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**THE HUMAN RIGHTS
OF MIGRANT WORKERS
IN THE THAI POULTRY
INDUSTRY: THE REGULATORY
GAPS AND THE GUIDELINES
FOR THE PROMOTION AND
PROTECTION**

**THAILAND'S FIGHT AGAINST
FOOD WASTE: A STUDY ON
FOOD LOSS AND WASTE
MANAGEMENT**



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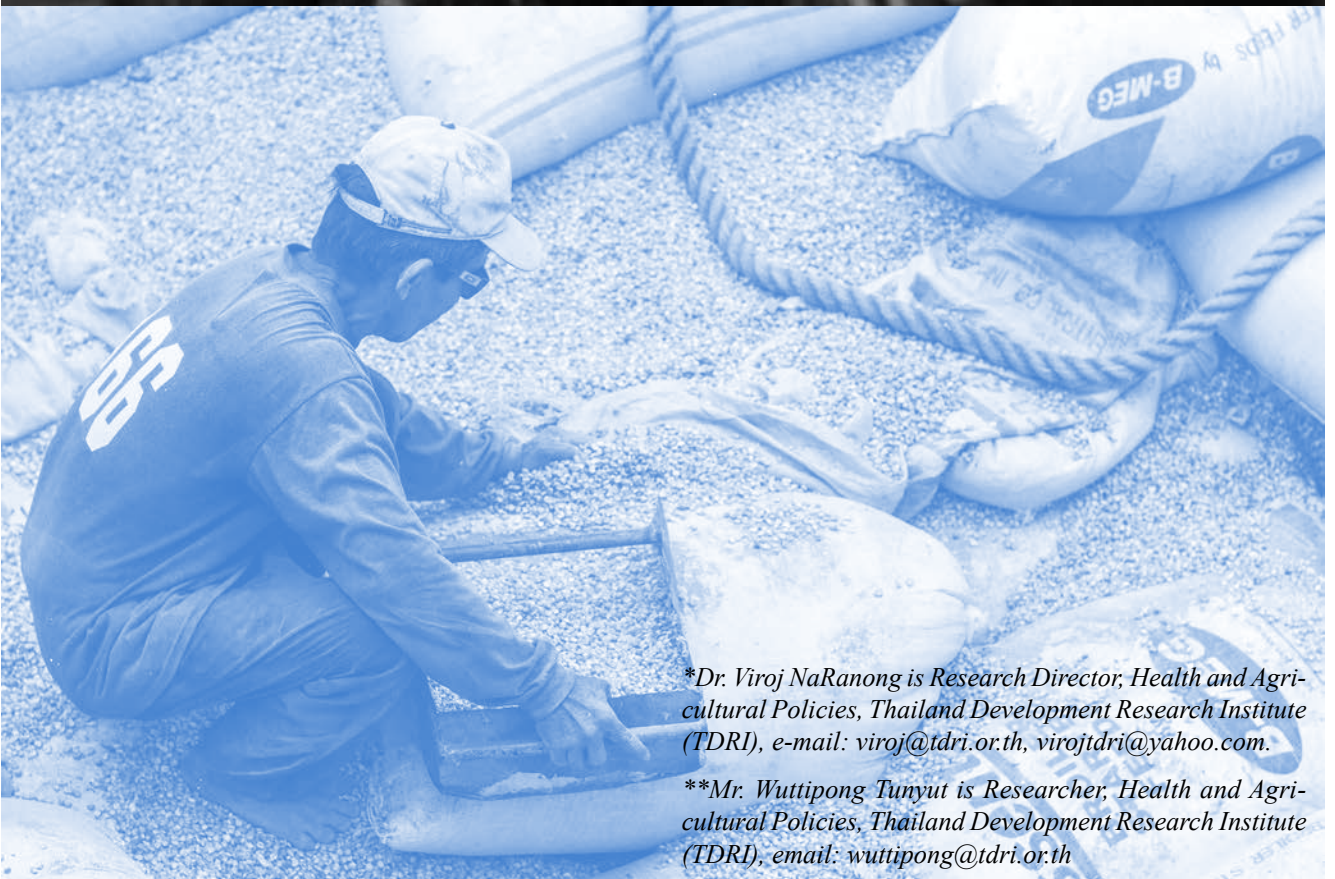
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THE HUMAN RIGHTS OF MIGRANT WORKERS IN THE THAI POULTRY INDUSTRY: THE REGULATORY GAPS AND THE GUIDELINES FOR THE PROMOTION AND PROTECTION

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BACKGROUND AND SIGNIFICANCE OF THE RESEARCH

The main objective of this research is to propose policy recommendations and legislative amendments to strengthen the protection of human rights of migrant workers in the Thai poultry industry. Evidently, the Thai poultry industry has been carefully scrutinized by buyers and civil rights organizations in importing countries—to ensure that the industry complies with Thai labor laws as well as international human rights principles.

In late 2015, Swedwatch and Finnwatch, two human rights non-governmental organizations (NGOs) from the European Union (EU), undertook a study in Thailand and issued the report entitled “Trapped in the Kitchen of the World—the Situation for Migrant Workers in Thailand’s Poultry Industry.” The report, which was based mainly on interviewing migrant workers from Cambodia and Myanmar, stated that there were a number of human rights violations within the industry. There is evidence

that both the public and private sectors—especially broiler farms—have subsequently employed several measures to correct the problems.

Shortly after publication of the report, there was a dispute in 2016 between 14 Burmese farmworkers and a Thai broiler farm in Lop Buri Province. This case was highly publicized, partly because of the involvement of the international human rights NGOs. The farm owner decided to also file several lawsuits, some of which are still pending in the courts.

As for the main lawsuit, the court decided that the farm owner violated certain aspects of the Thai labor law and ordered the farm to compensate the workers with a total of 1.7 million baht. However, the court also decided that the farm did not violate the workers’ human rights. Nevertheless, some importers had already made a decision to ban imports from Thailand or cut down orders.

Currently, the poultry industry is one of the most important agro-industries in Thailand. It generated income from exports in 2017 as high as



105,637 million baht, almost 20 percent of the value of Thai food exports. Poultry is also the country's largest livestock industry; in 2016, the poultry industry's GDP was approximately 40 percent of the livestock GDP, or 5.4 percent of Thailand's agricultural GDP. To ensure the sustainability of this export income, both the government and the industry must learn how to appropriately handle human rights issues of migrant workers in order to avoid conflicts or violations that can adversely affect both the industry and the economy in the future.

