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Danone-Aqua Circular Economy Performance in Maximizing Waste Plastic Value

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Abstract

This study discusses the economic performance of the Danone-AQUA circular in maximizing the value of plastic waste in terms of proper plastic waste sorting management or circular packaging, water and carbon circular and business circular. Economy Circular was proposed because of its increasing popularity in the midst of the world's problem with global carbon reduction. The selection of Danone-AQUA Economy Circular is the right way to find out how significant the efforts of non-government organizations are in creating a sustainable economy and environment. This study analyses the performance of Danone-AQUA's circular economy through six circular economy dimensions in managing and maximizing the value of plastic waste in a positive way to reduce the impact of plastic waste workers in Indonesia. This study uses a systematic literature review and adopts a research design to extract research data. The data comes from interviews with Packaging Circularity Senior Manager at Danone, Indonesia. The economic circular performance of Danone-AQUA in maximizing the value of plastic waste contributes to the reduction of plastic bottle packaging waste. The study proves that the impact of circular economy performance in maximizing the value of plastic waste is positive because it increases the function of plastic bottle packaging waste and has value again and reduces the negative impact of plastic waste on the environment. In achieving the performance of maximizing the value of plastic waste, Danone-AQUA applies six circular economy dimensions which are concentrated on three policies, namely packaging circular, water and carbon circular and business circular.

Key words : Danone-Aqua, Circylar Economy, Value, Platic Waste

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INTRODUCTION

Good management of natural resources and human resources has become challenges for global community, especially in environmentally sustainable development. In connection with that, the world is currently facing environmental challenges caused by climate change, clean water, ocean health and biodiversity. Based on United Nations Environment Programme (UNEP) report, environmental issues have become one of the problems facing by

the world along with the increase of political and public recognition through intergovernmental panel discussions at the 2021 United Nations Climate Change Conference (COP26) in Glasgow (UNEP, 2021). Furthermore, climate action data based on COP26 showed that there was an increase in the global average temperature above 20C which caused the world to seek policies to limit the increase in temperature up to 1.50C (Moosmann, et all, 2021). In other words, the environmental challenges facing by the world are long-term problems, but need to be considered as medium-term problems that require short-term action.

Strong policies are needed along with the development of technology to address environmental problems. In Indonesia, complex environmental problems are reviewed through cause-and-effect relationships and the systematic resolution of environmental problems (Ministry of Environment and Forestry, 2022). By referring to the DPSIR (Driving Forces, Pressure, State, Impact and Response) model adopted from the United Nations Environment Program, Indonesian government uses an approach that is able to describe and communicate environmental problems. The DPSIR model, which describes the causal relationship in sustainable economic, environmental and social development, is considered relevant to address environmental issues in Indonesia. Since 2020, Indonesia has raised the thematic issue of plastic waste and its relation to marine and coastal biodiversity (Ministry of Environment and Forestry, 2020). Moreover, in 2021, the government focused on environmental recovery which became an important part of economic development and recovery. Followed by using the thematic theme “Only One Earth” in 2022, Indonesian government also invites the world community to raise awareness about the importance of nature and reforestation. It becomes a synthesis of priority environmental issues that become the basis for determining national policies referring to environmental conditions in Indonesia.

In addition, based on The World Bank data in 2021, Indonesia is the second largest contributor of plastic waste dumped into the sea with approximately 7.8 million tons of plastic waste and 4.9 million tons of plastic waste that is not managed or disposed of in open dumps (The World Bank, 2021). This is supported by the data from the Indonesian Plastic Industry Association (INAPLAS) and Central Bureau of Statistics which shows that the presence of plastic waste in Indonesia reaches 64 million tons per year. In fact, it is not only experienced by Indonesia, but also the global community. Based on these environmental issues, the United Nations has implemented policy in the form of single-use plastics as an environmental conservation campaign on World Environment Day. Since 2016, the United Nations has seriously implemented policies in order to defeat plastic pollution by encouraging changes in consumption patterns and both national and international related to environmental policies (Ministry of Environment and Forestry, 2020). Through this environmental campaign, it is hoped that it would be able to invite the global community to be aware of the environmental problems that the world is currently facing.

