

You can't have your meat and keep it

How overconsumption of meat threatens marine life and our future food supply.

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Singaporeans' overconsumption of meat exacerbates climate change, and threatens marine life. This threatens our ability to continue consuming our favourite foods. However, hope is not lost, as tweaking our dietary habits can make a positive impact on the environment.

Singaporeans love to eat. Rightly known as a multicultural food paradise, our little red dot boasts dishes from all over the globe: from local favourites like chilli crab, to foreign fares from the likes of Japan, Thailand, and France.

With such a wide variety of dishes available, it is no wonder that food is a mainstay of our celebrations and gatherings. Some might even say that it is not a celebration unless we feast to our hearts' content!

However, as much as we enjoy indulging in good food, it is important to consider the consequences of our dietary practices. Overeating costs us more than just a food baby: it leads to environmental harms that threaten our ability to continue enjoying our favourite foods.

THE MEAT OF THE PROBLEM

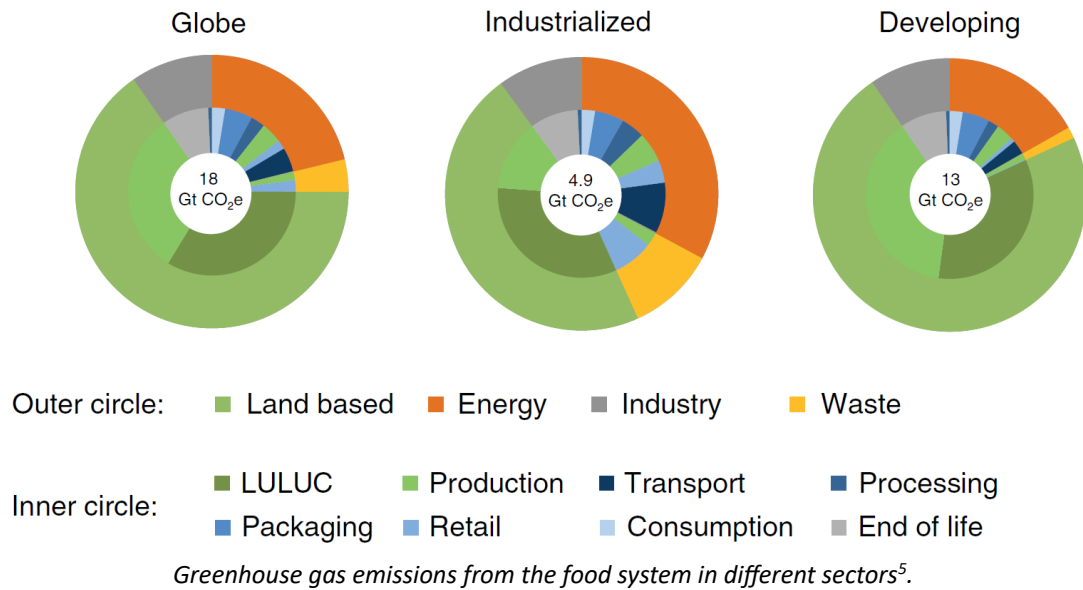
Singaporeans consume three to five times more meat and eggs than is environmentally sustainable. This amounts to a total of 36kg of chicken and 22kg of pork, among other meats, consumed by the average Singaporean every year¹.

Singaporeans' overconsumption of meat has its roots in the country's Asian culture. According to Dr Su Xiaochen, who specialises in Asian socio-political issues, "meat serves as a symbol of enjoyment and social attainment."²

Yet, there is reason to reconsider the role meat plays in our society, as our extravagant consumption of it damages the environment.

IMPACT ON CLIMATE CHANGE

One way it does so is through the release of greenhouse gases. A study by the Institute for Environmental Protection and Research found that 34% of human-caused greenhouse gas emissions is linked to food³. Of all food-related emissions, meat accounts for almost 60% – twice that of plant-based foods⁴.



While the overconsumption of meat is not the only cause of climate change, it greatly exacerbates the volume of greenhouse gases released into the atmosphere. Furthermore, unlike other contributors, it is one that we, as individuals, can make a direct impact on. And there are compelling reasons to make a change.

DEATH OF MARINE LIFE

According to market research firm OnePoll, the top travel destination of Singaporean millennials is Tokyo, with 87% of travellers to Tokyo heading there primarily for its food⁶. A separate study also found that Japanese cuisine is the second most popular cuisine in Singapore⁷.

For these sushi-loving Singaporeans, climate change spells trouble, as key ingredients of sushi are threatened by rising ocean temperatures and acidification.



Wasabi grown in water⁸.

A delicate, semi-aquatic vegetable, the wasabi plant can only be grown in water with temperatures between 10-15°C⁹. However, average sea surface temperatures around Japan have risen by 1.24°C over the past century¹⁰, increasing the risk of mould and rot¹¹. As a result, the volume of wasabi produced

has fallen by three-fifths over 15 years¹². A similar plight befalls the cultivation of seaweed, which is threatened by epiphytes and diseases that thrive in warm temperatures¹³.

Aside from rising temperatures, sushi ingredients are also threatened by ocean acidification. As the amount of carbon dioxide in the atmosphere increases, more carbon dioxide is absorbed by the ocean, producing carbonic acid. This lowers the pH level of seawater, rendering it more acidic¹⁴.

Ocean acidification inflicts serious harm on marine life. A 2016 study found that acidification in the Pacific Ocean will increase the mortality rate of yellowfin tuna larvae by 50-100%, greatly endangering the species¹⁵.

With the death of marine flora and fauna, our ability to continue consuming our favourite foods is in jeopardy. As painful as this might be though, it is but a minor inconvenience compared to the negative impact climate change has on people in other parts of the world.

For the 60 million people employed in small-scale fisheries globally, and the additional 53 million engaged in subsistence fishing, warming water temperatures could mean a loss of livelihood, or even food insecurity¹⁶. Hence, we must take action to mitigate climate change, and protect our marine life.

CONSUMING IN MODERATION

The most straightforward solution is to reduce our consumption of meat. According to research published in *The Lancet*, each person should eat no more than 300g of meat (the equivalent of three chicken breasts) every week by 2050¹⁷.

Granted, this figure is unrealistically low for most, as substitutes like lab-grown meat have yet to enter the mainstream diet. However, it still pays to cut back on meat as much as possible.

To do so, we can avoid over-ordering at restaurants, eat in moderation, and consume other sources of protein, such as tofu, eggs, and beans. Even a small reduction in the amount of meat consumed would reduce the volume of greenhouse gases emitted into the environment, mitigating climate change.

PURCHASING SUSTAINABLY-SOURCED SEAFOOD

Another way to do our part in protecting marine life is to consume only sustainably-sourced seafood.

According to the Marine Stewardship Council, for seafood to be sustainable, it has to meet three criteria: fisheries must maintain a healthy population of fish, minimise their impact on the marine environment, and fish in an area with responsible management¹⁸. Consuming only seafood that meets these criteria ensures that we would be able to enjoy our favourite dishes well into the future.



Labels indicating sustainable seafood¹⁹.

This might be easier said than done though, as three-quarters of seafood species are unsustainable in Singapore²⁰. However, the Singapore Food Agency has invested more than S\$60 million in aquaculture research and development to help fisheries adopt better farming practices²¹. Government policies like this, combined with our individual effort, mitigate the impact of climate change, and protect our food supply.

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