DEVELOPMENT AND STRUCTURE OF THE THAI POULTRY INDUSTRY

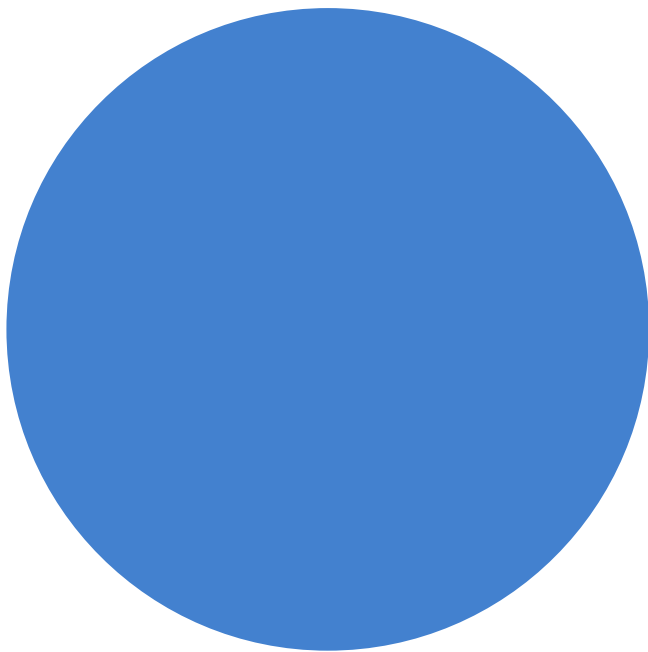
The poultry industry is one of the fastest-growing industries within the Thai agricultural sector. Between 1997 and 2018, the average annual growth rate of the poultry GDP was 3.9 percent (more than twice that of the 1.8% average annual growth rate of the entire agricultural sector).

The source of this growth has been

industrialization, which transformed backyard farms into large-scale farms equipped with modern technologies, as well as the ability to adjust their operation to withstand unanticipated crises.

Currently, broiler chickens account for 57.6 percent of the total number of birds raised by all farms. Remarkably, this product comes from only 1.2 percent of the poultry farms in Thailand (78.7% of poultry farms are native chicken farms, but they account for only 19.1% of all poultry operations) whereas 90 percent of broilers are raised on large farms (corporate farms (50%) and contract farmers (40%)). Independent farms account for only 10 percent of the broiler output. The top five broiler production areas in the country are Lop Buri, Chon Buri, Kanchanaburi, Nakhon Ratchasima, and Saraburi.

The biggest crisis the poultry industry has faced was the outbreak of bird flu over the period 2004-2006, which led to the destruction of more than 63 million birds in Thailand and a ban by many countries, especially those in the EU and Japan,



which had been Thailand's main export markets, on imports of raw poultry products from Thailand. The Thai government established various corrective measures and introduced a compartment system in the poultry industry in 2006; these measures have been successful in curbing the disease since late 2007. Consequently, Thai poultry products have been allowed to be exported to the EU since 2012, and Japan since 2014.

In 2018, Thailand was the ninth-largest exporter of frozen poultry and the number one exporter of processed poultry. Overall, Thailand is the fourth largest exporter of poultry products in the world after Brazil, the United States, and the Netherlands. It should be noted that, while some EU members import poultry products from Thailand, they also export their own or processed poultry products to other EU members; intra-EU exports are as high as about 90 percent of its total exports.

The poultry industry in Thailand uses migrant workers in almost every step of the production chain, especially in processing plants and broiler and layer farms. The employment conditions in the

industry vary according to the type of business. For example, broiler farms usually employ an "all-in-all-out system," which makes the workers' routine different from those of layer farmworkers. Workers in processing plants tend to work long hours in a chilly environment.

It is difficult to estimate the exact number of migrant workers in the poultry industry. Historically, Thailand has long had a large number of illegal migrants. Although the measures for migrant workers newly implemented during 2017-2018 have resulted in most migrant workers properly registering for work permits through the one-stop-service system (OSS), there still are no official or detailed data or reports on the number of workers by type of industry or business. However, based on data gathering and processing and our in-depth interviews, it can safely be inferred that the Thai poultry industry is now heavily and increasingly dependent on migrant workers.

THE REGULATORY GAPS IN LABOR RIGHTS PROTECTION BASED ON INTERNATIONAL HUMAN RIGHTS PRINCIPLES

In this study, the research team considered the details of the principles of international human rights, and the international human rights treaty ratified by Thailand, then compared them with the relevant Thai laws and industrial production standards. From the analysis of the regulatory gap, it was found that only some issues needed to be improved with additional legal tools. The issues found include the following:

- Thailand has just adopted the first National Action Plan on Business and Human Rights (NAP) on October 29, 2019.
- Good Agricultural Practices (GAP) standards do not specify standards for the right to freedom of association and standards for forced labor that already are set in the

Good Labour Practices Guidelines for Poultry Farms and Hatcheries in Thailand (GLP-poultry Thailand) and Thai Labour Standards (TLS).

- When considering past human rights issues in the industry and Thai law or legal system, it was found that Thailand has established laws/industrial standards that are consistent with international human rights standards in all areas. However, Thailand still does not have any law governing the collection of recruitment fees incurred in the workers' countries of origin.

THE REGULATORY GAPS IN LABOR RIGHTS PROTECTION COMPARE WITH THOSE OF COMPETITORS AND IMPORTERS

The research team compared Thailand's regulatory gaps in labor rights protection with three major competitors and importing countries by choosing to study the cases of Brazil, Germany, and Sweden.

Based on Human Rights Scores, Fragile States Index and results from the Freedom in the World report, it was found that Thailand is ranked below these three countries in all three assessments.

The research team then compared Thailand's migrant labor policy/laws with those of Brazil, Germany, and Sweden. The key findings are as follows:

- Thailand signed and ratified almost as many major human rights treaties as these competitors, except for the treaty on enforced disappearance and the ILO conventions on freedom of association and collective bargaining (C087 and C098).
- The Thai immigration process is still mainly paper-based, while that of some countries is 100 percent online.
- The ability of ASEAN countries to manage

issues related to transnational migrants is not as effective as those belonging to the South American Conference on Migration and of the Mercado Común del Sur and the EU.

