyer. This will increase independency and negotiation power to the community

Step 04

Defining Financial Management Methods

Q1: Is a membership or shareholder system necessary?

A: A membership or shareholder system is recommended for communities that aim to 1) track and maintain member engagement, 2) collect fees or shares from members to be used collectively for managing the waste bank or community, and 3) allocate special benefits or welfare to members. However, a membership or shareholder system is not required for all waste banks. Not having this system may provide greater flexibility and ease of operation, which may be more suitable for smaller communities or those without a formal management committee.

Q2: How should cash flow be managed?

A: Cash flow management depends on whether the waste bank is positioned as an "intermediary" or a "coordinator," as these **two models operate differently**.

Intermediary Model: The waste bank purchases waste from participants/members before selling it to MRFs. This model requires cash reserves because there may be delays before selling to buyers.

Coordinator Model: The waste bank does not purchase waste directly but facilitates transactions between participants/members and recycling centers. In this case, cash reserves are not necessary. If using this model, you can proceed directly to Step 5.



Q3: How should savings and financial transactions be managed for waste banks with revolving funds?

A: There are two main approaches to financial management, depending on convenience and preference.

- ★ The first option is to **open a joint savings account with a commercial bank**, requiring at least two account holders who must co-sign for withdrawals. This method enhances security and improves transparency in managing the waste bank's funds.
- ★ The second option is to **establish a cash savings fund with an accounting system to record all transactions**, typically managed by the waste bank committee. This approach is similar to a joint savings account, but the cash is held by a designated leader or committee member instead of a bank.

Tips: Maintaining clear financial records and ensuring transparent communication between the committee and members will help enhance trust and accountability in the financial management process.



Step 05

Identify the
resources needed

5.1 Financial resources

Q1: What could be my sources of income?

A: There are at least 3 sources of income you may choose from:

- a) **Waste sale margin:** You can generate the margin by purchasing waste at a slightly lower rate than your selling rate at the partnered junk shop. (This source of income is typical for most waste banks in the PSC program).
- b) **Shares:** You may also consider a shareholder model where your participants would purchase certain amounts of shares before starting the waste bank activities.
- c) **External funding:** You may also consider seeking external funding if you do not want to earn income from the participants, or if the expected income from sources a) and b) is inadequate for your operation.

Q2: What are all the costs I need to take into account?

A: There are multiple costs that could arise:

- Capital - Construction
- Capital - Vehicles for transporting wastes
- Operating - Rent
- Operating - Equipment
- Operating - Staff
- Operating - Transportation fuel and maintenance costs

Tips: You do not always need to pay for everything. Instead, you should start with identifying which of these resources are already available in your community. For example, you can use an existing area that does not need construction nor rental fee. (See 4.2 for more details on Physical Resources).

Q3: What should I do with the surplus (i.e. profits)?

A: Depending on your choice (and your committee's choice), you may choose to allocate your surplus for different purposes:

- Project-related activities
- Member welfares
- Other purposes such as donation for charity, or generous compensation for the committee members.

5.2 Physical resources

Q: What are all the physical resources I need to prepare before starting a waste bank?

A: You will need these 3 things:

- **Space**
 - A space can be either permanent or temporary.
 - You can use an existing space that is free of charge, a space that only needs minimum adjustments, or you may construct a new space (if needed).
- **Vehicle & transportation:**
 - You will need a vehicle, or means of transportation, to transfer your collected waste to the partnered junk shop.
 - The simplest option is to have the junk shop come pick up your waste using their vehicle.
 - Another option is to arrange your own transportation. This can be with a shared vehicle (if there is someone in your community who is willing to share their vehicle), your own vehicle (if you already have one), or a rental vehicle (if your waste bank has generated enough income to rent one).

Plastic Smart Cities

5.3 Intellectual resources & Communication

Q1: How can I obtain the correct knowledge in waste sorting & organizational management?

