

SAVE THE FOOD FOR A BETTER FUTURE: A DISCUSSION ON FOOD WASTAGE IN MALAYSIA

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Accepted date: 30 January 2018

Published date: 15 September 2018

To cite this document:

Sulaiman, N. F. A. R., & Ahmad, A. (2018). Save The Food for A Better Future: A Discussion on Food Wastage in Malaysia. *International Journal of Law, Government and Communication*, 3(10), 12-21.

Abstract: *In 2016, the Food Aid Foundation (Food Aid) reported that Malaysian has wasted almost 15,000 tonnes of food including 3000 tonnes of edible food every day. A report shown that Malaysia's food import bill is said to be between RM35 billion and RM40 billion, which means an average income Malaysian spent about a quarter from their income on food and beverages which later gone to waste. In addition to that the contributors were also including hotels, restaurants, supermarkets and many more production households. Awareness on the food waste or food loss is quite alarming with participation from NGO's to combat the issue. However, there are no laws on regulation on food waste or food loss management in Malaysia and only a normal standard of procedure is used to dispose the food within 24 hours after its produce. The aim of this article is to discuss possible regulation in addressing the issue. The discussion will also involve comparison of laws and regulations from other countries in handling the same issue. In the end the article seeks to propose a strong guidelines and procedure in managing the food wastage in Malaysia.*

Keywords: *Food Loss, Food Wastage, Comparison to Other Countries*

Introduction

Exhibit 1

It is that month of the year again where Mr.X went to Bazaar Ramadhan¹ to buy some food for his family. He bought 3 types of malay-kueh and few other streets delicacies. After open-fast, he and his family went to the mosque to perform *Terawih*². The prayer ended around 10 o'clock at night and feeling tired, they went home and sleep. The left-overs were kept in the refrigerator. Next evening, the same is thrown in the garbage because it is not best to be consumed anymore.

Exhibit 2

Mr. Y harvested the bananas in his farm to be sold. Some of it fell off from its truck and so Mr.Y cleaned up the spoilt bananas to be thrown away. The “good” bananas were kept in a storage before it being sent out to be sold. Mr.Y will again select only the “good” bananas because the spoilt ones have no value and not fit for human consumption.

Exhibit 3

The X supermarket is doing its “house-keeping” routine³ where the workers will clean-up the markets including disposing all the unsold packed-foods and fruits. These items were dispose as it is not fit for human consumption. It also has to be disposed within 24 hours to maintain the quality.

These are few examples that are in our everyday routine. The first and third exhibit is known as food waste. Meanwhile the second exhibit is known as food loss. Food waste and food loss are the key to food wastage which is a growing issue in Malaysia. A statistic in 2017 by SWCorp, a government agency dealing with solid waste management in Malaysia, stating that Malaysians generate 38,000 tonnes of waste per day where out of this, around 15,000 tonnes is food waste. In which out of that, about 60% is avoidable food waste meanwhile the 40% of it is still edible (Star2.com 2017). The amount of the food waste could have fed up to 2 million people.

A scary fact and as alarming as it sounds, Malaysia is doing its very best to deal with the issue. NGO's and the government agencies are working together planning and solving towards having a better solution. Hence, the article is discussing on the issue, factors contributing, any possible regulations and comparison of laws from other countries for a better implementation in Malaysia.

Scenario in Malaysia

In 2005, municipal solid waste (MSW) generated was 7.34 million tons and is predicted to increase to 10.9 million tons in 2020 (Alias 2010). Food waste content is about 60% of the MSW, thus the estimated amount of food waste generated in 2005 is 4.404 million tons and is estimated to increase to 6.54 million tons in 2020 (Azlina, Anees, Mahamad & Nik, 2012). From the statistics, 60% of the municipal solid waste is constituted of food waste. The number is contributed by many factors including the household, hoteliers and restaurants outlets, commercial activities such as organising events, conferences, seminars and many more.

¹ A bazaar is a permanently enclosed marketplace or street where goods and services are exchanged or sold. A bazaar Ramadhan is a market where foods and other delicacies are sold during fasting month.

² refers to extra prayers performed by Muslims at night in the Islamic month of Ramadhan.

³ operations such as maintenance or record-keeping which facilitate productive work in an organization.