- Thailand's law prohibits sex discrimination but still lacks concrete protection mechanisms.
- Thai law does not specify hours of on-call issues, whereas Swedish law clearly covers conditions for this type of working hours.
- Thai law does not specify the difference between sick leave and disability leave. All workers in Thailand must use their sick leave allowance in case of an injury at work.

PUBLIC HEARING AND FEEDBACK

Besides using standard techniques, such as in-depth interviews, focus group discussion, and a survey on human rights risk assessment, to elicit information and opinions of stakeholders, the team arranged a public seminar with public hearing, in addition to attending an extra meeting to hear more information and opinions from members of the Thai Broiler Processing Exporters Association.

In this process, the research team obtained additional data on labor inspections at poultry farms conducted by the Ministry of Labour during the period 2013-2018. After processing the data, it was learned that, in 2018, among the 88 poultry farms with migrant workers that were inspected, the average proportion of migrant workers was of 57 of the total number of workers. During the period 2013-2018, there were 38 farms that employed illegal migrants. Among them, only one case was prosecuted. As for the rest, the labor inspectors simply issued an order to correct the situation. The data also indicated that there were poultry farms that did not comply with Thai labor laws on various issues, such as holiday pay and weekly vacations.

SUMMARY OF POLICY RECOMMENDATIONS

This section summarizes the gap in the rules/standards for the protection of human rights of migrant workers in the Thai poultry industry and policy recommendations/proposals for amendments to the law under 11 topics, broken down as follows: seven covering sensitive issues (S) in the industry, and the other four being macro issues (M). The details are as follows:

S1: Hours of work in poultry farms (broiler farms)

Potential problems or issues

- In the past, there were allegations that some farms required their workers to work longer hours beyond the legal limit, with or without overtime payment.
- In the past few years, several broiler farms have turned to using the shift work system and/or technology, such as CCTVs combined with cellular phones, to monitor their birds instead of requiring the workers to sleep in the broiler house.
- Some broiler farms—supported by the Exporter Association—have proposed amending the law to allow poultry farms to extend the maximum rest period during the workday from two to four hours.

Policy recommendations/proposals for legislative amendments

- The responsible government agencies should ensure that every party in the industry—mainly employers and workers—is aware of and knows the workers’ rights on hours of work.
- The main question that needs clarification is: Should all the work performed outside ordinary hours of work be considered

overtime? For example, if overnight work or standby duty is requested or required by the employer, would it be apparent that employees are entitled to receive extra/overtime payment?

- If rest-period extension during the workday is allowed, which is equal to extending the total office hours (working hours + rest hours), the workers should be compensated for their additional office hours. For example, the rate should be no less than 50-75 percent of the hourly wage for the additional hours.

S2: Weekly holidays for poultry farmworkers (poultry farms)

Potential problems or issues

- Some interviewed farmworkers stated that they have to work continuously—without any weekly or annual holidays—during the period that broilers are raised on the farm. They would be given holiday breaks only during the rest period when all broilers had already exited the farm.
- This issue was beside the disputes in the 2016 Lop Buri broiler-farm case.
- Some broiler farms—backed by certain broiler export associations—have proposed amending the law to allow employers to have their poultry workers work for up to 28 or 56 consecutive days without a holiday; instead, they could let the workers take extended holidays after the entire broiler batch has been shipped elsewhere for processing.

Policy recommendations/proposals for legislative amendments

- If allowed, it is very likely that all workers would have no choices but to work for the whole month (28 days) or even more than

40 consecutive days. The broiler producers' proposal would cut out workers' options and benefits (see below).

- Some workers who used to get paid “double-time” on the seventh consecutive day of work in a workweek would be worse off, since all of the 28 or 40+ consecutive working days are considered “normal” working days, which means that there would be no “double-time” payment on the seventh consecutive day of work in a workweek.

S3: Compulsory overtime at poultry processing plants

Potential problems or issues

- Most processing plants have a two-shift policy that requires all workers to perform two hours of overtime per shift. Some workers stated that the overtime is compulsory and they cannot choose not to work the extra hours in any given day.
- According to the International Labour Organization (ILO), compulsory overtime does not constitute forced labor as long as it is within the limits permitted by national legislation or collective agreements.
- During this study—although compulsory overtime is rampant—there was never a complaint from any of the interviewed workers accusing employers of using forced labor.

Policy recommendations/proposals for legislative amendments

- The responsible government agencies should make more efforts to curb the practice of compulsory overtime to ensure that there are no practices which can be viewed as forced labor practices.
- The relevant agencies should provide all workers and supervisors with a printed

manual and/or information training covering the rules, policies, and procedures to avoid prohibited practices in the workplace. The manual and/or training should be prepared in both Thai and a language understood by the employees.

S4: Employer withholds payment (layer farms)

Potential problems or issues

- Some layer farm owners withhold the first 15 days of wage payment in lieu of a work deposit, claiming that it is a common and necessary practice because the cost of recruiting a worker is so high.
- Several interviewed employers from various businesses in the poultry industry complained that they have to deal with migrant workers leaving their job without giving a notice before the contract expires.

Policy recommendations/proposals for legislative amendments

- The relevant agencies should adjust the labor standards of layer farm production to be more consistent with human rights principles.
- The responsible government agencies should make more efforts to curb the practice of compulsory overtime to ensure that there are no practices which can be considered as forced labor practices.
- Because the cost of hiring each worker is substantial, the relevant agencies should develop a database system that can record the working history of each migrant worker in such a way that potential employers would be able to retrieve past information on the contractual fulfillment of each worker, so that employers can make more informed decisions.



S5: High cost incurred by employers or employees

Potential problems or issues

- Some interviewed broiler farm owners claimed that the payment for recruiting a Cambodian worker is as high as 26,000 baht. Therefore, they collect some of this charge from the Cambodian worker.¹
- Some interviewed workers claimed that they had to pay 15,000 baht to a recruitment company in Myanmar without receiving any support from their employer, and they had no detailed information on what the money was being spent on.

Policy recommendations/proposals for legislative amendments

- The announcement of the Department of Employment regarding the determination of migrant workers' recruitment fees should be amended. The amended announcement should more clearly define and classify "the expenses incurred in the country of origin."
- The requirement that workers—or employers—need to report or renew their presence in Thailand every 90 days should be reviewed. For example, this measure should be adjusted to 180-day notification or annual notification in order to reduce the burden of transaction costs and increase productivity.