A: You can obtain the knowledge from various sources:

- **Partnered junk shops:** You can ask your partnered junk shops to provide recommendations on how you can sort your waste correctly.
- **External training:** You may consider attending training courses offered by external parties such as Wongpanit. However, please be aware that those courses often come with tuition fees.
- **Peer learning:** You can also ask other community waste banks for their knowledge and recommendations in waste sorting and organizational management.
- **Self-learning:** If you have any relevant experience in organizational management in the past, you can consider adapting that knowledge in your waste bank operation as well.
- **Municipality:** has commitment to support and capacitate community waste banks in alignment with the Provincial Administrative Organization's Recycle waste banks guideline.

Q2: How can I communicate with my participants?

A: You can choose between many ways.

The 3 recommended ways are:

- In-person communication
- Peer-to-peer communication
- PR campaigns

Online chats are helpful for communicating as well.

Trip: it is recommended to:

- Be prepared to make trial & errors, and seek solutions along the way.
- Constantly check whether the needs & desires of stakeholders are fulfilled & see what you can offer to sustain everyone's engagement.
- Build connections. Talk to others when you need help. Partnering with other community waste banks is always a plus.

Let's kick start your waste bank now!
Only by putting things into practice can bring success!!



Guidelines for each junk shop to Participate in Plastic Smart Cities Project



Recommendations for Municipalities or Local Government Organizations

The following steps outline a model for municipalities or local government organizations that aim to establish a new waste management system. This system will include dedicated buy-back stores and community waste banks, encouraging them to become allies in managing plastic waste sustainably.

1 Study the City's Areas

This includes identifying locations for buy-back stores and community waste banks in target zones to establish an efficient and comprehensive waste management system throughout the city.

2 Determine the Size and Customer Base

Define target customer groups, from individuals to industrial-level customers such as shopping malls, hospitals, and hotels. This process helps pinpoint both waste suppliers and buyers more accurately.

3 Communicate your purposes with each junk shop

and support them through all the steps (1-5) to ensure that the new waste management system can operate smoothly. This includes providing knowledge and incentives to encourage participation from both buy-back stores and waste generators in the city-wide sustainable waste management network.

For waste sorting centers or junk shops that wish to be part of the project, the following steps can be followed:

Step

1

Find your motivation and uniqueness

Partnering with community waste banks is slightly different from partnering with your regular sellers.

Knowing your motivation will help you make a good start.

Q: Why would I partner with community waste banks?

A: Below are some of the motivating factors that might resonate with you:

To earn more income from waste sales and expand customer base

By forming partnerships with community waste banks, junk shops have the potential to earn more from waste sales. This is due to the fact that managing bulk waste is simpler, and larger waste volumes yield higher net margins.

To contribute to the environment

Partnering with community waste banks means you are contributing to the community's efforts to better collect and sort their recyclable waste, which will eventually help to reduce waste pollution to the environment.

To contribute to the society

Partnering with community waste banks also means you are contributing to the community's activities that bring people together for good causes, both for the environment and for the local people. Connecting with informal waste workers in the community can also give you a sense of contribution to the society where you belong.

Step

2

Choose your stakeholders (optional)

Q1: Who should be my target communities?

A: In case you want to become part of the community waste bank network but have not been contacted by anyone, you may set your targets based on **2 important factors**:

- **Locations:** The travel distance between your shop and the communities should be feasible for you to go collect waste from (if needed).
- **Waste volumes:** The expected waste volumes should be reasonable for your collection.
- **Waste composition:** What is commonly found in this. Do their waste materials match with the processing capacity/ preference.

However, this step is optional and the variety of target communities to work with might vary a lot depending on the city context.

Step

3

Understand the needs of both parties

Q1: What do the community waste banks need from a junk shop?

A: They usually need the following:

★ Waste sale pricing:

- Providing understanding about what factors influence your buying price is crucial. You will need to update your customers when the rates change over time.

★ Transportation:

- Oftentimes, the community might not have the capacity to ship their collected waste to your shop. Therefore, they might ask for your kind support to go pick up the waste from their location when the volume is optimal.