A number given by a study stated that Malaysians are throwing away up to 930 tonnes of unconsumed food daily (Jeremy, 2013). This is equivalent to throwing away 93,000 kg bags of rice each day (Aruna, 2011). The number is also expected to increase every year as the fact that the number was increased to double the last past four years. This has become a concern issue to the country as it is not just about wasting edible food but also affecting the economy growth in the country. A study also found that a household of five spent an average of 210 USD a month on food and that a quarter of that food was wasted during preparation, cooking and usage. Literally about 53 USD goes into the dustbin every month, which amounted to 631 USD a year. In 2012, it was reported that Malaysians produced 33,000 tonnes of solid waste daily and will exceed the projected production of 30,000 tonnes by 2020 (Siti Wahidah Abd Ghafar 2017). It is reported that Malaysian wasted about RM225.00 to the garbage every month, a total of RM2,700.00 in a year (Hazilah Gumri, 2016). The figure will highly increase especially during festive seasons.

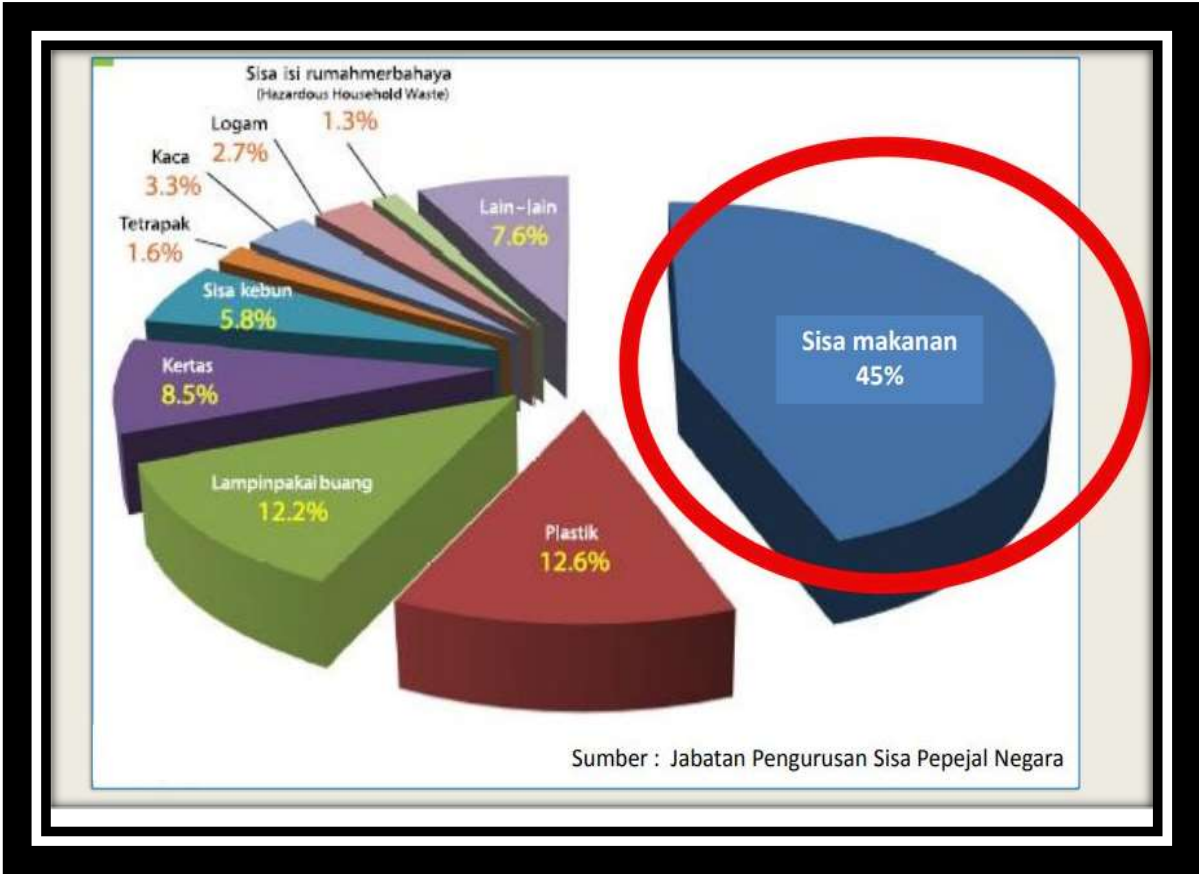


Figure 1: A statistic provided by SWCorp Malaysia in showing the number of food waste (“*sisa makanan*”) in Malaysia.

