



“Role of Public Private Partnership
for Sustainable Plastic and Waste
Management (**PPP Plastics**) for
solving the plastic waste problem
in Thailand”



PPP Plastics

โครงการความร่วมมือภาครัฐ ภาคธุรกิจ ภาคประชาสังคม
เพื่อจัดการพลาสติก และขยะอย่างยั่งยืน
Public Private Partnership for Sustainable Plastic
and Waste Management
(**PPP Plastics**)





Public Private Partnership for Sustainable Plastic and Waste Management (PPP Plastics)

The current situation of **plastic waste**

“**Plastic waste**” is one of the main causes of environmental problems around the world, including Thailand which make us as one of the top countries that produce more plastic waste per person in the world. One third of the plastic waste is disposed of by improper means, then makes them escaping into the external environment and disintegrating into microplastics which residues accumulate in the sea, water sources and soil sediment. Due to microplastics have a very small particle size, then they can spread more easily into the external environment, causing the organisms that live in the deep sea to consume microplastic to accumulate in the food chain, which negatively affects the marine ecosystem and contaminates the human body. If the lack of proper waste management system, **it is predicted that will result in up to 700 million tons of waste escaping into the external environment within the next 20 years. The best solution of this problem** is to reduce waste starting at source. All sectors must cooperate together to reduce the use of unnecessary plastics, especially, the reduction of single-used plastics and adapt the Circular Economy principle to systematically implement plastic waste management from the manufacturing sector, consumption to waste management through reuse, recycle, and re-material. If Thailand can systematically integrate development of plastic management system and Circular Economy principle together in the future, then it will make Thailand’s economic development as being complete green economy and can create added-value along with the cost-effective use of resources and sustainable in environment.

In 2021, Thailand was able to downgrade the country with the highest marine plastic waste in the world from the 6th to 10th successfully by reducing its consumption by 25,284 million plastic bags or 228,820 tons. It is a success from the cooperation of all sectors in operation through various measures to solve seriously the problem of plastic waste in the sea.



Background of **PPP Plastics**

PPP Plastics was established on June 5, 2018, which led by the **Thailand Business Council for Sustainable Development (TBCSD)** jointly with the **Plastic Industry Club, the Federation of Thai Industries (FTI)** for driving the sustainable management of plastic waste with various sectors both government, public, private sector, international organizations, and educational institutions recognize the importance of mobilizing cooperation from all sectors to find sustainable solutions to the plastic waste problem in Thailand, which PPP Plastics has continued to operate 4th year in 2021.





Main goal of PPP Plastics

PPP Plastics has the main goal in supporting and driving roadmap for the plastic waste management in order to achieve its goal of reducing the amount of plastic waste in the Thailand's seas by 2027 according to two goals as follows:

Goal 1 Reducing and eliminating the use of target plastics by using environmentally friendly products.

Goal 2 Reusing the targeted plastic waste 100% by 2027.

PPP Plastics also supports the implementation of the National BCG Model agenda, particularly in driving a Circular Economy principle.