Besides countries which have policies to maximize resources, there are also Non-Governmental Organizations or Multi-National Companies (MNCs) which are also committed to improve the quality of the environment and public health through the implementation of a circular economy. One of the MNCs that pays great attention to economic and environmental sustainability is Danone-AQUA. Danone-AQUA has been committed to maximizing resource mana-

gement through sorting plastic waste. As one of the MNCs which demonstrates its commitment in all countries to protect supply chains since 1973, Danone-AQUA strives to provide healthy hydration products for consumers (Danone, 2020). Through its vision of "One Planet One Health", Danone-AQUA wants to achieve the Sustainable Development Goals designed by the United Nations until 2030. Moreover, as a form of its commitment to overcome the problem of plastic waste, Danone-AQUA carried out *#BijakBerplastik* campaign through innovation of environmentally friendly products, providing consumer education and developing waste collection infrastructure (Danone, 2019).

Danone-AQUA strives to improve natural resource management through the implementation of innovative solutions that contribute to sustainable development (Danone, 2021). With operational management through protecting water resources, reducing CO_2, optimizing packaging and collecting packaging waste, Danone-AQUA invites not only stakeholders and employees, but also the global community which are able to make a sustainable contribution to environmental problems. Development of governance by paying attention to the quality of environmental elements through a circular economy approach, indirectly increases public awareness of the concept of a green economy to achieve sustainable develop ment. Danone-AQUA initiates environmen tal management measures by investing in eco-innovation that provides long-term benefits and innovation through a policy of transitioning from plastic packaging to linear packaging. In other words, Danone-AQUA focuses on maximizing the value of plastic waste through its policies in circular packaging water and carbon circular and business circular. Therefore, waste management requires significant changes in the structure of the waste management system and this also depends on the quality of human resources whi-ch can support the level productivity of natural resources.

Environmental problems have an impact on the management of environmental assets and it is necessary to implement the concept of circular economy as an effort to increase sustainable quality economic growth to protect natural resources. In this study, circular economy performance is used to show Danone-AQUA's efforts to maximize plastic waste management. This study, then, uses circular economy performance and Danone-AQUA plastic waste management practices as the study variables. Based on the variables, a noverlty that is obtained is the circular economy performance of Danone-AQUA in maximizing the value of plastic waste which is influenced by their plastic waste management practices. Thus, to analyse this, the researchers highlighted the importance of packaging management policies as an effort conducted by Danone-AQUA to meet the target of sustainable environmental development through a circular economy.

METHOD

This study discusses the economic performance of Danone-Aqua circular in maximizing the value of plastic waste by adopting a qualitative approach which is carried out in the stages of literature review to determine the analytical framework, providing a conceptual framework to integrate and evaluate the potential and synergism of the concepts used, validate the proposed model with collect qualitative data that supports research based on focus and unstructured interviews with Packaging Circularity Senior Manager at Danone Indonesia. The analysis was carried out using categories based on a literature review. This study approach uses

descriptive qualitative which aims to collect the most relevant information available in the review literature. The model analysis of this study was carried out in the form of qualitative-descriptive. Data processing perform data reduction process, data presentation and the obtainment of conclusions. Thus, data collection includes: The literature review method aims to find relevant studies. The literature review aims to collect documents, journals, books and other articles that lead to Danone-Aqua in improving its circular economy performance. The most widely used electronic databases are from leading journals. We compiled the content of this article by unstructured searches in leading databases such as Emerald, Springer Link, Taylor & Francis, Science Direct, EBSCO, Researchgate and other journal sites (Christenson, O'Kone & Farmery 2017). For the literature search we used the keywords Circular Economy or CE, and Danone-Aqua or DA. The literature review consists of the stages of determining the formulation of the problem, selection and evaluation of the study, analysis of selected articles that are considered relevant, and description of the results.

Broadly speaking, the data collection method used in this research is interviews. The in-depth interviews consisted of a number of open-ended questions. Through interviews, they dig up information directly to obtain primary data by using a series of structured questions about the policy-making process and implementation of the circular economy at Danone-Aqua. Questions were prepared before the interview started, but during the discussion process, interviewees were allowed to respond to the informant's statements to follow up on the statements of the informants which were considered important. Discussions provide a forum where more in-depth information is gathered. The reason for not using an unstructured interview approach is because it requires relevant and comprehensive responses, following a predetermined topic and staying within the parameters set by the research objectives that have been designed previously. By using structured interviews, the author can follow up on information obtained secondary or through a review so that the selected resource person validates the information obtained by the author through secondary data or literature review. Secondary data from information collected from the Danone-Aqua plastic waste management was responded to and given an in-depth explanation as proof by the Packaging Circularity Senior Manager at Danone Indonesia. This interview method allows confirmation of general information obtained by the author through secondary data, which offers important points as comparisons and attempts to validate existing data. Thus, through data analysis, various references were further reviewed to expand the research findings. Overall, the model in this study was carried out qualitatively descriptively. In processing the data the authors carry out the process of data reduction, data presentation and drawing conclusions.

