

## ***RAISING GEN Z'S AWARENESS OF FOOD WASTE MANAGEMENT ISSUE***

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### ***Abstract***

*Food waste management is still an unsolved problem in Indonesia, given that public awareness of this is still relatively low. The management of food waste that is not good will have an impact on the preservation of nature and the environment. Gen Z, which is hoped to be the catalyst of the change, is encouraged to understand this issue. In order to raise the awareness of Gen Z on this issue, a webinar was held by a team of lecturers together with a student organization called UMN ECO. Three perspectives are presented: an academician, a food bank organization Garda Pangan representative, and an Instagram eco influencer. A total of 633 university students coming from 16 universities joined the event. The evaluation shows that the students are mostly inspired by this event and eager to know more about food waste management.*

**Keywords:** *food waste management, environmental communication, sustainability*

### **INTRODUCTION**

Food waste management is still a major environmental problem considering the large amount of food waste produced in the world, where the amount can reach a third of the amount of food produced each year (Jamaludin, Mohamed, & Noorashid, 2020). Gustavsson et al. define food waste as food that is discarded even though it is fit for human consumption (Fox, et al., 2017). Food waste, according to the European Commission, is classified into three categories, namely food losses, i.e. food products are lost during the production phase; unavoidable food waste refers to food products that are lost during the consumption phase; and avoidable food waste, namely products that can be eaten but are lost during the consumption phase (Thi, Kumar, & Lin, 2015).

Food waste is a global problem affecting all countries worldwide (Karunasena, Ananda, & Pearson, 2021). Problems related to food waste, especially in developing countries, become a threat to sustainable development and food waste management systems (Thi, Kumar, & Lin, 2015).

In Indonesia, food waste management has not become a popular thing, even though the level of urgency of this problem is relatively high. Consumption patterns in Indonesia have the potential to produce large amounts of food waste, but the level of awareness that food waste must be managed is still low (Elmada, Ariestya, Lestari, Lolita, & Widjono, 2020).

Another study stated that in Indonesia, 62% of respondents in the study were never aware of their food waste, 20% of respondents were aware of the threat of food waste but chose to ignore the

dangers, and only 18% of respondents were aware of the problem of food waste and took action to manage waste. food (Susilo, de Leon, Putranto, & Hartati, 2021). Other specific data related to public awareness of food waste in Generation Z in Tangerang, Indonesia, mention a number that is not much different. A total of 54.10% of respondents in the study were aware of the food waste problem and tried to minimize their food waste, while 45.90% of respondents were not aware of the problem of food waste (Lemy, Rahardja, & Kilya, 2020).

Efforts to reduce food waste continue to be carried out by various parties. Karunasena, Ananda, & Pearson say that young consumers with a long future are often the most critical group for establishing and maintaining social norms regarding food waste reduction. Even so, interesting findings from the study of Karunasena, Ananda, & Pearson (2021) say that it is precisely the tendency to waste more food in the younger generation. This is due to the younger generation's lack of skills to manage food, from how to shop effectively, store food correctly and for a long time, and re-cook leftover food that is still edible.

However, other studies have shown that Generation Z takes the challenges of climate change, which is related to food waste, seriously (Kymäläinen, Seisto, & Malila, 2021). Karunasena, Ananda, & Pearson stated that disseminating messages related to reducing food waste is highly recommended to target young consumers and communicate through various channels that can touch them.

## METHODS

To increase public awareness, especially Generation Z, regarding the issue of food waste management, a series of activities were initiated by the Communication Studies Lecturer Team at Multimedia Nusantara University in collaboration with UMN ECO. This student organization focuses on environmental issues.



Figure 1. Poster of The Event

The series of activities began with a Digitalization for Food Waste Management webinar. This event focuses on the issue of food waste management, with a specific target audience of UMN students and is also open to the Gen Z community in general.

Three speakers speaking in this webinar come from different backgrounds. This is expected to provide a broader perspective for Gen Z, and if using the penta-helix approach, then at least three parties will be represented in this webinar.

The first speaker was Angga Ariestya, a Lecturer from Universitas Multimedia Nusantara who is active in Tri Dharma with the theme of environmental communication and sustainability, and provides an academic perspective regarding Gen Z's awareness of environmental issues. From an academic perspective, some of the things that will be discussed are the latest research and findings related to the level of public awareness regarding the management of food waste, especially in the digital world, that has the potential to be a driving force for the community, especially Generation Z, to be able to take part in environmental conservation.

Next is Dedhy Trunoyudho, Initiator of Garda Pangan, a food bank startup aiming to become a coordinating centre for surplus and potentially wasted food. From a practical perspective, they will explain the facts on the ground that they have encountered in the management of food waste and what can be done regarding the management of food waste by the community, especially Gen Z.