S6: Lacking knowledge of labor rights and access to complaint channels

Potential problems or issues

- Almost all the interviewed migrants told the team that they do not know their rights or channels of complaint. Many of them also

¹ For example, the employer collects 20,000 baht from each Cambodian worker by deducting 2,000 baht from the monthly salary for 10 months.

preferred to avoid contacting Thai government agencies.

Policy recommendations/proposals for legislative amendments

- A handbook on labor rights should be prepared that provides such information on rights along with examples that are easy to understand. The handbook should provide information on practices in the case of human rights incidents and should be printed in both Thai and a language understood by the employees. Simply training migrant workers is not sufficient.
- The government should request that the government of the workers' country of origin should publish a handbook on their website so that workers can access the guide through their electronic devices.
- There should be a complaint-handling system that enables workers to more conveniently make a complaint when necessary. For example, there should be a hotline that is available 24 hours a day, 7 days a week and manned by a team that can communicate in the Thai, Burmese, and Khmer languages.
- The responsible government agencies should cooperate with NGOs to establish an alternative non-governmental channel for receiving complaints from migrant workers, similar to the arrangement that the Charoen Pokphand Food uses by hiring the Labour Rights Promotion Network (LPN) (a migrant rights NGO) to receive complaints from migrant workers on its behalf.

S7 Labor standard in industry's production

Potential problems or issues

- The team's analysis of the regulatory gap in labor rights protection finds that the main

agricultural production standards, such as GAP for many livestock products, still does not address some labor rights issues.

Policy recommendations/proposals for legislative amendments

- All the industry's production standards should consist of the ILO core labor standards. There should be a checklist that the inspectors from the Department of Livestock Development are able to use during farm inspections.

M1: Thailand's National Action Plan on Business and Human Rights (NAP)

Potential problems or issues

- Thailand has just adopted the first National Action Plan on Business and Human Rights (NAP) on October 29, 2019.

Policy recommendations/proposals for legislative amendments

- The relevant agencies should revise the draft of NAP, especially on the topic of "human trafficking and forced labor," which, currently, has only the indicator "the reporting of the number of risky businesses." Indicators on the development of complaint/inspection channels, the standard duration of treatment and concrete preventative measures should be included in the indicator list on this topic.
- The responsible government agencies should expedite the process of implementing the NAP. There should be a quarterly report to monitor and evaluate the effectiveness of the NAP according to the indicators specified in the plan by having a committee consisting of members from the government agencies concerned, academia, industry

organizations, farmworkers, and migrant organizations.

M2: Number of workers in the industry

Potential problems or issues

- In the quarterly statistical report of migrant workers, there are no statistics on some labor groups by type of industry or type of business, such as the OSS group, which is a large group of migrant workers.
- It is possible that the number of migrant workers may be overestimated due to the fact that some migrant workers registered themselves more than once with different agencies.

Policy recommendations/proposals for legislative amendments

- All databases on migrant workers in Thailand should be combined into a single database which assigns a specific personal identification code to each migrant worker.
- The Thailand Standard Industrial Classification (TSIC) and the International Standard Classification of Occupations (ISCO) should be used in the registration process to make the data consistent and comparable with Thai labor statistics data and the Labour Force Survey compiled by the National Statistical Office. Standardizing the database will make it more useful in labor management and planning for both migrant and regular workers in Thailand.

M3: Right to work-related sick/injury leave

Potential problems or issues

- Workers have to use their own sick leave allowance when absent from work due to a work-related injury.

- Competitors in the industry, such as Brazil and Germany, specify the right of workers to take leave due to work-related injury separately from their sick leave rights.

Policy recommendations/proposals for legislative amendments

- The responsible government agencies should consider amending the Labour Protection Act on the issue of appending the right to take leave due to work-related injury separately from existing sick leave rights.

M4: Freedom of association and collective bargaining

Potential problems or issues

- Thailand has ratified almost all ILO fundamental labor rights conventions, except for the conventions on freedom of association and collective bargaining (C087 and C098).
- The overseas competitors and trading partners selected for this comparative study have ratified all ILO fundamental labor rights conventions.
- Some migrant workers in Thailand have roles in the welfare committee of the company and have the right to be a member of a trade union, but no migrant workers have the right to be on a management committee of a trade union.

Policy recommendations/proposals for legislative amendments

- The Thai government should ratify the ILO conventions on freedom of association and collective bargaining of labor, which the ILO defines as fundamental rights of labor.
- Increase workers' rights to integrate issues into the GAP standard for poultry farms (currently available in GLP-Poultry Thai-

land and TLS)

- All migrant workers should have the right to be a member of a management committee of a trade union. The Thai government should enact the draft Labour Relations Act B.E., section 99, allowing migrant workers to be a member of a management committee of a farmworkers trade union.

In addition, two other issues should be revised or considered. First is the labor protection law; it currently stipulates a two-year limit for retrospective holiday pay and wage claims, causing potential problems in cases when workers' rights are violated for more than two years. Second, the National Human Rights Commission should develop a system to protect complainants.

In summary, the main finding of this study is that Thailand has labor protection laws and industry standards that are mainly consistent with international human rights standards. There are only a few legislative issues that need to be revised in order to reach the standards held by overseas competitors and trading partners in the international poultry industry. However, enforcement of the law on several measures is still lacking or ineffective to protect the rights of workers, especially the measure related to migrant workers who have already been disadvantaged due to language and other barriers.



THAILAND'S FIGHT AGAINST FOOD WASTE: A STUDY ON FOOD LOSS AND WASTE MANAGEMENT

*Thanthip Srisuwannaket
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FOOD LOSS AND WASTE PROBLEM

Globally

Each year one-third of food in the world, estimated at 1.6 billion tons, is thrown away. That amount of waste generates 3.3 billion tons of carbon dioxide in food production, becoming one of the critical causes of greenhouse gas emissions. Meanwhile, nearly a billion people around the world still go hungry every day (FAO 2013).¹ Such an amount of squandered resources in the face of hunger brings into question whether it is time to urgently improve mankind's responsibility for food consumption and management globally.

In the meantime, the United Nations has been promoting the sustainable consumption concept as part of the Sustainable Development Goals (SDGs); the aim is to reduce food waste by 50 percent globally by 2030.

Many governments as well as the private sector have responded positively to that ambitious target. Major multinational food retailers, such as IKEA and Tesco Lotus, have announced their internal policy of reducing food waste through such measures as the donation of surplus food and prevention of waste in the food chain. Many countries encourage the redistribution and donation of edible past-date food from supermarkets and surplus food from hotels to people in need.