RESULTS AND DISCUSSION

Danone-AQUA as the largest bottled mineral water company in Indonesia uses unique and integrated solutions to effectively tackle the problem of plastic waste. The President Director of Danone-AQUA, Conire Tap, said that the only way to achieve the government's target of reducing plastic waste was to commit to a circular economy approach. Multinational companies must be able to engage on a large scale to seek to contribute and collaborate with stakeholders. Since 2018 Danone-AQUA has initiated steps to manage plastic waste by using technology assistance as an effort to design sustainable mineral water bottles. Danone-AQUA in building a cir-

cular economy by seeking a very large public involvement. Therefore, Danone-AQUA partners with Non-Governmental Organizations by introducing a curriculum on sustainable plastic recycling in educational institutions. Danone-AQUA partnered with VICE Impact to produce a documentary educational video about the potential of plastic waste and the recycling process (Ricardo, 2022).

The main reason for Danone to maximize the value of plastic waste is to maintain the sustainability of life on earth. Danone has the principle that consumer sustainability is influenced by where the consumer is located. Danone sees that the continuity of a good and healthy consumer life is very much needed to maintain the existence of consumers. If the world community has a place full of garbage, it will look more slum so that it will create a source of disease in society. Thus, an unhealthy society will cause the purchasing power of consumers to decrease. Danone recognizes that in order to create value, production must ensure the availability of its market or its consumers, so the maximum aim of using plastic waste would be able to improve the healthy living of the community.

Plastic waste is one of the main factors that are of concern to the world community because waste is considered to interfere with human security. In 2020, the total plastic bottle packaging produced by Danone globally reached 1.5 million tons and the waste generated in 2020 reached 0.7 million tons. The waste will have a great potential to cause damage to the environment and nature. If Danone does not make a policy to reduce plastic waste from plastic bottles of mineral water produced, it will lose sales volume in its main category, namely consumers, environmental activists and anti-plastic pressure. Furthermore, if Danone stick to the linear packaging transition policy instead of circular packaging, it will have a negative impact on sales, margins and company reputation. Therefore, the priority of Danone's policy is to make plastic packaging 100% circular and to pursue the transition to a circular economy with the innovation of recycling waste instead of becoming other waste that produces pollution (Ricardo, 2022).

The Danone company is one of the mineral water companies that signed the Wrap's United Kingdom Plastics Pact which promises to make 100% of used mineral water packaging to be reused by recycling by 2025. Danone has a plan to eliminate single-use plastics with the support of 70% modern infrastructure. There are four targets for Danone-AQUA in increasing the value of plastic waste: 1). Danone determines the list of packaging that will be implemented as the main target by 2021 and takes action to eliminate plastic waste by 2050; 2). In 2025-2050, all plastic packaging is 100% reusable and processed with high standard technology to create a waste cycle that can be reused and has no impact on health; 3). In 2025-2050, the Danone company takes ambitious actions to recycle waste that is separated into two parts, namely grade A waste or plastic packaging waste which is considered not to be contaminated with other chemicals so that it can be produced into drinking water bottles again. Meanwhile, grade B packaging waste is recycled not as mineral water packaging but is used for other plastic tools such as food boxes, plastic spoons and so on or to make compost effectively using 50% plastic packaging; 4). In 2025-2050, the average content of bio-based plastic waste recycling is to measure the feasibility of plastic to be used as drinking water packaging again (Ricardo, 2022).

Danone-AQUA Indonesia has fully adopted Danone-AQUA Indonesia's top priority. Thus, the current program of Danone has a circular packaging program because plastic packaging comes with various problems for the environment so that the impact causes greatly affect Danone-AQUA's production process. Plastic as mineral water packaging is considered to make it easier to market drinking water products.

However, after the consumption of mineral water by the community, the plastic will cause new problems that must also be considered by the company. In 1993, Danone created "Aqua Peduli" programme in collaboration with various stakeholders, both from the local government and the community (Ricardo, 2022).