The authority is also growing their concern in the way the waste being manage as mostly is being dumped daily in unsanitary landfills. This will lead to impact of greenhouse emission and could affect the future generations as well as the environment generally. The resources of food could also be affected and such the cycle of supply from agricultural, processes, production all in all may be affected by the issue. There is a significant loss in our food supply at the moment in which a study shows that 1.3 trillion tonnes metric of food which cost to RM4.4 trillion every year globally, due to the failure of management of food (MS Suhaimi, 2016). That much of a food loss can actually be a supply up to almost 3 billion people around the world. In

Malaysia alone, the statistics shows said that we are losing 28.5% from the harvested rice costs of RM918 million. Meanwhile, we are losing about 20%-50% of harvested fruits and vegetables during the process of food management.



Figure 2: A statistic by SWCorp Malaysia in showing the comparison of food waste by countries.

The Government agencies and NGO's has worked to solve the matter. One for example, Food Aid Foundation has set up a MY Save Food Network in which they collect unsold food daily from the Bazaar Ramadhan to serve to the needy. Having said that, the concern is still there and the issue has to be tackled to the most definite solution. All citizen must keep in mind that the food waste issue is not only associated with social, economic, environmental aspects, but it is also an ethical problem, that needs to be seriously considered (Thi, Lin, & Kumar, 2016). Thus, reducing food waste has attracted a growing public attention at the international, regional, and national levels (Liu et al., 2016).

Although there are laws to solve the issue, but it is lacking in enforcement and implementation. Frankly, the only way to solve the problem is to reduce the limit of food waste itself however, with minimal awareness from the society in the issue, this is hard to be realise. Perhaps, it is also best to look into other methods to overcome the food waste such as recycle it to a better usage for the environment. This will need an efficient technology equipment and sufficient funding to conduct the treatment of food waste.

The Law in Malaysia

In Malaysia, food wastage management is being dealt by the National Solid Waste Management Department ("the Department") under the Ministry of Urban Wellbeing, Housing and Local Government. Among others the department is carrying out its function to propose policies, plans and strategies in respect of solid waste and public cleansing management, to formulate plans for solid waste management including location, type and size of new treatment facilities, coverage areas of solid waste management facilities, the solid waste management schemes to supply controlled solid waste to the solid waste management facilities and the time-scale for

the implementation of the plans; to set standards, specifications and codes of practice relating to any aspect of solid waste management services and public cleansing management services, to exercise regulatory function specified in Act 672 and any regulation made under the Act, to grant licences and approval under Act 672 and to carry out such other activities for the purpose of carrying the implementation of the Act⁴. This powers are given and govern under Solid Waste and Public Cleansing Management Act 2007, Solid Waste Public Cleansing Management Corporation Act 2007, Local Government (Amendment) Act 2007, Street, Drainage and Building (Amendment) Act 2007 and Town and Country Planning (Amendment) Act 2007.

How does food waste and food loss fall under the department's jurisdiction? The Solid Waste and Public Cleansing Management Act 2007 ("the Act") was implemented to regulate the management of controlled solid waste and public cleansing for the purpose of maintaining proper sanitation and for any matters incidental thereto⁵. Under the Act, solid waste includes- (a) any scrap material or other unwanted surplus substance or rejected products arising from the application of any process; (b) any substance required to be disposed of as being broken, worn out, contaminated or otherwise spoiled; or (c) any other material that according to this Act or any other written law is required by the authority to be disposed of, but does not include scheduled wastes as prescribed under the Environmental Quality Act 1974, sewage as defined in the Water Services Industry Act 2006 or radioactive waste as defined in the Atomic Energy Licensing Act 1984⁶.

Meanwhile the solid waste management falls under the category "solid waste management facilities" means any land, fixed or mobile plant and systems incorporating structures, equipment used or intended to be used for the handling, storage, separation, transport, transfer, processing, recycling, treatment and disposal of controlled solid waste and includes transfer stations, disposal sites, sanitary landfill, incinerators and other thermal treatment plants, recycling plants and composting plants⁷. The Act also further defines on household solid waste⁸ and commercial solid waste⁹.