In 2016, France issued groundbreaking food waste legislation requiring all large retail stores of more than 400 square meters to donate surplus edible food to people in need through certified food distribution charities and businesses.

The United States has chosen to fight food waste through taxation. The government of that country provides a tax deduction based on the value

¹ FAO. 2013. "Food Wastage Footprint: Impacts on Natural Resources." Downloadable from <http://www.fao.org/3/i3347e/i3347e.pdf>.

of donated surplus food to encourage food producers and retailers, such as farmers and supermarkets, to donate surplus food.² In addition, if their donated food complies with hygienic standards,³ the donors are protected from any criminal and civil liability.

In Thailand

Thailand is still in the early stage of developing concrete policies to fight against food waste on a broader scale; the problem is a growing one. In 2017, food waste accounted for two-thirds of the country's garbage collected by municipalities nationwide, according to a rough estimate by the Pollution Control Department. Most of that food waste ends up in landfills, causing environmental degradation.

This study found that the primary causes are the lack of appropriate garbage-sorting infrastructure and awareness of households generating more than half of the food waste. Households tend to throw away their food waste, which usually has high moisture content, together with other types of trash, such as plastics, paper, and electronic waste. This situation makes recycling and incineration more complicated and costly.

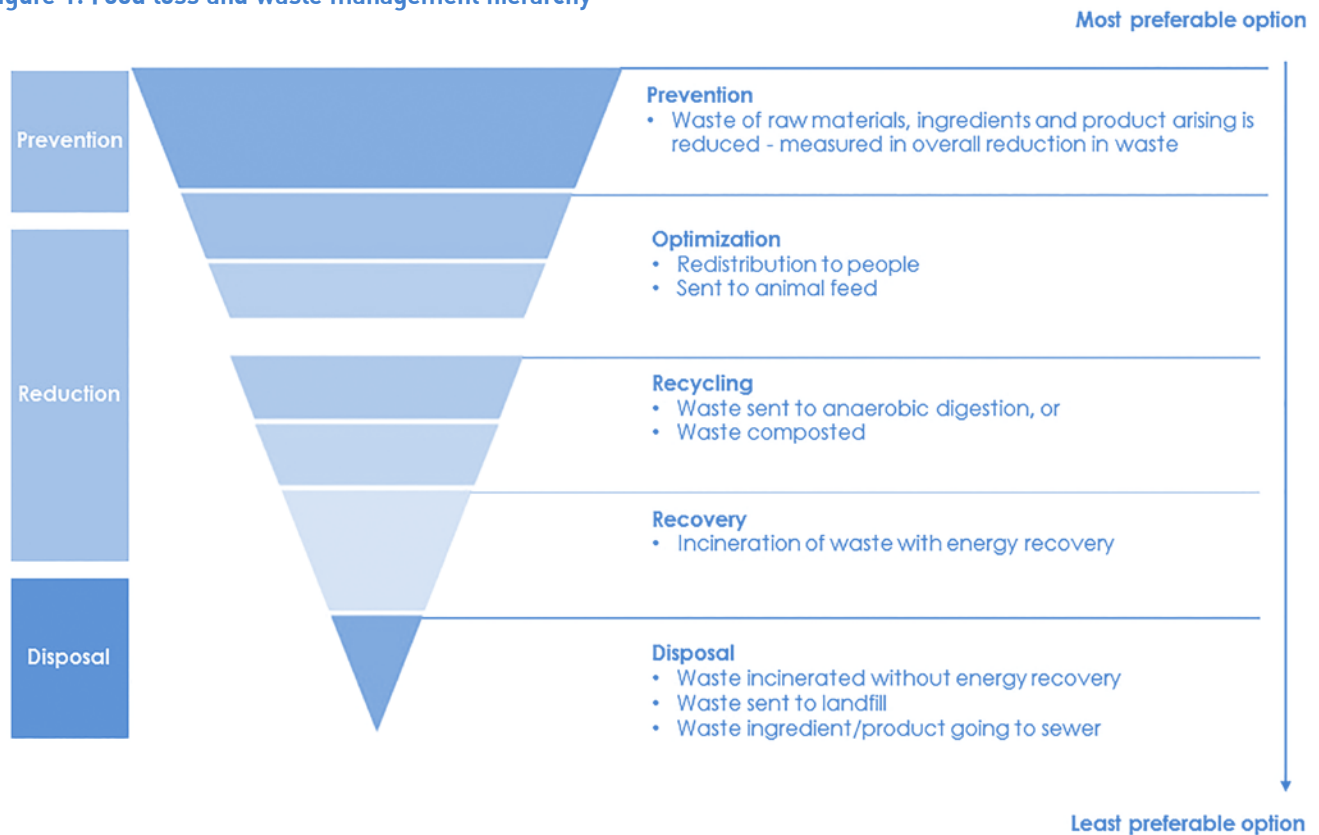
CONCEPTUAL FRAMEWORK OF EFFICIENT FOOD WASTE MANAGEMENT

The Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP) recommend a conceptual framework for the efficient management

² ReFED. 2019. "U.S. Food Waste Policy Finder." Retrieved from <https://www.refed.com/tools/food-waste-policy-finder/federal-policy/federal-tax-incentives>.

³ LOI n° 2016-138 du 11 février 2016 relative à la lutte contre le gaspillage alimentaire, see European Commission, 2016, "Reducing food waste: the EU's response to a global challenge." Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/MEMO_16_3989.

Figure 1: Food loss and waste management hierarchy



Source: Reprinted, with changes, from *Prevention and reduction of food and drink waste in businesses and households – Guidance for governments, local authorities, businesses and other organisations, Version 1.0, UNEP, Paris, 2014. Fig. 2. p. 24.*

of food waste. Their food loss and waste management hierarchy, which is shown in Figure 1, suggests that five stages of surplus food treatment can be implemented, ranging from the most to the least preferable ones.