Cooperation with the community such as community scavenger groups to collect plastic waste. Continuously up to 2018, Danone-AQUA continued the policy with the name "*Bijak berplastik*". The policy of "*Bijak berplastik*" programme consists of three main pillars, namely: 1). Plastic waste collection: Danone-AQUA is committed to collect more plastic waste than it uses from the Indonesian environment by 2025; 2). Public education: Danone-AQUA is committed to lead a national recycling education campaign through educating by reaching 5 million children and 100 million consumers in 2025; 3). Product innovation: Danone-AQUA is committed to make all its plastic packaging 100% recyclable to increase the proportion of recycled plastic in its bottles by 50% by 2025.

Danone-AQUA's circular economy policy is based on the Triple Bottom Line (TBL) which has performance metrics: economic, social and environmental conceptualized in three pillars, namely planet, people and profit (Ricardo, 2022).

Planet, which refers to the environmental and ecological impacts of the company's business operations. Danone-AQUA's dependence on nature, namely the guarantee of water sources as the main ingredient for mineral water products, is very important to maintain the environment, air pollution remains stable so that the condition of the water used does not change due to excessive carbon on earth.

People, which refers to various social initiatives that form the Corporate Social Responsibility (CSR) strategy as a form of the company's efforts to improve the standard of living of the community as a sustainable target consumer.

Profit, namely the profit in question is not only the profit from the company but the economic impact caused by the Danone-AQUA company to the general public. Profits obtained from mineral water products produced by Danone-AQUA in addition to enjoying the mineral water provided must also enjoy other benefits such as the availability of plastic waste disposal infrastructure and so on.

"*Bijak berplastik*" aims to convey to the public that the wise use of plastic must start from the mindset of the community. In addition, Danone-AQUA also invests in the development of an integrated waste disposal site to obtain raw materials so that the plastic waste can be returned to the Danone company to be produced into mineral water packaging again if it meets the requirements as mineral water plastic packaging. However, if it does not meet requirements, the plastic waste will be produced as plastic-based goods such as plastic spoons, plastic buckets and so on. This waste classification aims to ensure that the mineral water packaging provided does not contain other chemicals that are contaminated from bottles made from other chemicals that can damage the quality of aqua mineral water. The purpose of Circular packaging is to ensure that consumer health can be maintained by ensuring that the water consumed is clean (Ricardo, 2022).

In Indonesia itself, to achieve an economy circular or sustainability standard, there are still considerable challenges, especially the existence of high-standard technology for processing waste. However, currently there are several such technologies in Indonesia, but they are still limited so that it is still quite challenging for Danone Indonesia to control and produce or recycle waste. In addition, public awareness of the use of used plastic is very minimal. Therefore, Danone-AQUA also conducts socialization and education to the public to ensure that

people know that plastic waste has value. Another value given to having awareness of plastic waste will make the environment cleaner and liveable.

The development of the Danone circular economy not only contributes to waste management in one country but also globally. Danone provides assistance to associations engaged in the management of plastic waste. Assistance from Danone centre will be channelled to Danone in various countries to support circular economy activities globally. Danone-AQUA uses the aid funds for infrastructure development and social education to be able to manage and maximize the value of waste, especially plastic bottled mineral water. Danone also cooperates with various other companies such as Coca-Cola, Pepsi and so on. Danone all over the world have the same ambition to create a zero-waste world using 100% recycled plastic by maximizing the function of plastic waste. The same thing is also done if it does not meet the requirements to be used as drinking water bottles again, it will be recycled into compost. Thus, the program runs in accordance with global Danone policies carried out by each branch of each country.

The main policy, especially the use of plastic waste to be repackaged after being recycled, is a very strict inspection process because it is to improve the quality of drinking water and maintain the health of the people who consume the drinking water. Danone centre provides guidance in achieving circular packaging called the Danone Packaging Policy as a guide to the plastic recycling cycle. Danone has a vision that by 2030, 55% plastic bottle packaging waste can be recycled. The Danone packaging policy includes the policy that the use of other packaging must not be conflicted with the food source of the local community because it can increase the selling value of the food which in turn will make it difficult for the community to meet their food needs, especially for the poor (Ricardo, 2022).