★ Equipment and supplies:

- Scales and calculators: You will have to bring a scale and a calculator with you when purchasing waste from the community (if they do not possess any).

- Waste containers: Some communities might use their containers such as net bags to collect and deliver waste. If you receive these containers when purchasing waste from them, you will have to return them to the communities afterwards.

★ Waste sorting:

- The communities often have limited knowledge on how to sort their waste correctly. You will usually need to educate them with the correct practices, especially the practices that are compatible with your shop.

★ On top of all the factors listed above, trust is the number one thing that will sustain your partnership with the community waste banks. Through your transactions of waste and cash with the communities, you will be able to prove your trustworthiness by being honest, reliable, and consistent in your practices. Maintaining the trust between you and your partners is key to your long-term success.

Finances

Logistic support

Knowledge and communication

Trustworthiness



Q2: What do you (a junk shop) need from the community waste banks?

A: You will usually need the following:

Logistical commitment: You will require the communities to stay committed to the agreed dates and times for your pickup arrangement, or inform you in advance for any rescheduling.

Waste sorting quality: You will require the community to maintain a good quality of waste sorting, so that you can proceed properly without causing troubles at your shop.

Prediction of waste volume: If possible, you might want to know the approximate volume of waste that you will collect from a community waste bank, so that you can plan your transportation and your budget accordingly

Tips: Not all the requirements are needed in every community. You will have to check with each of them individually for their tailored list of requirements.

Step

4

Compromise

Q: What if I cannot serve some of the needs of the community waste banks?

A: Once you have identified the limitations, it is highly recommended to communicate them clearly with the communities and seek solutions together. Below are some examples:

★ If the volume of collected waste is too little for you to make it worth driving your truck to the community, you could ask the community to either make the appointments less frequent, or expand the community network to collect waste from more participants.

★ If you need to adjust your purchasing rates, which had been agreed upon with the communities earlier, you should inform the communities in advance since this could affect their internal purchasing rates from the members as well.

Tips: Not all the requirements are needed in every community. You will have to check with each of them individually for their tailored list of requirements.



Step

5

Get started!

Q: I've done Step 1-4 already, can I start now?

A: YESSS!!!! Let's kick start your partnership now! Only by putting things into practice can bring success!!

Tips: it is recommended to:

- Be prepared to make trial & errors, and seek solutions along the way. Constantly check whether the needs & desires of both parties are fulfilled.
- Expand your network. Partnering with more community waste banks is always a plus.
- Set up a membership system with benefit scheme to secure regular customers. i.e. once registered, you will get 0.5 THB higher than the normal price.



Plastic Free Schools

This guide is for any school that wants to start a plastic free school campaign at your school.

(For the municipality)
Find your
target schools

This step is for the municipality or the local government who wants to set up Plastic Free Schools within the city.

The municipality should:

- ★ Start off with the municipality schools within your network for the ease of communication and collaboration between the schools.
- ★ Try to also reach out to other schools outside of the municipality's authority.
- ★ Communicate your purposes with each school and support them through all the steps (1-6).
- ★ Know the current situation and management structure in the schools. What can be done and what cannot. It is also useful to conduct baseline assessment.

Step

1

Organize educational activities

Before the school can start adopting any plastic reduction measures, the school should organize a few activities to educate and engage the participants first.

Q1: What activities should be organized at the school?

A: There are different types of activities you can organize for the students and/or the teachers:

Informative activity

A lecture or a presentation can provide the participants with basic knowledge.

Interactive activity

A practical training or an interactive activity can provide the participants with hands-on experience of the practices, which they can easily adopt for themselves after the session.

Q2: What information should be delivered during the activities?