Having said that, the function of the Act is limited to only the dysfunctional of the management of the solid waste. Currently, the Act is only in action when a corporation has breached the laws provided. Not individual per se. Even so, in the case of *Pendakwa Raya Iwn L & K Bera Construction Sdn Bhd*¹⁰, the Sessions Court in Temerloh has dismissed a charge made under Section 2 of the Act. The court highlighted on the weaknesses of the Act in which the court stated that;

"So at the end of the prosecution's case what is ahead of this, apart from the exhibition 9A and 98, is only Section 2 of the Solid Waste and Public Cleansing Management Act 2007 which defines "solid waste?", "Solid waste construction"? and "controlled solid waste? to explain whether the solid waste involved in this case is solid waste construction. This court has examined the

⁴ <http://www.swcorp.gov.my/index.php/en/>

⁵ Solid Waste and Public Cleansing Management Act 2007

⁶ Ibid.

⁷ Ibid.

⁸ "household solid waste" means any solid waste generated by a household, and of a kind that is ordinarily generated or produced by any premises when occupied as a dwelling house, and includes garden waste"

⁹ "commercial solid waste" means any solid waste generated from any commercial activity"

¹⁰ [2017] MLJU 1851

entire provision in Act 672 and found that there was no provision regarding the requirements of the samples to be analyzed, no provision for the envelope or specimen was sent to the chemical lab or competent lab for the purpose of concluding analysis, experiments and discoveries about the materials / samples as in the case of the Dangerous Drugs Act, the Environmental Quality Act and so forth. Therefore, without the conclusive find / findings about the status of samples / exhibits P9A and P9B it is difficult for this court to make the P9A and P9B finding that SP12 collected on 02.12.2015 at two different locations as in the description swearing, is actually "a solid waste that is solid waste construction? especially in the Act 672 itself. Respectfully, there is no specific provision that allows this court to make an inference or prescription to make a discovery on the exhibit..."¹¹

The Act comprises of regulations to regulate on the management of solid waste and public cleansing. It does not however, has the jurisdiction in controlling or limiting "the solid waste". The Act will only be in action if there is dysfunctional of management of solid waste in one place or a commercial centre.

There is no action yet be taken against any individual or a commercial centre whom caused the food waste or food loss.

In any cases may there be, the offences against disposal of solid waste could be handled and tackled strictly under the Environmental Quality Act 1975. One example of a case, *Malaysian Vermicelli Manufacturers (Melaka) Sdn. Bhd. v Pendakwa Raya*¹², in which the court has on 13.1.2000 in the Malacca Sessions Court convicted and sentenced the accused to a fine of RM75,000/- in default, a year imprisonment on a charge of discharging effluent into inland waters (Malacca river) contrary to Regulation 8(1)(b) of the Environmental Quality (Sewage and Industrial Effluents) Regulations (the Regulations) without a licence, which was an offence under section 25 (1) of the Environmental Quality Act 1975 (EQA) punishable under section 25(3) of the same Act.

Still, this will not be sufficient enough to tackle the whole situation of saving the food. The issue on food waste contributed by any household, supermarkets, restaurants were never discussed or have there been any laws impose on them. This issue on the wastage of food itself was not discuss in any Act. As such, the act of food waste is not wrong per se, it only becomes more to a moral obligation not to waste any food.

A further view on this should be compare to other countries. France for example, has lead the world to become the first country in implementing a law to ban the supermarkets from throwing away or destroying unsold food, forcing them to donate the food instead to charity. The law which was implemented and in force in 2016 and has a positive feedback on the numbers of food loss and food waste in their country. The penalty against the law is fines of up to €75,000 (about RM370,000.00) or two years' imprisonment for supermarkets which defaulted with the law. Italy has passed into law a raft of new measures to try to reduce the mountain of food wasted in the country each year. the law is forcing the retailers to donate the food loss in one simple form every month. Farmers will be able to donate their unsold produce

¹¹ Judgment by Judge Ahmad Zamzani Mohd Zain H

¹² [2001] MLJU 359

to charities without incurring costs. In October 19 to 21, 2017, Milan has signed up a pact called Milan Urban Food Policy Pact (MUFPP) at its 3rd Annual gathering. Launched in 2015, the MUFPP became the first international protocol to focus on sustainable urban food policies. The pact “is proving to be an extraordinary means to promote collaboration among cities on food policies and sustainability”.

