

SINGAPORE ENVIRONMENT COUNCIL UNVEILS KEY INSIGHTS FROM STUDY ON FOOD LOSS AND FOOD WASTE IN SINGAPORE

393,000 tonnes of food loss across fresh food supply chain

Singapore, August 6 2019: Singapore Environment Council, together with knowledge partner Deloitte Singapore, today unveiled findings of a joint study aimed at shedding more light on food loss and food waste in Singapore along the entire fresh food supply chain, from production stage, transport, processing, storage and distribution (upstream and midstream) to consumers downstream.

In Singapore, food waste is a major concern and constitutes one of the top five largest waste streams generated. Based on the study, an estimated 393,000 tonnes of food loss occurs during upstream and midstream from imported foods and local farms, even before reaching retail and consumers. Out of these, around 342,000 tonnes of food loss occurs in Singapore. As Singapore imports most of its food requirements, more than 144,000 tonnes is lost when imported food lands in Singapore.

For the locally produced food within Singapore, more than 5,000 tonnes of food is lost at production, and close to 2,000 tonnes of food is lost during post-harvest handling and storage. During the processing and packaging of imported and locally produced food items, there is a food loss of close to 75,000 tonnes, and food loss of more than 116,000 tonnes during distribution.

The study also looked at key drivers for food loss – which refers to food that is lost in the supply chain between producer and the market – and food waste which is defined by the Food and Agricultural Organization as the discarding or alternative (non-food) use of food



that is safe and nutritious for human consumption. Identifying these drivers is key to developing possible solutions to reduce overall food loss and food waste generated.

Of the 342,000 tonnes of food loss incurred within Singapore, vegetables and fruits top the list, making up about 167,000 tonnes or 49 per cent while eggs accounted for the lowest at about 5,500 tonnes or 1.6 per cent.

Singapore Environment Council Chairman Ms Isabella Huang-Loh said: “Our study on food loss and food waste is totally aligned and in support of the national agenda of Year Towards Zero Waste and “30 by 30” goal to produce 30 per cent of Singapore’s nutritional needs locally by 2030. The study seeks to go beyond plugging gaps in research, but more importantly, to look at drivers behind the loss and waste in the fresh food supply chain to uncover opportunities and innovations on how we can close the loop on food loss and food waste.

“According to the Food and Agriculture Organization, the causes of food losses and food waste in medium/high-income countries relate mainly to consumer behaviour, as well as a lack of coordination between different players in the supply chain. In Singapore, food waste is largely monitored at the post-consumer or downstream stage, with little awareness of the losses occurring at the upstream and midstream stages. When taken together – especially given the fact that Singapore imports more than 90 per cent of its food needs – the bigger picture points to an urgent need to address food loss and food waste now.

“In dollar value, food loss contributes to an estimated \$2.54 billion from farm to market within Singapore. More can be done in an industrialised country like Singapore to reduce food loss. Down the chain, better coordination and raising awareness among food industries, retailers and consumers can go a long way to reduce food loss and waste.”

The study is supported by qualitative and quantitative information gathered through comprehensive interviews with more than 30 key stakeholders in the local food supply

chain, intensive research on past literature focused on food loss and waste and a consumer survey on food storage behaviour, purchasing patterns and food handling habits covering more than a 1,000 respondents.

Some of the key drivers of food loss identified in the study are:

- Poor disease and pest management
- Over importation of food items
- Fragmented cold chain management
- Inadequate infrastructure

The study identified the eggs supply chain as the best example with the least amount of waste generated. Part of the reason is that the egg supply chain is well developed, with efficient flow between the production and distribution channels.

Through the use of automation, application of science and technology in disease management amongst other measures, egg farms in Singapore have been able to maximise output while ensuring minimal loss during production. Local farmers can look to egg producers here as a role model to achieve the same high level of efficiency.

Downstream consumer study

Research from our consumer survey showed that at the consumer stage, more than 26,000 tonnes of unconsumed foods are thrown away from households annually due to improper storage, purchasing patterns and food handling habits.

Data for the consumer study was collected from 1,002 respondents in Singapore through an online survey which looked at food storage behaviour, purchasing patterns and food handling habits.

One of the findings from the consumer survey revealed that Singapore households throw away an estimated \$6.57 million worth of food per week. This would amount to about



\$258 per household per year from unconsumed food or about \$342 million for all households in Singapore annually.