The third speaker is Mayang Manguri Rahayu, an Influencer on environmental issues which is quite active on social media. From the perspective of an influencer, it will be explained more in the direction of real-life inspirational stories regarding what reasons made her interested in this issue and how it moved her to be able to do something, especially in the issue of food waste management, as well as to show the public that this is things that are close to our daily lives.

In addition, this event was also moderated by Cinthia Kusuma Rani, ambassador of the Ministry of Environment and Forestry of the Republic of Indonesia and Miss Earth Indonesia 2019. This strengthened the positioning that this program raised environmental issues by presenting ambassadors who were also close to Gen Z as representatives of that generation.

## **RESULTS**

This event was held online on September 13, 2021, and was attended by 633 participants who were students, in accordance with the main target of this event, namely Generation Z. Apart from Multimedia Nusantara University, which was the host of this event, universities that also participated became participants were Macquarie University, NAFA, University of Indonesia, Gadjah Mada University, Bandung Institute of Technology, UNIKA Atma Jaya Jakarta, Andalas University, Bina Nusantara University, Esa Unggul University, Lampung University, Muhammadiyah University Magelang, Udayana University, Tarumanegara University, Pelita Harapan University, and Prasetya Mulia University.

The presentation was opened from a practical perspective by Dedy Trunoyudho, the initiator of Garda Pangan, a start-up food bank based in Surabaya. Dedy opened with the fact that it turns out that

Indonesia is one of the world's largest producers of food waste based on the Food Sustainability Index published in 2018 by The Economist Intelligence Unit. A further fact is that food waste produces 21 times more dangerous methane gas than carbon dioxide gas. Dedy explained that behind the number of food waste produced, there are 19.4 million people in Indonesia who are still hungry, according to FAO.

Next, Dedy explained how Garda Pangan works: collection, sorting and packing, re-servable food distribution, and organic scrap distribution. In the collection stage, Garda Pangan collects from the hospitality industry, such as hotels, factories, and food service businesses, such as restaurants. The next stage is sorting and packing, where the organization will carry out quality checks, selection, repackaging if needed, and mobilizing food. The third activity is re-servable food distribution, where food that is still edible is distributed to underprivileged communities. Furthermore, finally, organic scrap distribution is the delivery of food waste that can no longer be processed to black-soldier farms to produce high-protein larvae and manufacture fertilizer through compost facilities. In addition, Garda Pangan also collects agricultural waste products that are no longer of economic value. Everything Garda Pangan does aim to reduce food waste as much as possible in the previously mentioned ways.

The following presentation was given from an academic perspective by Angga Arestya, a Communication Studies Lecturer focusing on environmental communication. The presentation begins with data related to facts about food waste in Indonesia from 2000-2019. According to the Food Lost and Waste study, which is a collaboration between the Ministry of National Development Planning/Bappenas and Waste4Change and supported by the World Resources Institute (WRI) Indonesia and the United Kingdom Foreign, Commonwealth, and Development Office (UKFCDO) in 2021, the generation of Food Lost Waste in Indonesia reached 23 -48 million tons/year, causing economic losses of 213-551 trillion rupiah/year, and producing GHG emissions of 1,702.9 Megatons of CO<sub>2</sub> per year. Still, according to the same source, the loss of energy content lost due to Food Lost Waste is estimated to be equivalent to the food portion of 61 million - 125 million people per year. Furthermore, Angga provides an overview of how waste management in Indonesia is based on existing data and relates that the problem of waste management is a communication problem, which is also related to perceptions, lifestyles and habits at the internal level. At the external level, waste management issues are also related to information and knowledge circulating in the community, innovation and technology, policies, costs, and institutions from various parties.

In his communication regarding food waste management, Angga said that information about food waste management is usually obtained from friends, neighbours, and the surrounding environment. Unfortunately, environmental issues in general and food waste management issues in particular in various media are outmatched by other more prevalent issues. Furthermore, Angga said that digital communication is interconnected with sustainability issues; one of the frameworks that can be used is digital green storytelling, where information related to sustainability issues can be communicated more tellingly using available digital channels. Angga's research also found that green storytelling can affect environmental awareness and increase the purchase of products for environmental sustainability. In addition, he also presented data that Generation Z has begun to express their willingness to spend more money on more environmentally friendly products, even though they are

not as strong financially as the previous generation. This can be a lesson regarding how environmental communication needs to be done through various channels, primarily digital, to reach Generation Z.

The third speaker, Mayang Manguri Rahayu, is an influencer on social media on issues related to the environment, including one related to sustainable eating patterns and food waste management. Mayang said that wasted food is the same as wasted money and nutrients. This can result in an increase in methane which is the cause of global warming, unbalanced distribution of nutrients, and a decrease in the usability of food. Food waste that is not managed correctly can also cause various types of potential diseases, such as those carried by flies, rats, and those that are toxic to humans. Mayang explained that food waste management could be started from home, such as extending the usability of food, increasing nutritional knowledge of 'dregs' such as fruit skins/seeds/vegetable tubers, and extending the life of the food ingredients themselves. Food redistribution is also one solution to overcome the potential for wasted food due to too much quantity. In addition, food waste can also be managed with home composting and bio-pori as the last step in managing food waste. Mayang then introduced the term long life kitchen where the planning could be through using the "ISI PIRINGKU" guide from the Ministry of Health as a reference, planning what to eat and cook, financial planning, planning what ingredients to use, time planning which is also related to the preparation of food and seasonings, as well as planning food storage.