Danone developed a recycling technology that can convert Polyethylene Terephthalate (PET) plastic waste using Loop technology. Loop technology separates PET/ polyester plastics from fossil fuels by depolymerizing PET/ polyester waste. This technology enables the creation of pure quality recycled plastic that enables a circular economy. Loop technology also allows low-value or no-value waste to be recycled into high-value mineral water bottles. The use of smart or high technology creates an efficient product. The circular economy concept is one of the newest strategies to address environmental sustainability (Murray, Skene, & Haynes, 2017). This is done to overcome the scarcity of raw materials and energy and increase economic growth. Loop technology can convert plastic waste materials into reusable items (Klettner, Clarke, & Boersma, 2014). Circular economy resource efficiency is achieved through the wise use of raw materials and energy consumption at all stages of the value chain (Yuan, Bi, & Moriguichi, 2008). All of these Loop technologies are distributed to Danone's branches in every country. Danone-AQUA also has this technology to be able to maximize the use of plastic waste so that it can produce plastic bottle packaging that can still be used as mineral water packaging and avoid waste that cannot be decomposed by the environment in large quantities.

Danone is a company engaged in the production of mineral water with water as raw materials provided by nature. Furthermore, to improve the sustainability of nature, clean water can only be produced by nature that is sustainable and free of waste to ensure the cleanliness of the water so that it is not contaminated with other chemicals. Garbage is closely related to a dirty and polluted environment so that if this happens it can cause mineral water resources to not be guaranteed quality. The sustainability of the water used by the Danone company must be ensured, namely water discharge and water conserva-

tion must be of high quality. Thus, one of the efforts to maintain water flow is to plant trees so that the Danone company also carries out this program to keep the environment sustainable. First, this tree planting aims to turn off the water circular so that mineral water production can continue. Second, planting trees to ensure carbon circularity is controlled and even reduces carbon because carbon is considered a dangerous chemical if it is contaminated with water used for bottled mineral water from Danone-AQUA (Ricardo, 2022).

To be able to achieve the marketing target, Danone-AQUA must ensure the availability of water as the main resource by supporting water conservation. Under the policy "One Planet", Danone embraces the responsibility to help conserving, restore ecosystems and the water cycle and collaborates with the local sector to create an effective governance system with stakeholders. Danone has a sustainability standard program to achieve circular economy standards, which is to ensure that all components that affect the mineral water production process to consumer sustainability are the main concern. Environmental management includes water circular and carbon circular. Danone-AQUA's commitment has also ensured to the care about climate issues, reducing carbon footprint and increasing the use of renewable energy. In 2021, Danone-AQUA took action to contribute positively to environmental protection focusing on three pillars: circular economy, water conservation and climate change. Not a few plastic waste causes contamination of water sources in many areas because the quantity of production and consumption of Aqua mineral water in Indonesia is very large. Thus, making a circular economic strategy causes efforts to maximize plastic waste to be valued again so that public awareness of collecting plastic bottle packaging is greater. The amount of plastic bottle packaging waste in rivers and seas will decrease. Plastic bottle packaging waste is an environmental scourge both on land and at sea and in rivers (Ricardo, 2022).

Danone has a circular economy of business model and circular economy of product design programs. In terms of the circular economy of business, the Danone-AQUA model uses a refill drinking water program. Danone-AQUA collaborates with several partners such as in Bandung, namely PT. Sindo and PT Veolia in Sidoarjo through the provision of resources and knowledge to partner companies so that the packaging produced meets the appropriate standards for using packaging with safety food and beverage regulation standards. Danone-AQUA uses renewable energy resources with a circular economy model as an effort to create value, preserve the environment and build social capital (Bali discovery, 2021). The mineral water packaging collection program is not only for mineral water packaging with the Aqua brand but also for various other mineral water plastic packaging. This is done considering that mineral water packaging in the community is not only from Aqua but also many other brands which will definitely increase the amount of waste in the community if the company does not follow up (Ricardo, 2022).

The Danone-AQUA initiate to think about the ambition, design and reuse plastics, to create a circular economic path for mineral water plastic packaging in Indonesia. Danone-AQUA encourages collaborative action and makes changes to the plastic waste management system. The circular economy is a new value-creating opportunity to offer a circular economy strategy. The circular economy principle in the management of mineral water plastic waste goes beyond traditional waste management practices. The circular economy principle can emphasize improving product design and production practices aimed at repurposing existing resources to be able to create new products or new mineral water bottles from the recycled waste. Danone-

AQUA ensures the transition from a linear economy to a circular economy with a target to reduce wastage of resources.