- **Prevention** is the most preferable option to avoid excess food waste by eliminating waste generation. For example, an evaluation system for food producers to meet the needs of customers and reduce the number of products left over can be a critical practice in food waste prevention
- **Optimization** is to repurpose surplus food by optimizing its value or giving the products a second life before they become waste. The private sector could donate edible food to underprivileged people

through food redistribution programs and sell it at a discounted price to farms raising animals. The government could provide support by providing tax incentives to those in the private sector that donate surplus food and to voluntary food redistribution foundations

- **Recycle** is to reprocess food waste into products, materials, or substances, including anaerobic digestion to produce biogas and compost fertilizer
- **Recovery** is to turn food waste into energy through incineration technologies, and apply biological technologies to enable anaerobic digestion
- **Disposal** is the least preferable option to eliminate food waste that is no longer us-

able through such processes as landfilling, incineration, pyrolysis, and gasification, among other final solutions without energy recovery

In addition, households and food service industries, such as hotels, restaurants, and food retailers, can reduce food waste by employing a simpler “4R” method: Reduce, Reuse, Recycle and Recover. The details are as follows:

- *Reduce* means to limit the amount of food waste in the first place
- *Reuse* means to repurpose edible food, such as by sending it to food redistribution or donation organizations, or send it to animal feed producers
- *Recycle* means to process food waste into other products, such as fertilizer or biogas
- *Recover* means to incinerate food waste for energy generation, such as for producing electricity, heat, compost, and fuel.

GOOD PRACTICES OF FOOD WASTE MANAGEMENT FROM LARGE FOOD RETAIL AND HOTEL SECTOR IN THAILAND

This study examines the food waste situation in the four largest provinces in different regions of Thailand: Nakhon Ratchasima, Chiang Mai, Phuket, and Chon Buri. It finds that many hotels and food retailers are aware of food waste and have introduced their own internal food waste management policy. However, only large businesses can efficiently reduce food waste. Thus, many significant obstacles are to be tackled to enable small businesses to achieve the same goal as their large counterparts.

Hotels and restaurants

Hotels and restaurants generate 40 percent of food waste globally, according to the 2016 report of

ReFED, a non-profit network of NGOs, investors, and policymakers advocating against food waste in the United States.⁴ Buffet restaurants are among the top generators of food waste. Such squandering of food causes a loss of profit margins in the hospitality industry. Although the problem has been identified, the solution is not apparent. In trying to solve this problem, some hoteliers and restaurants engage the services of food waste and environmental consultants.

In Thailand, a food waste reduction consulting service was created recently to satisfy the increasing demand for such a service. However, many hoteliers and restaurant owners are not willing or cannot afford to pay service fees despite knowing that such a service could help them save costs by maximizing the benefits from their surplus food. As a result, government intervention may be needed to increase awareness and unlock the potential demand for this type of specialized service.

Thailand Convention and Exhibition Bureau is also trying to tackle food waste in hotel service. It has launched a campaign that subsidizes any hotel that engages the food waste reduction consulting service known as LightBlue Environmental Consulting. The subsidy comes with a condition: the hotel must reduce by at least 10 percent the amount of food waste it produces. In 2019, there were more than 10 voluntary participants in this initiative. Many of them are large hotel and resort operators, such as the Marriott Marquis Hotel in Bangkok and the Sampran Riverside Hotel in Nakhon Pathom.

Based on the assessment of LightBlue Environmental Consulting, the leading food waste consultant in this initiative, food waste usually occurs as a result of the following four activities:

- Over-ordering of ingredients and improper

⁴ ReFED. 2016. “A Roadmap To Reduce U.S. Food Waste by 20 Percent: Executive Summary.” Downloadable from <https://www.refed.com/downloads/Executive-Summary.pdf>.

Table 1: Factors discouraging food waste prevention in hotels and restaurants

4R stages	Discouraging factors
Reduce	<ul style="list-style-type: none"> • Lack of knowledge and awareness among chefs and kitchen staff • Resistance from employees who would take on unpaid extra workloads, such as weighing food waste before discarding it • Additional costs of installing systems and purchasing equipment, such as food scales • Decreasing satisfaction of customers as a result of a reduction in the quality of service and the quantity of food
Reuse	<ul style="list-style-type: none"> • Non-compliance with hygienic standards of food preservation and the logistics of many donor agencies • Lack of clear legislation on the liability of food donors and redistributors • Lack of a platform between food surplus donors and recipients
Recycle	<ul style="list-style-type: none"> • Inefficient and inadequate waste-sorting infrastructure and implementation • Distorted incentives of the waste collector contractors whose remuneration is based on waste weights and additional payments from the sale of valuable waste
Recover	<ul style="list-style-type: none"> • Inefficient waste management of municipalities • Lack of investment in the infrastructure of environmentally friendly waste disposal to replace landfills

storage, which causes spoilage and damage to food

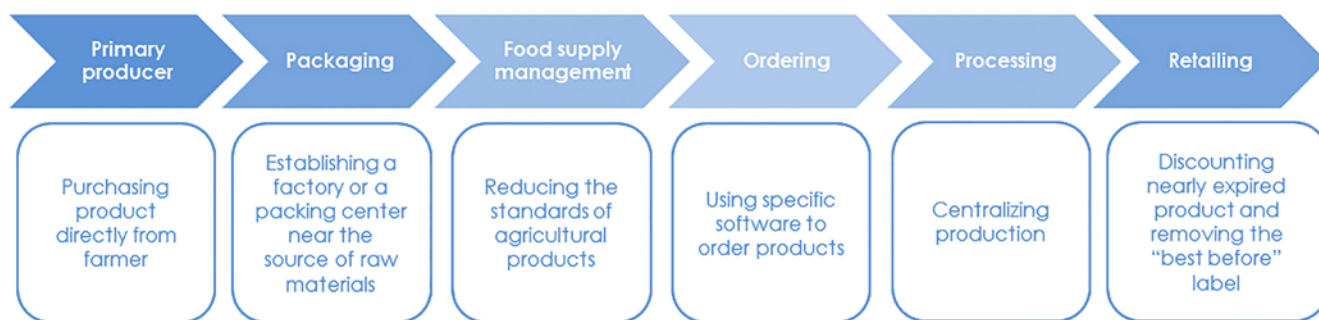
- Improper or unoptimized food preparation and cooking in the kitchen
- Discarded food from a buffet line that must always be filled to maintain freshness and beauty
- Discarded food from customers' plates and plate decoration

To reduce food waste, hotels and restaurants should start by improving food and ingredient storage conditions, centralizing their ordering routine and kitchen operations in order to minimize over-ordering and waste in preparing and cooking food. Chefs' awareness and creativity are also pivotal with regard to the reuse of remaining ingredients and food, such as by making bread pudding with leftover bread from buffet lines.

After putting a lot of effort into minimizing losses in the kitchen, many hotels have begun to donate surplus food to charities that redistribute it to people in need. However, there are many discouraging factors to the prevention of food waste; these are summarized in Table 1.