Mayang then gave many practical examples in her daily life on how to reduce food waste, starting with herself and her kitchen. One of the reasons for the need for a long-lived kitchen is that the potential for food waste will be even more significant if there is no planning from the kitchen regarding suitable personal or family needs. She also gave one example of long-life kitchen management, even the manufacture of eco-enzymes from food waste which can then function as a natural home or kitchen cleaner.

At the end of the webinar, the committee provided an evaluation link to see how participants assessed the public awareness-raising event regarding this issue. Several questions about hosting the webinar related to this food waste issue were asked. The following is a summary of the answers given on the evaluation sheet.

Regarding the dissemination of information related to activities, considering that the committee also cooperates with universities to disseminate information, e-mails from universities related to this event are still the main channel for disseminating information related to the event. Furthermore, recommendations from friends and closest circle are words of mouth become the second channel for disseminating event information. UMN ECO's official social media ranks third for information dissemination channels, namely through Instagram and Official Line Accounts.

Participants can answer several open-ended questions. First, related to the reasons for their interest in participating in this event. Participants considered this event interesting for various reasons, ranging from raising topics rarely discussed attractive designs, the UMN ECO concept, which was also engaging, the desire to restore the environment, speakers whose material they wanted to know, and so on. In addition, many also said that they specifically wanted to understand the problems related to food waste management.

Their impression of this event is also good. This can be seen from their answers to open questions regarding the impression and message of the webinars. Participants said that this event was informative, motivating, and insightful. They also felt that the material presented by the speakers was very easy to understand, and the topics raised were unique.

The participants of the webinar seemed very enthusiastic regarding the issue of food waste management. This can be seen from the data that 97.6% of participants said that if it were to be held again, they would be interested in participating in a similar event that discusses food waste management. This shows that Generation Z's interest in this issue is quite significant, and there is potential for them to become agents of change in the issue of food waste management.

## DISCUSSION

If viewed further, this activity is a form of collaboration in environmental communication efforts, particularly related to food waste management. Elmada et al. (2020) said that there needs to be a collaboration between representatives from NGOs, the government, social media activists, and the right social media influencers to be able to communicate about the issue of food waste management so that it has a broader reach. In sustainable development, multi-stakeholder collaboration, often referred to as the penta-helix, is often echoed. The penta-helix model prioritizes integration between 5 sectors that coordinate with each other: government, academia, community and environmental supervisory institutions, industry, and the community itself (Amrial, Adrian, & Muhamad, 2017). In this webinar activity which is also a discussion forum, at least three parties have collaborated, namely Angga Arestya as an academic representative, Dedhy Trunoyudho from Garda Pangan and the UMN ECO organization as part of the community and environmental supervisory institution, and Mayang Manguri Rahayu, Cinthia K. Rani and also a participant who became part of the community that is the main target of the message in this webinar. In addition, the media partner conducted with several media became the fourth collaboration. Furthermore, the government needs to be involved in the forum so that there can be a solution from the government that can help deal with the problem of food waste.

Elmada et al. (2020) also said that efforts should be made to make the issue of food waste management more contemporary. Shee said the message must be convincingly disseminated to the community so that people are willing and able to manage their food waste. This has been done through the presence of influencer Mayang Manguri Rahayu who said that waste management solutions could come from their respective kitchens by practising long-life kitchens.

Through the evaluation of this event, it was found that according to the Generation Z participants, the issue of food waste management is interesting to them. They are also interested if there will be a follow-up event related to this. This further confirms research that Generation Z sees environmental issues, including food waste management, as serious matters they need to pay attention to (Kymäläinen, Seisto, & Malila, 2021). Various parties can then follow this interest to assist Generation Z in managing food waste. As stated by Jamaludin, Mohamed, & Noorashid (2020), there needs to be a bond for higher education institutions to form awareness in Generation Z to be wiser in

managing food to avoid the accumulation of food waste and other campaigns to mobilize Generation Z in this issue.

## CONCLUSION

Collaboration between many parties is the answer to the complexity of environmental communication, especially regarding the issue of food waste management. The approach taken through this event, with the involvement of the UMN ECO student organization in collaboration with lecturers, was able to present a large audience and exceed the previously set targets. Multi-stakeholder collaboration must continue and strive to raise awareness of Generation Z regarding food waste management and motivate them to participate. Clear messages through the proper digital channels are still the main criteria for achieving the goal of reaching Generation Z in the issue of food waste management.

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