A: The activities, which could be organized in series, should collectively cover these following topics:

- Different types of waste (e.g., general waste, hazardous waste, organic)
- Different types of plastic waste (e.g., PET, PP, flexible films)
- Waste sorting
- Waste reduction
- Waste management

Step

2

Aim to establish Plastic Free Days

Plastic Free Day(s) is to announce at least one day in a week to reduce single-use plastics of your choice at the school. A couple of things to determine are:

- 1. Frequency:** How often do you want to set plastic free days? Examples are once or twice a week as a start.
- 2. Target participants:** Who do you want this campaign to be applicable to? Examples are students, teachers, staff, and outsourcing shops.
- 3. Target types of plastics:** Which types of plastics should be reduced? You may choose from 1 to many different types. (See Step 3 for more details)

Step

3

Identify all the single-use plastic items being used in your school

Q: Which single-use plastic (SUP) items shall the school reduce?

A: Let's start with identifying all the SUP items being used in the school.

You can use the list below as your checklist:



Straws



Beverage bottles



Beverage cups



Cutlery



Food containers



Plastic bags

- Plastic wraps or pouches
- Amenities (soap, washing liquids, etc.)
- Napkin packages
- Other (e.g. seasoning sachets, cup holders, etc.)

Step

4

List out the possible measures you can take

Q: What measure(s) can be taken for each type of SUPs?

A: There are 4 options you can choose for each type of SUP items:

1



Eliminate

2



Replace/Refill

3



On request

4



Bring-Your-Own: BYO

Step

5

Decide on your measure(s)

There are 3 things to consider before making the decision: the suitable measures, the target stakeholders, and the school's capacity.

Q1: Which measure is realistic for each SUP item?

A: This depends on your context. You can start with only a few items, with one measure each. Choose the measure that you find most feasible to implement with the certain items. Below are some examples:

• **Straw + Measure 1 (Eliminate):**

Straws will no longer be distributed anywhere in the school.

• **Beverage bottles + Measure 2 (Replace/Refill):**

Refill stations for drinking water will be installed to replace bottled water at the school.

• **Plastic bags + Measure 3 (On-request only):**

Plastic bags are not freely provided by default. Customers will have to make an extra effort to request it.

• **Beverage cups + Measure 4 (BYO):**

Students are encouraged to bring their own cups or tumblers to purchase drinks within the schools. They will get a 5-baht discount as an incentive.

Q2: Which stakeholder(s) does the school have to work with?

A: There are several stakeholders you will need to work with to make the implementation successful:

- Shops within the school (operated by the school itself)
- Shops within the school (operated by outsourced parties)
- The students
- The teachers
- The school management team and staff

Q3: What is the suitable intensity of the campaign at the school?

A: Besides what you want to achieve in your Plastic Free School campaign, it is necessary to be considerate of the capacities of teachers, school staff, and students.

Tips: A Plastic Free School campaign should be made flexible according to the school context to make sure that the measures are practical and realistic, coupled with easy and simple example to motivate low-capacity with high motivation schools. Small action like changing defaults can lead to impact. Change from giving out straw/ bag, to on-request or not giving by default, with simple behavioral change message.



Get started!

Plastic ACTion (PACT)

This guide is for any restaurant, cafe, hotel, or business establishment that wants to reduce single-use plastics in the business.

(For the municipality) Find your target businesses



- Identify high-potential businesses to start off with. These could be the businesses who are already using eco-friendly packaging or adopting the sustainable tourism trends.
- Once you get the first group of businesses to join PACT successfully, aim to expand the campaign to potential businesses that are harder to reach. Ultimately, you want to involve as many businesses as possible to reduce SUPs across the city.
- Set up a system to monitor the reduction. Data collection and reporting tools are significant driver to successful campaign. Capacity building on data collection, monitoring, and reporting is necessary.

Communicate your purposes with each business and support them through all the steps (1-5).

Step 1

Identify all the single-use plastic items being used in your business

Q: Which single-use plastic (SUP) items shall the business reduce?