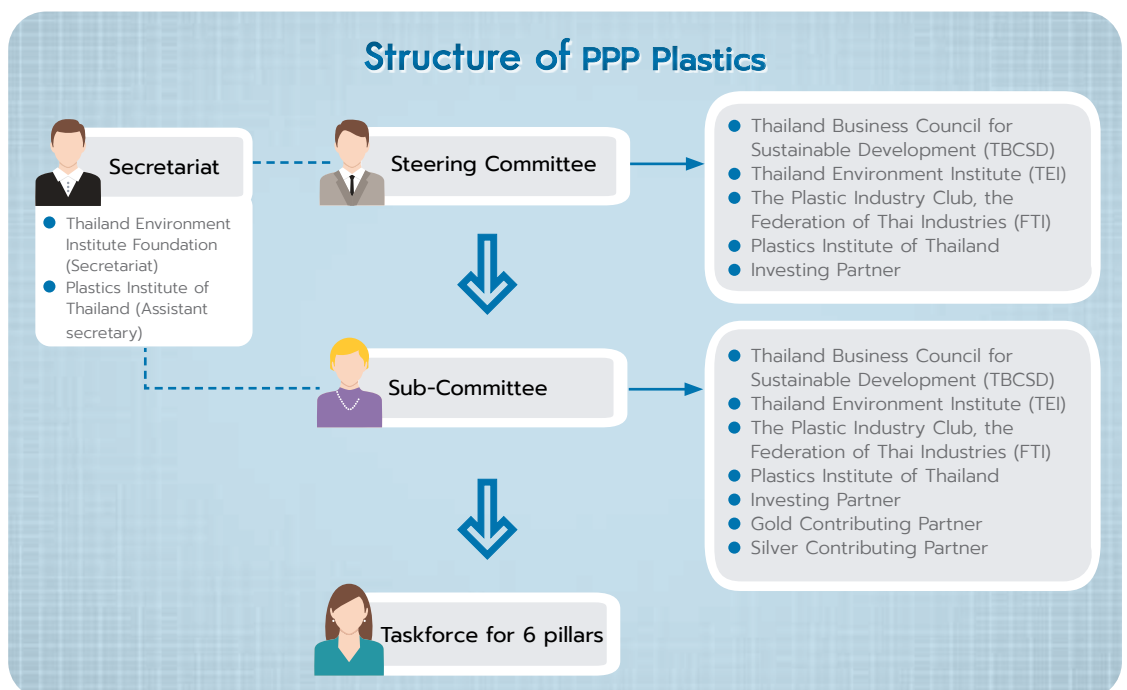
Chairman of PPP Plastics

Dr. Wijarn Simachaya is the Chairman of PPP Plastics which is also currently serving as the President of Thailand Environment Institute (TEI) and Secretary General of Thailand Business Council for Sustainable Development (TBCSD)

Remark: The Chairman of PPP Plastics has a 2-year term, alternating between representatives from the Plastic Industry Club, the Federation of Thai Industries (FTI) and representatives from Thailand Business Council for Sustainable Development (TBCSD).



Structure of PPP Plastics





Structure of PPP Plastics

- Steering Committee
- Sub-Committee
- Taskforce
- Secretariat
- Collaborative Partner

Secretariat for PPP Plastics

- Thailand Environment Institute or Plastics Institute of Thailand

Remark: Secretary for PPP Plastics has a 2-year term according to the agenda of the Chairman of PPP Plastics by alternating between the Plastics Institute of Thailand and Thailand Environment Institute. If any organization acts as a secretary, then another organization will act as assistant secretary.



6 pillars of **PPP Plastics** activity

1) Developing the Circular Economy Models (Infrastructure)

Supervised by the Plastics Industry Association, the Federation of Thai Industries.

- To push a comprehensive plastic management through the pilot project of Klong Toey model, Rayong model and “Won project” to receive clean used plastics to be recycled according to the Circular Economy principle.

2) Policy and Legislation development

Supervised by the Plastics Industry Association, the Federation of Thai Industries, and Thailand Environment Institute Foundation

- To participate in policy and measures related to plastic waste management by joining a working group on the development and utilization of plastics. (the 3rd Working Group) under subcommittee for the plastic and e-waste management established by the government.

3) The development of plastic waste database

Supervised by Plastics Institute of Thailand

- To establish a plastic waste database to study the situation of plastic waste in Thailand by using Material Flow Analysis concept.

4) Education & Communication

Supervised by Thailand Business Council for Sustainable Development (TBCSD)

- To build knowledge and understanding of proper waste management to the public, including developing a curriculum for higher education.

5) Innovation development in the industry sector.

Supervised by Plastics Institute of Thailand

- To promote innovation and technology for sustainable and safe management of plastic waste.

6) Funding

Supervised by Plastics Industry Association, the Federation of Thai Industries and Thailand Business Council for Sustainable Development (TBCSD)

- to supervise and manage funding to implement in accordance with the objectives of determined PPP Plastics.

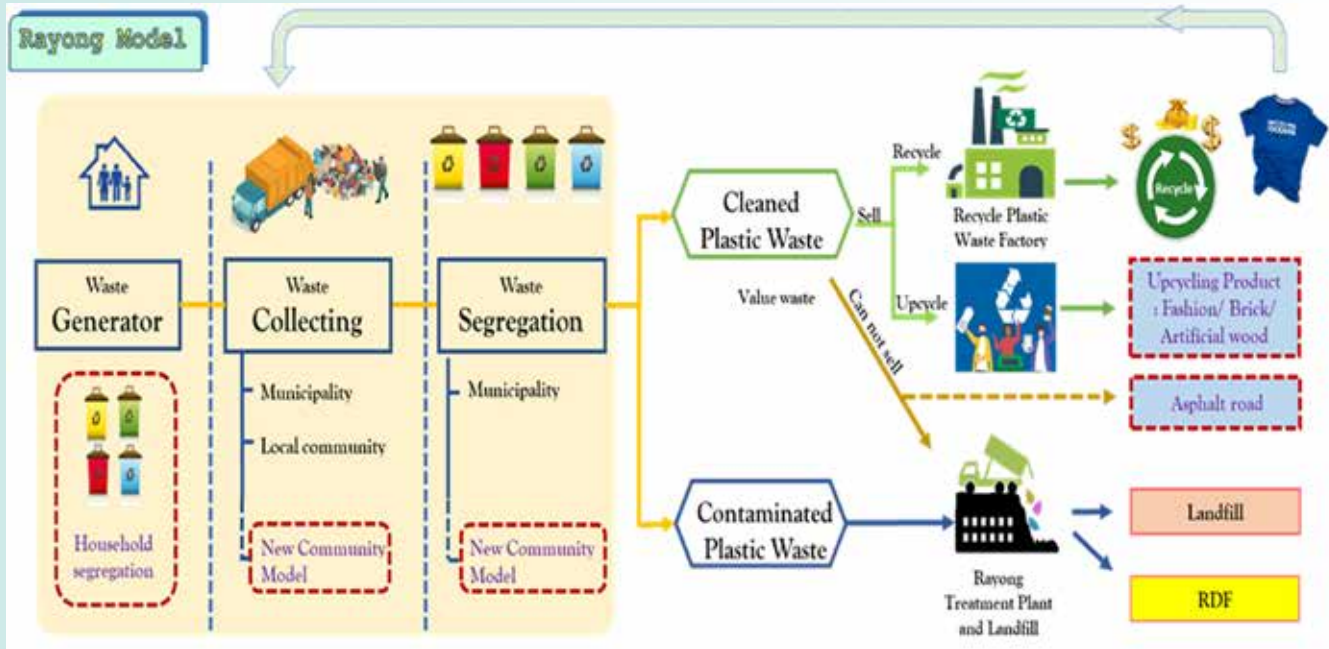
Performance of activities / Projects under **PPP Plastics**