Many non-profit redistributors still operate on a small scale and lack systematic logistics management and hygiene standards. Only Scholars of Sustenance, an international food rescue foundation operating in Bangkok and Phuket, has a standardized delivery and donation system. The lack of proper food donation regulations is a critical factor that discourages hoteliers and restaurants from donating surplus food and impeding the non-profits from scaling up their redistribution of food. It is still unclear to what extent donors and redistributors must bear liability in case redistributed food adversely affects the health of recipients. This opacity worries

Figure 2: Food loss and waste reduction measures in the large retail sector along the value chain



Source: TDRI (2019).

large hotel and restaurant chains rather than their small counterparts, which donate or even sell their food waste as livestock feed. Some creative small hotels in provincial areas also process their food scraps, such as perished vegetables and fruits, into fertilizer or bio-fermented water (an ingredient for cleaning products).

Retail

Food waste or surplus food management in the large food retail sector in Thailand has not been scaled up yet. Only Tesco Lotus and IKEA, both multinational food retailers, have introduced internal measures in line with their parent companies' policies to reduce food waste along their value chain. In addition, Tops supermarket, a Thai retailer, has started implementing a food waste reduction policy as well (see Figure 2). Below are examples of the measures taken by Tesco Lotus and Tops.

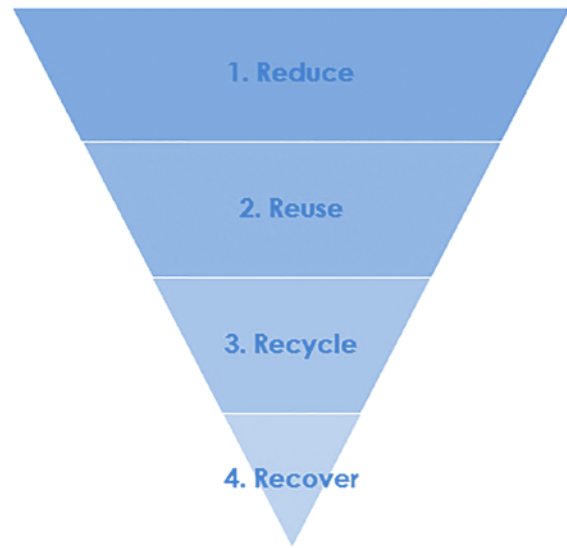
- **Primary producer:** ordering vegetable and fruit products directly from farmers can mean obtaining the quantity and quality of products as needed, thus reducing the loss of non-standard products, and eliminating the amount of food that exceeds market demand
- **Packaging:** establishing a factory or packing center near the source of raw materials

can preserve freshness and reduce transportation losses during packaging processes

- **Food supply management:** reducing the standards of agricultural products can eliminate the waste from produce that does not meet established criteria. For example, a retail store may buy dark-colored bananas and sell to ice cream shops that do not require the banana peel to have a beautiful appearance
- **Ordering:** using specific software can help to optimize supply estimation by calculating past sales statistics instead of ordering products according to the orders of the branch decision-maker
- **Processing:** centralizing the production of food can reduce losses in the production process by consolidating production centers into a specific area and improving the transportation system between branches to retain the freshness of the products
- **Retailing:** reducing the price of food that is about to expire can increase customers' willingness to buy. Canceling the "best before" product labels can extend the life of the product because most food remains useable longer than stated on the "best before" labels.

Figure 3: Lessons learned about food waste management in large retail stores

1. *Reduction*: educating farmers about how to eliminate food waste during the transport of goods, centralizing food processing, and packaging centers
2. *Reusing or repurposing food surplus*: donating surplus food to the Scholars of Sustenance Foundation, Duang Prateep Foundation, Mirror Foundation, schools, and employees (some retailers)
3. *Recycle*: recycling food waste into fertilizer
4. *Energy recovery*: incinerating food waste with energy recovery



Source: TDRI (2019).

Edible dried food products, such as cup noodles and instant coffee left over from the lean⁵ process, are donated to various charitable organizations, such as the Scholars of Sustenance Foundation, Duang Prateep Foundation, Mercy Center and Mirror Foundation, but only Scholars of Sustenance can accept fresh food as it complies with HACCP⁶ food safety standards.

Food retail stores in provincial areas usually donate dried food to schools and send leftover raw materials to pig farms or to factories making fertilizer (see Figure 3). However, since the amount and type of food products left over after daily selling varies widely every day, it is impossible for schools to plan food preparation for students.

To summarize, proper practices for food surplus management in the retail food sector already exist. To ensure impact at a broader

scale, policymakers and other stakeholders, such as business associations, should help businesses eliminate the following obstacles:

- **Lack of know-how and financial incentives to prevent food waste:** Many small food retailers do not have access to food waste prevention methods, along with their business operations and value chain. Others cannot see the financial benefits and cost-savings of the so-called lean process
- **Lack of economies of scale in food surplus donation and redistribution:** The amounts of food left over from small retail branches are not worth the costs of stock management and logistics. As a result, neither retail stores nor charitable organizations, in particular in the provinces, invest in adequate storage infrastructure and cold chain trucks to maintain donated food quality and prevent spoilage before it reaches the recipients
- **No incentive from a VAT refund policy for unsold food donations:** Unlike many countries in the European Union, Thailand

⁵ A technology to create more value for customers with fewer resources.

⁶ HACCP stands for Hazard Analysis Critical Control Points, a preventative food safety system that takes stock of the hazards in food.

has not introduced a VAT refund policy for unsold food donations. While food retailers can claim back the value added tax on their damaged and unsold canned food, the objective of this tax policy is to encourage the recycling of aluminum packaging. Many food retailers, therefore, tend to destroy their unsold canned food rather than donate it.

CONCLUSION AND RECOMMENDATION

Despite different strategies for the management of food waste, policymakers should prioritize action on food waste prevention and diversion instead of recycling and disposing it. Such a strategy would benefit the environment and the economy. Nevertheless, there are many remaining obstacles in implementing food waste management.

