# Ethical Consumption in Food

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## Ethical Consumption in Food



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### Source of food waste

Food waste

There is over 1,300 million tons waste from food, about 1 out of 3 of global production yearly. Refer to Food and Agriculture Organization



of the United Nations, or FAO's report, CO2 from food waste globally is 3,300 million tons per year approximately which is calculated 8% of released CO2 sources.

In Thailand, food waste is over 60% of overall waste which means 1 person can produce food waste around 254 kilograms per year. Meanwhile 50% of waste in Bangkok, 9,000 tons per day, mostly are from leftover food in each meal and low-grade food which is eatable but not in good appearance.

With amount of food waste, it cause smell from decompose to nearby area which, mostly, is the residence of poor people who made life survive from waste separation. Not only hygiene but also their



health from disease and bacteria are in

government concern.

Fig.1 – Ugly vegetable mountain at Si-Mum-Muang market in Thailand (<u>https://www.thairath.co.th/news/local/2367815</u>)

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### Source of food waste

• Packaging

Online food delivery is one of the Platform Economy businesses in digital era. With various alternative foods in Thailand, consumer is influenced by the marketing resulted in highly growth rate of online food businesses. In 2018, KASIKORN Research Center Company Limited, or KResearch estimated that online food businesses will have market value around 35.000 million Bath with 14 percent growth rate from last year. However, reducing packaging waste difficulty is higher in online food business compare to pick-up purchasing as consumers have options to use reusable container. Moreover, the promotion such as coupon or special discount in online food business cause consumer behavior alter to online order. Consequently, with highly concerned, waste from packaging, singleuse cutlery,

and condiments will be rapidly increased with no separation process.





Fig.2 – Top 10 Food Packaging Materials Used in the Market (<u>https://printonshanghai.com/top-10-food-packaging-materials-used-in-the-market/</u>)

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In the COVID-19 pandemic, 2020, waste problem is worse especially, plastic issue. During Lock-down period in Thailand, restaurants and public area has been shut down. people have to home to stav prevent the pandemic. Online food business is





one of the few options for people in urban area. Plastic waste in Bangkok during pre and post COVID-19 pandemic is 62% increasing in the same period of time are reported. Recycle plastic ratio decrease due to contaminate plastic from unseparated garbage. This shows that the COVID-19 pandemic is one of the causes that interrupted the process of consumer behavior changes. Cleanliness and health are considered more while, environmental concern is considered less.

With the concern of waste effect to both environment and public health, Thailand has specific law to governance waste management since 1992 which are Public Health Act B.E. 2535, Hazardous substance act B.E. 2535, and Enhancement and Conservation of National Environmental Quality Act B.E. 2535. These law have been applied but may not effective because people awareness and basis knowledge of in daily life and business and industries cooperation in waste treatment.

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## Greenwashing

o What is Greenwashing?

Greenwashing is the act of making company's products and goals seem eco-friendly as possible, however many people think these are false or misleading statements about the environmental benefits of a product or practice. Moreover, many

people also think Greenwashing is only the marketing for the company to raise their profits by using the "Green" concept to attract those consumers who concern the World environment



### o Greenwashing in industries

Greenwashing appears in many industries. Food industry is one of the them. "Green" concept has been promoted and advertise to the consumer with the intention to twisted human sense that green, environmental responsibility, should be responsible by consumer, not the producer!



Most of Greenwashing has quickly adjusted to conserve the profits of the producer themselves. For example,

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Nestle: Unclear statement in 2018 that had ambitions for its packaging to be 100% recyclable or reusable by 2025. However, In Break Free From Plastic's 2020 annual report, Nestlé, along with Coca-





Cola and PepsiCo, named the were world's top plastic polluters for the third year in a row.

Source: Changing Markets Foundation

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Fig.4 – Ranking in Metric tonnes of plastic packaging produced annually as of 2020 (https://www.statista.com/char t/22959/metric-tonnes-ofplastic-packaging-producedannually/)

Starbuck: Attempt to recycle and reuse material in the company. In 2018, Starbucks released a "straw-less lid," as part of its sustainability drive, however this lid contained more plastic than the old lid and straw combination. The company claimed that it is made from polypropylene, a commonly-accepted recyclable plastic that "can be captured in recycling infrastructure." Critics were quick to point out that

statista 🔽

only 9% of the world's plastic is recycled, so the company shouldn't assume all the lids would be recycled. Further, the US exports about onethird of its recycling to developing countries, so it is simply passing its responsibility to poorer countries.