A: Let's start with identifying all the SUP items being used in the business. You can use the list below as your checklist:



Straws



Beverage bottles



Beverage cups



Cutlery



Food containers



Plastic bags

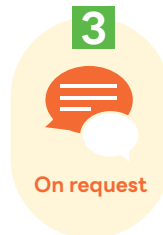
- Plastic wraps or pouches
- Amenities (soap, washing liquids, etc.)
- Napkin packages
- Other (e.g. seasoning sachets, cup holders, etc.)

Step 2

List out the possible measures you can take with each of the items

Q: What measure(s) can be taken for each type of SUPs?

A: There are 4 options you can choose for each type of SUP items:



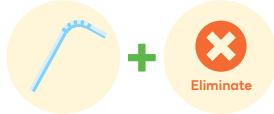
Step 3

Decide on your measure(s)

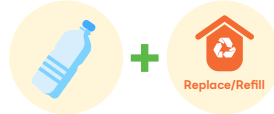
There are 3 things to consider before making the decision: the suitable measures, the resources needed, and the operational changes.

Q1: Which measure is realistic for each SUP item?

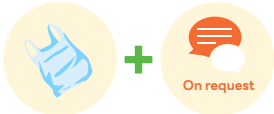
A: This depends on your context. You can start with only a few items, with one measure each. Choose the measure that you find most feasible to implement with the certain items. Below are some examples:



Straws will no longer be provided at your business premise.



Refill stations for drinking water will be installed to replace bottled water being sold at your premises.



Plastic bags are not freely provided by default. Customers will have to make an extra effort to request it.



Customers are encouraged to bring their own cups or tumblers to purchase drinks at your shop. They will get a 5-baht discount as an incentive.

Q2: What resources do I need?

A: Depending on your selected measures, you will need the following:



Environmentally friendly alternatives
(e.g. biodegradable packaging)



Reusable containers
(e.g. beverage cups and plates)



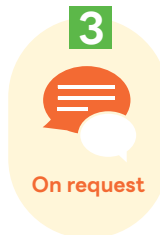
Additional stations for reusable items
(e.g. washing and drying stations)



Communication media
(e.g. posters and banners)

Q3: Which part of the operation do I need to change within the business?

A: Depending on your selected measures, you will need to change the followings:



- **Measure 1 Eliminate:** You will only need to remove the items from where they are usually made available.
- **Measure 2 Replace/Refill:**

Replace: You will need to get yourself and/or your staff acquainted with the newly introduced alternative materials, which might have slightly different qualities than the SUPs. Common concerns include shape stability, liquid leakage, and the packing techniques. Some testing is needed at the beginning to make sure that your new packaging can serve your packaging purpose well.

Refill: This measure will bring major changes in your operations. You will need to add washing and drying cycles of the reusable containers into your otherwise disposable practices. This can cause difficulties at the beginning, but once you are settled with the new practices, it can run smoothly in the long term.

• **Measure 3 On request only:** This only requires you and/or your staff to stop giving away SUP items as a default and to wait for the customer requests instead.

• **Measure 4 - Bring-Your-Own (BYO):** This requires you and/or your staff to adopt new ways to serve your orders in containers with different shapes and sizes that are brought by the customers, while maintaining the same quality and quantity, as well as hygiene. This could be coupled with a small discount offers.