According to Geissdoerfer et al (2017), the circular economy, which defines as a regenerative system in which resource input and waste, emission, and energy leakage, are minimized by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling. This has been done by Danone-AQUA to maximize the value of plastic waste. Packaging circular, water and carbon circular and business circular. In order to maximize the value of plastic waste, Danone-AQUA has a key resource through The Power of Aqua's Brand. Danone-AQUA as a pioneer in various aspects, cooperation and investment for the formal sector (government and informal sector as a form of strengthening the value chain of plastic bottle waste management. The Danone-AQUA collaboration includes multi-stakeholder collaboration with various stakeholders, program funding sources, business and program coverage areas wide area, research and development, structured teamwork, available human resources and global network. Meanwhile, in terms of main capabilities, Danone-AQUA has the ability to deliver circular innovations. Reaching out to Indonesian society widely, implementing zero waste to landfill in terms of operationalization of the company, as well as ensuring the security of supply of basic raw materials.

To achieve a circular economy, Danone-AQUA collaborates with several other companies to support the circular economy program by maximizing the value of plastic waste. In 2022, Danone-AQUA collaborates with Alfamart to provide a circular economy program where Alfamart is a partner of a large Aqua mineral water retail company. In addition, Alfamart's branch companies reach all regions in Indonesia so that Danone-AQUA collaborates so that education and collection of plastic packaging reaches all Indonesian people who consume Aqua mineral water. The collaboration between Danone-AQUA and Alfamart contributes to provide solutions for waste management in Indonesia. This cooperation commitment can provide a positive alternative to Indonesian waste and the Reserve Vending Machine is the result of the creativity of the nation's children. Danone-AQUA and Alfamart provide plastic bottle exchange machines and can be exchanged for AlfaGift, GoPay, Dana, LinkAja, OVO and ShopeePay points. The plastic bottle exchange program provides rewards as well as knowledge to the public that plastic bottles of mineral water can be valuable. Alfamart is the center for collecting the used plastic bottles (Ricardo, 2022).

There are positive impacts obtained by Danone-AQUA in collaboration with Alfamart in achieving a circular economy, namely, first the impact on the environment, the percentage of success in increasing environmental awareness as seen from the increasing number of plastic bottle packaging collected. The potential for plastic bottle packaging that was previously waste can be collected by the community and exchanged so that the plastic bottle recycling cycle can be reused. Second, social behaviour impact or behaviour changes, with this program the community is more aware that if it is not managed properly it will turn into garbage and will cause dirty and slum environmental issues and the third economic impact, namely Danone-AQUA, has not been able to clearly state the economic or financial impact. obtained from its collaboration with Alfamart because there are many variables to measure financial benefits because Alfamart has been working with Danone-AQUA for a long time to support the sale of mineral water. Up to this point, the collaboration with Alfamart has shown an increase in sales in several cities such as Bali and

Jakarta because they are interested in the plastic bottle exchange program (Ricardo, 2022).

In addition to Alfamart, Danone-AQUA also collaborates with Evian to redesign packaging, accelerate recycling initiatives and recover waste from nature, especially in rivers and at sea (Aqua, 2022). Danone-AQUA collaborates with many stakeholders in various regions such as in Bali, namely with EcoBali, which includes cooperation in collecting plastic waste from various villages in Bali. The waste is collected by the EcoBali community and then sent to a recycling centre for Danone-AQUA plastic bottles. To achieve education about plastic waste, we also collaborate with the MaluDong community to carry out campaigns and education to the community and schools not to throw garbage in rivers or in the sea. The program aims to prevent pollution of rivers and seas, especially coastal areas. Danone-AQUA also carries out another collaboration partner in achieving a circular economy, namely the Pesona Citra Insan Indonesia Foundation (YPCII) which is engaged in mentoring and empowering scavengers. YPCII provides education about the types of waste, provides training on economic management so that they have savings and a healthy lifestyle starting from healthy food to educate them to have health facilities such as the Social Security Administering Body (Ricardo, 2022).

Danone-AQUA's collaboration with various stakeholders aims to support every program carried out to achieve a circular economy. The circular economy policy is expected to provide education to the public as consumers but also to other companies engaged in the same field, namely bottled mineral water providers to care about the environment. This is a large-scale goal because the limitation to achieve the sustainability standard by Danone-AQUA is the large amount of plastic that is managed with limited technology. Thus, if all companies engaged in providing bottled mineral water have a circular economy policy like Danone-AQUA, they would tend to need funds that tend to be small. Managing plastic bottle packaging waste requires high-based modern technology so that the resulting bottles can be guaranteed to be reused. The Danone-AQUA circular economy policy has a positive impact on society, attracting the attention of other NGO companies and even the government.