Fig.5 – Starbuck strawless lid (https://www.wfmynews2.com/article/n ews/local/verify/verify-is-starbucksactually-using-more-plastic-to-get-ridof-straws/507-575200615)

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# What have we done ?

### Waste management in Thailand

Nowadays, Thailand apply 3 Rs to manage the waste which are,

- Reuse: Maximize number of usages for the clothes, tool, packaging, and cutlery until it breaks or tear or unusable before junk. This causes the number of wastes reduce directly.
- Reduce: By optimized left-over food and low-grade food by giveaway to poorer and put them in the animal feed or fertilizer industry for uneatable food. Or transform waste to be source of energy / electricity
- Recycle: By separate waste in to categories and manage them with proper processes for recycle. For example, PET1 or Polyethylene Terephthalate are mostly glass or bottle. The recycle process will be harder if glass or bottle contaminate with printed ink in logo, picture, or text on it. The best recyclable plastic

has to be pure and clean which need attention from consumer to manage.

Fig.6 – 3Rs guideline: Reduce Reuse and Recycle (https://radiothailand.prd. go.th/th/gallery/article/de tail/id/125/iid/1663)



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## Collaboration

- Thailand government by Pollution Control Department has MOU with Food delivery business since Sep, 2020 to manage and support plastic reducing from packaging and cutlery. Bangkok governor also has policy to support upstream waste management naming "BKK Zero Waste" by continuously increase knowledge of garbage separation to people like the poster in this picture.
- Private sector like Big company in Thailand developed ENVICCO factory to produce plastic resins called InnoEco PCR from plastic waste to be recycle and reuse. The recycle production can reduce plastic waste around 60,000 tons per



year and also reduce greenhouse gas around 75,000 tons of CO2. You may see the rough process here. They received waste, separate, send into the ENVICCO factory, then get the plastic resins 2 types, (1) InnoEco PCR PET is a food-grade plastic resin for food packaging certified by Thai FDA, US FDA, and European Food Safety Authority or EFSA. This PCR PET is also traceable for its original waste. And (2) InnoEco PCR HDPE is a package plastic resins for appliance such as shelf, box, vase, etc.

Fig.7 – InnoEco process by ENVICCO (https://sustaina bility.pttgcgroup. com/en/projects /945/envicco)



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### Consumer behavior – Basic needs

Packaging is one of the psychological products. It is an indirect consumption which is non-core product which low priority for consumer to consider compare to the core product like food or expected product. The research in Thailand shows consumer willing to pay not over 5 more THB in average for reusable packaging. People tend to pay less for reuse package due to the overall finance and economics in Thailand which cause ineffective policy or strategy to green environment.

#### o Knowledge, for example

1) Paper straw: With the believe of paper can be decomposed better than plastic, many brand sin Thailand has support not only paper straw but also anu cutlery made from paper are promoted in shop and café. This is the popular and environmentally friendly for user. However, scientists and researcher are not agreed. Belgium researcher found chemical contaminated in paper cutlery is "permanent" type

which is dangerous for living and environment. Most of the chemical called Perfluoroalkyl (PFAS) are contained in paper straw and can be remain in the environment for more than thousand years event the paper disposed. Which will be affected to living heath in further.



Fig.8 – Paper straw with PFAS and PFAS-free (<u>https://web.facebook.com/littlegreenpanda/photos/the-hidden-dangers-in-your-straws-pfas-and-sogginess-turns-out-paper-straws-aren/921712776643870/?\_rdc=1&\_rdr#</u>)

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2) Bio-Degradable bags: The trend of "saving the earth" continues to be of strong. One environmentally friendly products Thai store have chosen is "cloth bags" or "paper bags" instead of "plastic bags". So, "Spunbond bags" are



Fig.9 – Source of Spunbond bag ( Facebook: ลุงซาเล้งกับขยะที่หายไป )

the first option that many store operators use instead of plastic bags in the hope of reducing the problem of plastic waste and residues in the environment because they can be degraded.

Data from Journal of the Department of Science Services It is stated that "polypropylene" (referred to as PP) is a plastic that is strong and resistant to chemicals, heat, moisture, and oil, so that there normally used for food packaging. Although PP is a recyclable material, most spunbond bags are dyed and screen-patterned for aesthetic purposes. Recycling is more difficult because of the residual contaminants and it takes 10 years to decompose naturally.

However, there is some problem with spunbond bags that there are easily broken down when exposed to UV rays. So, these fibers called "microplastics" will be easily spread into the environment. Humans are exposed to microplastics through the consumption of



contaminated aquatic species, and the presence of microplastics in seafood could pose a threat to food safety and health.