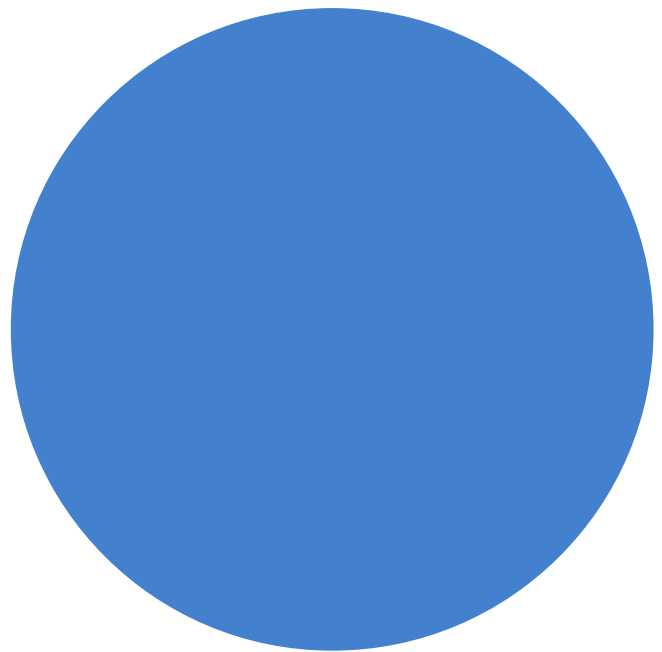
First, the actual volume of food waste is still unknown. The Pollution Control Department has not collected any data on food surplus and waste in Thailand. The lack of reliable data makes the goals of food waste reduction unmeasurable.

Second, the private sector does not perceive any clear benefits to be gained from managing or donating surplus food. Hotel chains, restaurants, and food retailers are the primary source of food waste. They consider food waste prevention and donation as a cost and a risk. Meanwhile, Thailand has not introduced any laws or guidelines to protect donors, redistributors, and receivers from possible liability.

Role of the government as a facilitator and incentive provider

In order to manage surplus food and food waste sustainably, government agencies should facilitate and incentivize the private sector through the following actions:

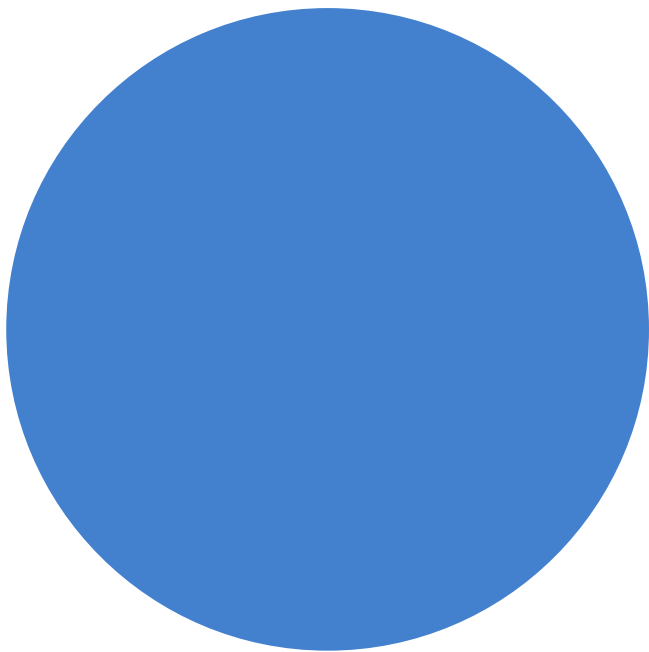
- **Reduce liabilities for food donors by**



issuing a regulation on food donation standards: The lack of efficient redistribution logistics and adequate transportation are significant obstacles to deliver surplus food to people in need. Private sector and non-profit organizations have the potential and incentives to provide this service. However, the risk of delivering unhygienic surplus food is still present due to the lack of food donation standards, while the liability of donors is still unclear. As a result, the Ministry of Public Health should issue a regulation to limit the liability of food donors and redistributors and guidelines on hygienic standards for donated food

- **Implement adequate mechanisms for waste prevention and disposal:** Municipalities should reduce their landfills of waste by using the following mechanisms of waste prevention and disposal:
 - Develop an efficient waste-sorting system with separate bins and collection schedules for food waste and general waste





- Increase garbage collection fees that reflect the actual cost of waste collection and disposal
- Install food waste disposal units in local businesses and households
- Allow more businesses to operate as food waste collectors
- **Collect reliable data for formulating evidence-based policy related to food waste management:** The Pollution Control Department should collaborate with municipalities to collect data on the volume of food waste. These data will enable the Pollution Control Department and city governors to design more efficient prevention and redistribution measures. The data can be collected easily when an adequate waste-sorting system is well established. On the demand side, the Department of Environment Quality Promotion should develop a database or directory of community organizations, such as schools or homeless shelters, which would be willing to receive surplus food. Such a database

would facilitate the redistribution of such food by potential donors

- **Introduce tax incentives for the primary corporate source of food waste:** Three tax incentives can be considered to incentivize business actors to reduce food waste. First, the Revenue Department could introduce tax-deductible expenses for businesses that hire food waste consulting services. This could be an incentive for businesses to reduce the amount of food waste and optimize food inventories of those that generate a high amount of food waste. Priority sectors could include hotels, restaurants, food retailers, and wholesalers. Evidence from Sampran Riverside Resort in Nakhon Pathom and Marriott Marquis Hotel in Bangkok shows that hiring a food waste consultant helps them reduce food waste by more than 10 percent, which is equivalent to a cost savings of 1 million baht per year.

Second, the Revenue Department could also apply a tax credit for businesses which donate food to charities registered as a receiver of surplus food, as suggested by the European model: a tax credit could be claimed for 60 percent of the value of donated food but not to exceed 0.5 percent of total corporate income.

Last, the Revenue Department could allow food retailers and wholesalers to request a VAT refund on donated food products.

Role of the private sector as a zero food waste alliance

Surplus food donation is a common practice for many Thai people. However, making it more efficient and systematic on a broader scale remains challenging. The Sustainable Development Goals

target to halve food waste by 2030 is less likely to be achieved without the active involvement of the private sector.

Business associations, such as the Thai Hotel Association and the Thai Retailers Association, are the main stakeholders with regard to this issue. They are ideally placed to convince businesses producing food waste to take food waste issues more seriously. They can take the role of a knowledge center to provide approaches to food waste management and cost-saving with affordable fees for small businesses.

The two associations could form a “zero food waste supply chain” by taking the United States experience as an example. The Grocery Manufacturers Association, Food Marketing Institute, and the National Restaurant Association in the United States have formed the Food Waste Reduction Alliance with the primary objective of reducing food waste.

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