Developing the Circular Economy Models (Infrastructure)

● **Klong Toey Model**

- PPP Plastics cooperate with Bangkok, developed a comprehensive model of plastic waste management in urban communities by selecting Klong Toey as a pilot area by focusing on 3 areas of importance as follows: 1. designing, and developing infrastructure to support plastic waste management, 2. a study of consumer behavior and motivation of people in the value chain to stimulate the sorting and storage of plastic waste into the system, and 3. Using digital tools to develop into an efficient business model of urban waste management; *the Klong Toey model, will be a model of waste management for other urban communities throughout the country.*





● Rayong Model

- Rayong Model is the cooperation of the school, community, and government agencies in Rayong province and entrepreneurs in the PPP Plastics network, as well as shops. The recycling entrepreneurs aimed to create a sustainable model for plastic and waste management by fostering a better understanding of plastics and sustainable waste management which is a comprehensive integration starting from the public to separate the garbage from the household level, especially clean used plastic in order to collect them into the recycling system to be better value-added products for consumers.





● **Magic Hand x Won project**

○ This is a joint project with PPP Plastics, the Ministry of Natural Resources and Environment, various stores and recycling entrepreneurs with the main objective of supporting government policies to recycle target plastics 100% within the year 2027 by campaigning for people to sort waste starting at source, especially clean plastics by bringing clean used plastic like plastic bags and film packaging which it is dried and stretched and returned to the drop point to be collected into the recycling system and used to produce new products according to the Circular Economy principle such as thick plastic bags, plant pots, and other decorative plastic products, etc.

PPP Plastics has joined with the Ministry of Natural Resources and Environment to campaign for people to sort waste starting at source, especially clean used plastic like plastic bags and film packaging which with the launch of the “Magic Hand x Won project” and a procession of vehicles namely, “Tang Won Tung” on June 5, 2020 (World Environment Day), which Mr.Varawut Silpa-archa, the Minister of Natural Resources and Environment was preside over this event in order to show their empowerment on World Environment Day, since the start of the project “Magic Hand x Won project”, it has received 20,562 kilograms of plastic scraps collected throughout the project (average weight of plastic scraps around 1,713 kilograms per month). From the operation of the project, it can help reduce global warming, calculate the reduction of CO₂ Emission by 17,868 kg. (data as of May 2021).





Policy and Legislation development

- The PPP Plastics Working Group has joined as part of the working group for plastics development and utilization (the 3rd working group) under the subcommittee for plastic and e-waste management which established by the government under the National Environment Board. It drives joint action with the government sector through the development and utilization of plastics primarily which plays an important role and role in drafting a road map of plastic waste management in Thailand by 2018 – 2030 and jointly formulate policies on the management of plastics that are critical in the environment aspect, including participation in drafting regulations for government’s law enforcement in the future.

The development of plastic waste database

- The PPP Plastics working group has established a database of plastic waste in Thailand based on the Material Flow Analysis concept to explore the type and amount of plastic waste within Thailand to use as an important reference for the country and government and the private sector can be utilized in order to guide the formulation of policies and measures to effectively solve plastic waste management problems. It can also be used to provide information for presentations at the international stage.