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### Government Policy



Fig.10 – Thailand's SDG Implementation ( https://image.mfa.go.th/mfa/0/wmuEa8nR2N/E-Book - SDGs Editorial (ENG) 1.pdf )

Thailand's SDGs (Sustainable Development Goals) Roadmap provides the blueprint to move forward in six key areas, namely, policy integration and coherence, enabling mechanisms, partnerships, pilot projects. monitoring and evaluation, and awareness-raising. In Ensure sustainable consumption #12 SDG and production patterns, Thailand has implemented a number of policies that ensure sustainable consumption and production patterns. The cooperation between the Government and the private sector shows in the number of certified "Green Industry" which is increase annually since 2017. Thailand Policies and implementation are,

(1) Policies have been implemented by the Ministry of Natural Resources and Environment, other line government agencies, and related private sectors. This is also in line with the Bio-Circular-Green (BCG) Economy Model and relevant indicators on sustainable production and consumption provided by the United Nations.

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The challenge on transition toward BCG economy is still limited to central government and large enterprise. Small and medium business is lack of funding and capacity to develop. Which require promote and support from government or encourage by tax incentive policy for sustainable growth.



Fig.11 – Thailand's BCG model (https://www.iok2u.com/news/administrator-gov/bcg009-sc)

(2) The Government has designated waste management as a National Agenda and has developed the Roadmap for Implementing a Management of Solid Waste and Hazardous Waste which serve to promote proper treatment and disposal of the waste and support increased recycling and "upcycling". The challenge on recycling system is limitation suffer like waste sorting which is the main obstacle for turning waste into reuse product. Therefore, government collaboration with other

sectors initiated the "Send Plastic Home" or YOLO project. The project recycles plastic waste which is a part of the Circular Economy model, which emphasizes the reduction, reuse, and recycling of waste with the motto of "You sort, We recycle".

โยโลเอาพลาสติก กำพร้าไปทำอะไร



Fig.12 – Yolo project to promote waste separation in Thailand (<u>https://wasteorshare.com/yolo/</u>)

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## Empowerment the collaboration with partners

 In Thailand, Business has promoted to be Green MSMEs under BCG Model. For who that has vision mainly on environment conservation. The keys are



(1) Apply innovation
in process since
production till
consumption

(2) Responsible on
prevention and social
encouragement on
environment.

Fig.13 – Green business support in Thailand (<u>https://sme.go.th/news/GreenBusiness</u>)

 Food Waste Hub is one of the collaboration of National Research Council of Thailand and Dow company group in Thailand. They take priority in food waste management by Thai innovation with the objectives follow,

(1) Exchange the data of food waste management and apply in business model to create revenue and opportunity for investment for sustainable growth.

(2) Expand food waste management to be practical activity led to waste reduction.

(3) Decrease contamination from waste to waste which will increase ratio of waste reuse and recycle.



Fig.14 – Food waste hub: sustainable project idea (https://www.thebangkokinsight.com/news/environmental-sustainability/1258960/#google\_vignette\_)

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### \* Apply successful case

Apply others' successful cases. There are 3 successful cases from 3 countries.

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- Canada: Canada has announced to cancelled distribution and usage of any produce which use Single Use Plastic. This included to shopping bags, cutlery, straw, Stir Stick, or any plastic package. This adaptation from government policy got good response and feedback from both people and private sector and also reduce waste significantly.
- Singapore: They focus on waste management in the upstream of the process. waste reduction and separation for sustainable strategy instead of Waste burner or how to destroy waste. Singapore takes waste management seriously as show in regulation parallel with procedure to enforce people producer, consumer, and private sector which controlled by government. Singapore government also has fund to support waste management to SMEs such as Food Waste Fund.



Fig.15 – The circular economy approach to waste and resource management under Singapore's Zero Waste Masterplan. (Source: https://www.towar dszerowaste.gov.sg/ zero-wastemasterplan/chapter 2/circulareconomy/)

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 France: In 2020, France has enforced regulations under environmental law which mainly prioritize on waste reduction driver from producer. Entrepreneur or producer has to donate leftover food to the needer instead of throw away under the conditions follow.

1) Manage food waste as per pyramid Hierarchical Pyramid for Food Waste.

2) Set any rule or limitation to create more food waste is prohibited such as set standard of material for cooking, vegetable, or fruit.

3) Big distributor or producer have to manage and limit the number of waste by coordination with food donation manageable shelter.

Moreover, France has taxation policy to encourage food donation which is defined in the General Tax Code section no. 238 said the donator can get tax return for 60% of the donation food value but not over 0.5% of annual performance.







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