Meanwhile, back in Malaysia, the Department however, after having facing difficulties and backlash from the society on food waste and food loss, has taken few strategic planning to curb the matter. For example, in 2010 the Government has launched their collaboration with Japan on Collaboration Project between the Ministry of Housing and Local Government Malaysia (MHLG) and Ministry of the Environment Japan (MOEJ) where among other the objectives of the project were to study the good practices of food waste management from Japanese experiences, in terms of the technical and legal perspectives and also to develop a National Strategic Plan for Food Waste Management in Malaysia. The project however, only focuses on recyclable materials.

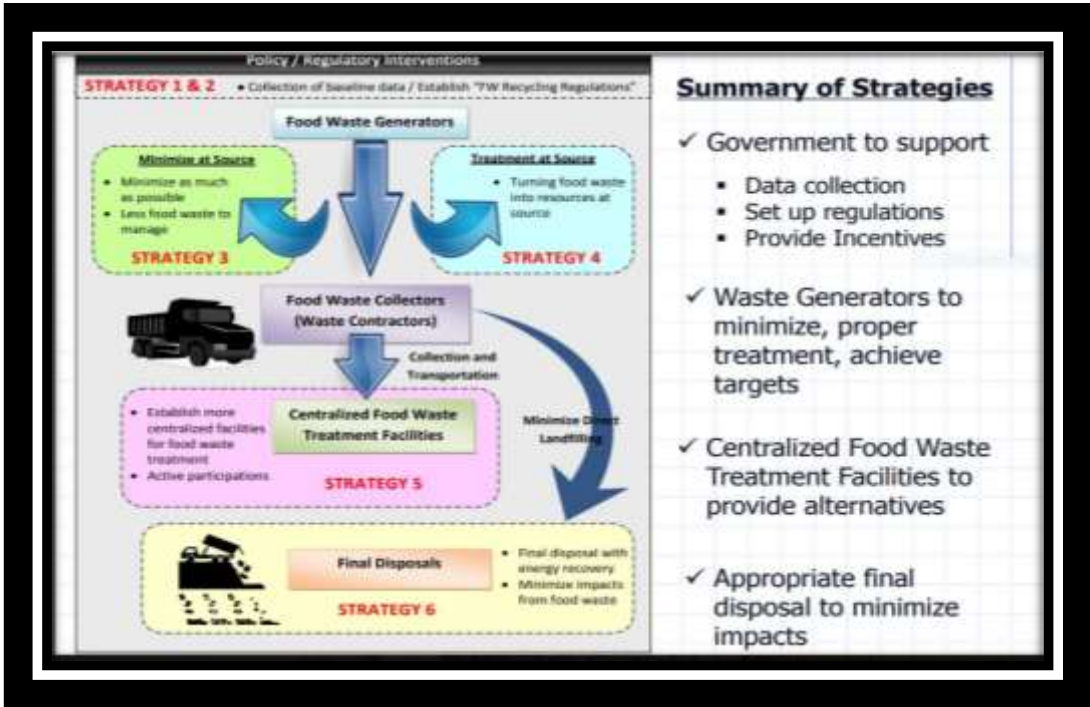


Figure 3: The strategies set in the Collaboration Project between the Ministry of Housing and Local Government Malaysia (MHLG) and Ministry of the Environment Japan (MOEJ)

Only good thing about the project was that the project has introduced the concept on 3R-Reduce, Reuse and Recycle in which the concept assists to cut down on the amount of waste we throw away. They conserve natural resources, landfill space and energy. Plus, the 3R's save land and money communities must use to dispose of waste in landfills. The concept leads inspire more independent planning to reduce food waste including MYSave Food Programme in which The Malaysian Agricultural Research and Development Institute (MARDI) and the Ministry of Agriculture and Agro-based Industry (MOA) are the coordinators of the MYSavefood program, which promoted the reduction of food loss and food waste in Malaysia. There are many stakeholders participated in this network as many realized the importance of the initiative. The network constantly updated information from local and international sources on ways of

reducing food loss and food waste and advocating the voluntary approach through awareness, persuasion and education, appealing to public and stakeholders in the food and beverages industry (Malaysia Kini 2016).