Step 4

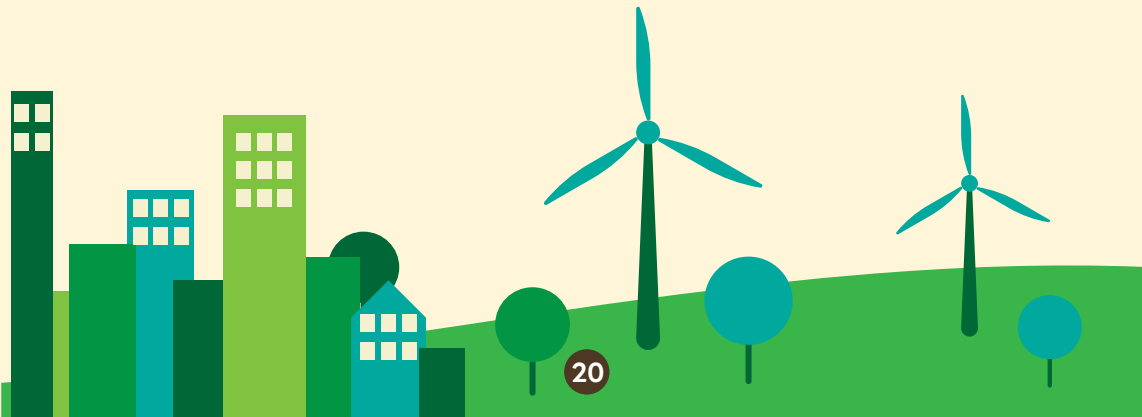
Design your communication techniques

Q: How do I communicate my measures with the customers?

A: To ensure that your measures are communicated well and consistently to the customers, you may choose to communicate through:

1 In-person communication

- You and/or your staff inform every consumer as they visit the store.





2

Offline media



★ Create printed media to advertise the measures within and/or in front of your business premises.

3

Online media

★ Advertise the measures on your online platforms. A key message should focus on awareness and behavioral change. Some behavioral instruments can be integrated, like a point system or online contest.



Step
5

Get started!

Let's kick start your
PACT campaign now!



What can Municipalities and Local Government Agencies Do to Help?

- ★ Municipalities and local government agencies have a very important role in supporting projects that reduce, reuse, or recycle plastics. There are many different ways that municipalities and local government agencies can help.

★ Activities for the whole plastic waste life cycle

- Establish a working committee with the municipality as the lead, including community leaders and key project personnel, to oversee waste management activities in all communities. This also involves providing waste management training and organizing activities to motivate communities to reduce waste.
- Raise more awareness about plastic waste prevention, collection, reuse and recycling. Communications should be done through public relations channels such as websites, online media and documents to explain the different types of reuse and recycling solutions.

★ Plastic waste prevention



- Establish policies for households, communities, businesses, governmental offices, and educational institutions to reduce the use of unavoidable single-use plastics.
- Support creation of a budget for various activities that can be done to reduce waste within households, communities, businesses, governmental offices, and educational institutions.
- Announce and enforce policies that reduce the amount of plastic bags given out in stores and workplaces.
- Promote activities in schools that eliminate or reduce single-use plastics and coordinate and support teachers in the schools who are implementing.
- Support training of local volunteers, which includes community leaders, youths and the elderly clubs, to be local trainers which are able to transfer knowledge and skills for community leaders and villagers in reducing single-use plastics (SUPs), proper waste separation and disposal.
- Promote reducing consumption of SUPs in households, communities, businesses, governmental offices, and educational institutions.
- Promote alternatives to single-use plastics when reduction of the SUP cannot be done.
- Promote tourist attractions, public spaces, schools, markets, and other municipal areas to become “**SUP-free**” areas.

Plastic Smart Cities

★ Plastic waste collection

- Work with the existing community waste banks and aim to establish more community waste banks across the city. This includes the collaboration with informal waste workers group through the development of benefit and welfare system.
- Set aside a budget to incentivize the continuation of the existing community waste banks.
- Establish a database for plastic waste management and make the data accessible by making it downloadable or provide updates through a website or mobile application.
- Create online plastic trading websites or mobile applications where the users can easily connect with others who they can buy from or sell plastic waste.

★ Reuse and Recycling

- Strongly encourage food and beverage vendors to give economic incentives to reduce plastic consumption.
- Strongly encourage vendors offer some discounts on food and/or drinks for customers who bring their own containers for takeaway.
- Support capacity building activities focused on designing and developing packages and products from recycled plastics and local plastic-free materials.
- Support and facilitate partnerships with businesses to create packaging extended producer responsibility systems.

จัดทำโดย



เทศบาลนำร่อง



สนับสนุน
การจัดทำโดย



Working with cities worldwide to
keep plastic out of nature by 2030