The survey also indicated there was still much work in progress to get consumers to do their part to cut down on food waste. About one third of respondents surveyed indicated they generally would throw away 10 per cent or more of uncooked and unconsumed food items per week.

Happily, a good 20 per cent of respondents can be classified as “smart consumers”. They are consumers who generally:

- Do not throw away unconsumed food
- Are effective and organised planners who always or often make a shopping list of food items to buy
- Not swayed by promotional offers to buy excess food items that are potentially wasted
- Make sure they consume all food items bought and do not buy more than they need
- Shop at least once a week without contributing to an increase in food waste

Singapore Environment Council Executive Director Jen Teo added: “Food loss and food waste is preventable. This is unsustainable if we are to do nothing to curb and manage the issue. We want our study to create value and wider conversations among multiple stakeholders on food loss and food waste to throw up possible solutions. If we can collectively do this, including having the support of consumers, we can harness value so that we can rely less on food imports while reducing overall food loss and food waste.

“There are several aspects of the fresh food supply chain which needs to be looked at with a fresh pair of lens, beyond the dollar value, where we can all make a difference and cut down on food loss and food waste. For example, local farmers may want to utilise more innovative ways like the application of technology to reduce food loss. Similarly, a



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greater awareness of the impact of food waste on the environment could give rise to a growing pool of smart and efficient consumers who don't discard food unnecessarily.

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For more information, please contact:

Right Hook Communications

Debbie Pereira, PR Director

Email: Debbie@righthook.com.sg

Tel: +65 9880 9848

Nurhayati Ghani, Senior Acct Executive

Email: Nurhayati@righthook.com.sg

Tel: +65 8218 4422



ABOUT THE SINGAPORE ENVIRONMENT COUNCIL

Established in 1995, the Singapore Environment Council (SEC) is an independently managed, non-profit and non-governmental organisation (NGO). As Singapore's first United Nations Environment Programme (UNEP)-accredited environmental NGO, we influence thinking of sustainability issues and coordinate environmental efforts in the nation. We are also an approved charity and offer tax exemption to donors. SEC continuously engages all sectors of the community by formulating and executing a range of holistic programmes, such as the Singapore Environmental Achievement Awards, Asian Environmental Journalism Awards, School Green Awards, Singapore Green Labelling Scheme, Project: Eco-Office, Project: Eco-Shop and Project: Eco-F&B. In addition, we build a pool of committed volunteers under our Earth Helpers programme. Our Training and Education arm provides the people, public and private sectors with the opportunity to develop awareness, knowledge, skills and tools in order to protect and improve our environment for a sustainable future. Strong partnerships with corporations, government agencies and other NGOs are valued by us. These partnerships are vital for sustaining our programmes, leading to positive action and change. Over the years, SEC has given strength and direction to the environmental movement in Singapore.

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新加坡环境理事会简介

新加坡环境理事会(SEC),成立于 1995 年,是非政府组织(NGO),也是非盈利机构。我们致力于推广新加坡可持续发展项目同时协调环境改善事务。在 2018 年,新加坡环境理事会被联合国环境规划署授予认证。

我们是一个获得认可的慈善机构,捐赠者可享有税务优惠。通过举办一系列整体项目如新加坡环境成就奖(Singapore Environmental Achievement Awards)、亚洲环境新闻奖(Asian Environmental Journalism Awards)、SEC-星和校园绿化奖(SEC-StarHub School Green Awards)、新加坡绿色标签计划(Singapore Green Labelling Scheme)、绿化办公室计划(Project: Eco-Office)、绿化商店计划(Project: Eco-Shop)和绿化餐饮计划(Project: Eco-F&B),新加坡环境理事会持续在社会各个领域发挥作用。

通过志愿环保战士 (Earth Helpers)项目新加坡环境理事会组织了一支队伍协助和改善环境。我们的培训与教学部门旨在提高人民、政府部门及社会各领域的环保意识,知识与技能,并提供相关教材。多年以来,新加坡环境理事会一直支持并引导着新加坡的环保运动,通过与企业、政府机构和其他非政府组织建立密切的合作关系以更积极的行动达成改善环境的远景,这对于我们项目的可持续发展是至关重要的。