Stakeholders involved in the circular economy policy of Danone-AQUA are not only from the environmental community or NGOs but also from the central government or local governments. The government does not provide assistance such as financial assistance to support plastic waste collection activities. The government only provides guidelines for integrated activities. However, there is direct assistance from the Lamongan local government such as assistance to build an Integrated Waste Making Site (IWMS) where the land for the construction of a IWMS is provided by the local government. In Gresik district, the local government provides full assistance by helping fund the construction of IWMS and several other facilities to support waste management. Danone-AQUA has a circular economy policy that is adapted to the policy of sustainable economic development in Indonesia (Ricardo, 2022).

Maximizing the value of plastic bottle packaging waste becomes the standard for Danone-AQUA circular economy performance. The circular economy process produces a significant component of the value of the circular economy. According Khan et al (2022) in classifying there are 24 components of a cir-cular economy: (1) a comprehensive level of utilization of industrial solid waste; (2) recycling rate of reclamation waste water; (3) Total amount of CO_2 emission; (4) Total amount of O_2 emission; (5) Waste emission level; (6) Design according to circular economy principle; (7) Total amount of waste water disposal; (8) Consumption of water per

unit of product in the main industrial sector; (9) Environmental awareness in the community; (10) Passing the level of scrap materials back into the supply chain; (11) Comprehensive level of hazardous waste disposal; (12) Product/material reuse rate; (13) Consumption of fresh water; (14) Willingness to transform to a circular econo-my model; (15) Percentage of consumption of renewable energy or clean energy; (16) Total energy saving; (17) Product/service redesign; (18) Carbo footprint level; (19) Availability of a complete list of ingredients and materials for the product; (20) Output of major mineral resources; (21) Energy consumption; (22) Total amount of industrial solid waste disposal; (23) Availability of a complete bill of solid waste for the manufacturing process; (24) Industrial solid waste recycling rate. From the 24 components above, according to the author's observations, Danone-AQUA has achieved the circular economy target.

Danone-AQUA fulfils the circular economy classification classified by Pomponi and Moncsaster (2017) regarding six dimensions for building research in a circular economy where Danone-AQUA in achieving maximization of the value of plastic waste as an effort to achieve a circular economy, first economic dimension is at least with circular business. Second, environmental and technological dimensions are maximized by using Loop technology to the value of waste reducing chemical waste generated from the recycling process. Three, societal behavioural dimensions are shown by the involvement of the general public and scavengers to collect plastic bottle packaging waste. Fourth, dimensions of government, namely in achieving a circular economy, Danone-AQUA also collaborates with local governments where the focus of a circular economy is held and a number of non-Governmental organizations and communities that have an interest in empowerment and the environment.

CONCLUSION

The Danone-AQUA company improves its circular economy policy by maximizing the value of plastic waste. Danone-AQUA's circular economy performances has reached six circular dimensions, namely governmental, economic, technological, environmental, societal and behaviour. First, government, namely in the Danone-AQUA Indonesia circular economy process, there is the involvement of the central government in providing regulations to achieve Sustainability Standards as well as local government assistance in building infrastructure for the disposal and collection of plastic bottle packaging waste. Second is economic, namely by maximizing plastic bottle waste to create a clean and healthy earth, the aqua mineral water produced will still have sustainable consumers. Three, technologies, namely the involvement of Loop technology, ensure that the recycling of plastic bottle packaging waste can be reused and is safe for consumer health. Fourth, environmental, namely, with efficient management of plastic bottle packaging waste and maximum use, it will create a clean environment from waste. Fifth, social, namely the circular economy program by maximizing the value of plastic bottle packaging waste, can provide education to the public that waste has value and by collecting waste it will improve the cleanliness of the environment where people live. The slums of an area are caused by the accumulation of garbage dumped by the community. Six, behaviours, namely the "*Bijak berplastik*" program, encourage changes in people's mindsets that littering causes a dirty environment, therefore plastic bottle packaging waste can be collected and can be worth money. Therefore, in achieving a circular economy, Danone-AQUA adopts a circular packaging policy, a water and carbon circular and a business circular in order to maximize the value of waste.

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