Reducing food waste
What we can do today

Malaysians generate about **38,000** tonnes of waste per day.

Around **15,000** tonnes of this is food waste.

About **8,000** tonnes or nearly 60% is avoidable food waste.

Out of this, **3,000** tonnes are still edible.

How to avoid food waste?

When shopping:

- **Plan meals**, use grocery lists, and avoid impulse buys.
- **Buy exactly what you need.** For example, if a recipe calls for two carrots, don't buy a whole bag.
- **Set a budget.**
- **Bring a container.** This will prevent you from buying more food than you can carry.

At home:

- **Practise FIFO (First In, First Out).** When unpacking groceries, move older products to the front and put new products in the back.
- **Take stock.** Note upcoming expiration dates on foods you already have at home, and plan meals around the products that are closest to their expiration.
- **Designate one dinner each week as a "use-it-up" night.** Instead of cooking a new meal, look around in the cupboards and fridge for leftovers and other food that might otherwise get overlooked.
- **Use it all.** Use every piece of whatever food you're cooking with, whenever possible.
- **Donate** what you won't use. Give edible, safe food to food banks or feed stray animals.

During mealtime:

- **Start with less food** on your plate.
- **Split the dish** when eating out if the portion is too much for you.
- **Take leftovers home.**

Source: Solid Waste Corporation Management (SWCorp) and www.greastist.com

©The Star Graphics

Figure 4: A concept of 3R by MYSave Food Network (source: SWCorp)

Another way to tackle the food waste issue, is by turning it into something which can benefited the environment. SIRIM for example, is looking into projects in turning the food waste to generate source of energy. SIRIM has developed an Anaerobic Digestion System to generate energy by using food waste collected from participating food courts¹³. The Group Strategic Planning vice president Goay Peck Sim, says that the same has been successfully implemented in Peninsular Malaysia. This is believed will promote a better environment-friendly source of energy. Research shows that there are other potential alternatives to combat food waste. Food wastes of vegetables and fruits may be transform to organic fertilizers. Composting and recycling food waste is part of the integrated waste management strategy that is being gradually recognized by local authorities (Imperial College, 2002). Recycling the food

¹³ <http://www.theborneopost.com/2017/10/06/sirim-to-introduce-food-waste-energy-project-to-local-councils/>

waste can provide benefits for local authorities in terms of financial, environmental and technical aspects (Tan Lih Min, 2015). Also, food waste may be converted to potential biogas generation through anaerobic digestion (Poh Ying Hoo, 2017). These alternatives have to be taken into account to test the outcome in handling food waste. Although these are still ongoing projects, this has proven that the awareness to curb the issue of food wastage is being handled in every aspect.

Of course, transforming or recycling the food waste will be a challenge to the authority especially in providing financial aid and sufficient technology. Also, there will be lots of research and experiments in which these needs financial aids. But the most difficult challenge to face is to educate the society in changing their social habits which already in their blood. It is always a challenge to make a source of separating and recycling the food waste as a habit (YiingChiee Moh, 2016). But small little step has to be taken and it has to starts now to have a better environment in the future.

Conclusion

Malaysia is very famous for her local delicacies, in fact each state has its own signature and very proud of their own delicacies. Having said that, we also must understand that the pleasure is not to be taken lightly. Everyone must be encouraged and educate on how important it is to appreciate and to have a better way to manage the food. We cannot just wait for the Government or others NGO's to act on our behalf. It is important to make the society has to understand the concept of saving food instead of wasting it. Also, it is important to make the society understands that the waste of the food has to be managed properly for a betterment of the environment that we lived in. Media has to play their utmost role as the society nowadays rely on the medias for information and advice. We also have to look into other potential alternatives apart from implementation of laws to curb the issue. Transforming the waste to something that can benefit the environment is also a possible solution that the government and other private agencies to look into. Perhaps, a better role from celebrities can help further to educate the society in saving food. Malaysia can also take other countries as the model in implementing laws. In fact, some restaurant in Germany for examples will fine their customers for not finishing their food in educating them to be more careful in their food orders. The fine of course is shown when the customers have to pay more instead of what they have ordered. More serious action has to be taken in order to save food for the betterment of the environment.

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