Education & Communication



- **Communication**
 - To promote waste sorting, especially plastic waste classification and educating about the circular economy of plastics, including organizing various types of events with PPP Plastics' mediating network partners in **public relations and dissemination of information to the broader society.**
- **Education**
 - PPP Plastics has cooperated with various organizations by Kasetsart University as the learning center of curriculum development, dissemination of knowledge, and understanding on how plastic recycling can create a Circular Economy principle for students at the national and local levels in order to lay the foundation of knowledge in building citizens who value natural resources and the environment and the cost-effective use of resources for the maximum benefits such as **collaboration with the GE Network of Thailand, the development of a teaching's manuals of the CE General Education Package for teaching first-year students in all universities throughout Thailand** and working with the Office of the Basic Education Commission with development training of speakers, environmental education officer and organized a training workshop for a model school based on the circular economy in Rayong province to convey knowledge on waste separation and recycling for Thai youths.





Use of Plastic Waste in building Plastic Road



Innovation development in the industry sector.

- The **Plastic Recycle Road** Project is a collaboration between Dow Thailand Co. Ltd., and SCG company under the strategy of PPP Plastics. Its main objective is to maximize the utilization of used plastic packaging that is less valuable or difficult to recycle with current technology in accordance with the Circular Economy principle by using it as a substitute for asphalt 8% in the process of making asphalt roads. The benefit of this project is the road that is 15 - 33% stronger, resistant to water erosion more, reducing greenhouse gas emissions from asphalt production. The Plastic Recycle Road will set new standards for making Thailand's roads strong and meet the demands of promoting proper waste management and the cost-effective use of resources for maximum benefits. In addition, the Department of Highways and the Department of Rural Roads discuss about implementation and expansion of the results along with studying the long-term environmental impact.





PPP Plastics : Network Partners

● Organization

- 1) The Federation of Thai Industries
- 2) Thailand Business Council for Sustainable Development
- 3) Thailand Environment Institute
- 4) Plastic Industry Club, The Federation of Thai Industries
- 5) Petrochemical Industry Club, The Federation of Thai Industries
- 6) Thailand Institute of Packaging and Recycling Management for Sustainable Environment, The Federation of Thai Industries
- 7) Thai Plastic Industries Association
- 8) Research & Innovation for Sustainability Center
- 9) Plastics Institute of Thailand



- **Private Sector**

- 1) Dow Thailand Group
- 2) PTT Global Chemical Public Company Limited
- 3) SCG Chemicals Co., Ltd.
- 4) Nestlé (Thai) Ltd.
- 5) SUEZ Services (Thailand) Co., Ltd.
- 6) IRPC Public Company Limited
- 7) HMC Polymers Co., Ltd.
- 8) Mitsui Chemicals (Thailand) Co., Ltd.
- 9) IVICT (Thailand) Company Limited
- 10) Mitsubishi Company (Thailand) Ltd.
- 11) Unilever Group of Thai Companies
- 12) Covestro (Thailand) Co., Ltd.
- 13) Colgate-Palmolive (Thailand) Ltd.
- 14) BASF (Thai) Limited
- 15) Ajinomoto Co., (Thailand) Ltd.

- **Government Sector**

- 1) Ministry of Natural Resources and Environment
- 2) Ministry of Industry
- 3) Ministry of Interior
- 4) Ministry of Higher Education, Science, Research and Innovation
- 5) Pollution Control Department
- 6) Department of Environmental Quality Promotion
- 7) Department of Marine and Coastal Resources
- 8) Department of Local Administration
- 9) Bangkok Metropolitan Administration

- **International Organization**

- 1) International Union for Conservation of Nature (IUCN)
- 2) United Nations Development Programme (UNDP)
- 3) Yunus Thailand Foundation

- **Educational Institution**

- 1) Asian Institute of Technology (AIT)
- 2) Chulalongkorn University
- 3) Bangkok University



PPP Plastics members who support funding are divided into 3 levels:

- 1) Investing Partner
 - an organization supporting a funding of 1,000,000 baht or more per year.
- 2) Gold Contributing Partner
 - an organization that contributes a funding of 500,000 baht per year.
- 3) Silver Contributing Partner
 - an organization that contributes a funding of 100,000 baht per year.

Remark: Members of each level receive different privileges which are clearly outlined in Charter of PPP Plastics.

To provide operations of **PPP Plastics** are continually achieving its core goals based on the engagement of various sectors for any organization interested in, wanting to play a role in driving plastic waste management issues, and would like to become a **PPP Plastics** member so that your organization can be a leader in policy making and activities related to plastic management in Thailand which can also be a part of the movement of **PPP Plastics** in the context of each member organization.

For more information, please contact with secretary for **PPP Plastics** : Pinyada Charoensin, Tel.02-503-3333 ext.212 or 062-624-535, Fax. 02-504-4826, email: pinyada@tei.or.th



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