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#### **ABSTRACT**

In response to the problem of increasing waste in the ocean, UNWTO formulated sustainable tourism to create economic, social, and environmental stability. In the effort to realize sustainable tourism, UNWTO introduces a voluntourism program that directly seeks to attract tourists' interests and make tourists become aware of the importance of protecting the environment. This study aims to understand the voluntourism strategy to realize sustainable tourism to reduce waste in the ocean. The method used in this study is a qualitative-explorative method that intends to explore social phenomenon based on the variables that have been formulated. In responding to the issue of marine pollution caused by garbage, voluntourism makes various efforts to cooperate with several stakeholders. The voluntourism program that focuses on the topic of marine pollution is expected to become a policy recommendation to be implemented by various countries, hence efforts to reduce waste in the sea can be massively carried out in different parts of the world. This study discusses the distribution of waste in the oceans and efforts to handle it through voluntourism programs.

Keywords: Ocean Waste, Sustainable Tourism, Voluntourism

Dalam merespons permasalahan peningkatan sampah di lautan, UNWTO memformulasikan pariwisata berkelanjutan untuk menciptakan kestabilan ekonomi, sosial dan lingkungan. Dalam mewujudkan pariwisata yang berkelanjutan, UNWTO memperkenalkan program volunterisme yang secara langsung menarik minat wisatawan dan membuat wisatawan semakin menyadari akan pentingnya menjaga lingkungan. Penelitian ini bertujuan untuk memahami strategi volunterisme untuk mewujudkan pariwisata berkelanjutan guna mengurangi sampah di lautan. Metode yang digunakan dalam penelitian ini adalah metode kualitatif-eksploratif yang menggali fenomena sosial berdasarkan variabel yang telah dirumuskan. Merespons isu polusi laut yang disebabkan oleh sampah, volunterisme menciptakan berbagai upaya untuk bekerja sama dengan para pemangku kepentingan. Program volunterisme yang berfokus pada topik polusi kelautan diharapkan mampu menjadi rekomendasi kebijakan yang dapat diimplementasikan oleh berbagai negara, sehingga upaya pengurangan sampah di lautan dapat secara masif dilakukan di berbagai bagian dunia yang berbeda. Studi ini mendiskusikan tentang penyebaran sampah di lautan dan upaya untuk menanganinya melalui program volunterisme.

**Kata kunci-kata kunci:** Limbah Lautan, Pariwisata Berkelanjutan, Volunterisme

Tourism is the main activity supporting the economic sector, whereas tourism has accounted for 9% of the global GDP (UNWTO 2013). In recent years, visitor growth has been relatively high and is expected to constantly increase. As of 2015, the number of tourists in the world was estimated to reach 1.966 billion tourists. Cited from the World Bank website (n.d.), it is noted that in 2019, the number of tourists has increased to 2.28 billion tourists. For some developing countries, tourism is able to generate significant foreign exchange income, and even for some other countries, tourism is its primary foreign exchange earner. Academics have confirmed that tourism is a sector that supports sustainable development targets. This is owing to tourism's positive characteristics that supports sustainable development programs. Tourism stimulates the increase in production capacity and provision of jobs related to the tourism sector. Not only that, the contribution of tourism to productive environmental, cultural, and human resources assets. of which several countries took advantage in these aspects, spurred the country to continue to improve its capabilities (UNWTO 2013).

The tourism industry has now grown to expect alternative tourism, both in terms of concepts, destinations to activities carried out by tourists (Yoga and Nugroho 2016). The occurrence of these changes is a consequence of the negative impact caused by mass tourism (Lee 2011)sparking research interest in the subject. However, there is little research that has examined future potential volunteer tourists' various perceptions, needs and wants. The purpose of this study was to understand how and in what way various potential volunteer tourists' beliefs, including attitudes, subjective norms, self-efficacy and motivation, influence their future intended participation in a volunteer tourism experience using the revised theory of planned behavior. Moreover, the potential moderating effect of past volunteer tourism experience was examined as well. The study collected 291 usable responses from potential volunteer tourists who were active members of volunteer tourism organizations. The study used second order confirmatory factor analysis, structural equation modeling and hierarchical multiple regression analysis to test study hypotheses. The study also used meta-analysis to examine the effect size of the predicting variables and compared it with that of previous tourism research. The results of structural equation modeling indicated that two constructs, both attitudes and subjective norms, appeared to be statistically significant, while self-efficacy and motivation were not statistically significant in predicting potential volunteer tourists' intended participation. Hierarchical multiple regression analysis

found a moderating effect of past volunteer tourism experience on motivation toward intended participation in a negative direction. In addition, the motivation factor \"altruism\" moderated in a negative direction. Meta-analysis found a large effect of attitudes, a medium effect of subjective norms, and a small effect of selfefficacy in relation to intended participation. In conclusion, the results did not validate the theory of planned behavior in the context of volunteer tourism research. Interestingly, the theory of reasoned action was found to be validated. Implications for volunteer tourism providers and organizations are also discussed (Lee 2011. The negative impact includes environmental damage. especially pollution of aquatic areas due to garbage. The United Nations Environment Program (UNEP) states that 14% of all waste in the oceans is found in the tourism sector (McDowall 2016). As much as 11 million tons of plastic waste is found floating in the ocean every year. For example in the peak season, tourist's garbage in the Mediterranean Sea increases by 40% (UNEP 2020b). As a result, 300,000 marine animals died from entanglement in plastic waste (Johnson 2021). Aside from that, some animals begin to be at risk for consumption due to eating numerous microplastics.

To overcome these problems, the tourism industry is currently turning its attention and became more concerned about sectors related to tourism industry activities, especially the environmental sector (Wisudawati 2017). The United Nations World Tourism Organization (UNWTO) formulated sustainable tourism target to shift the focus of tourism from a visit-only to the creation of economic, socio-cultural, and environmental balance (Aldira et al. 2016). Efforts to realize sustainable tourism can be one of the environmental mitigation programs, thus it must be able to create optimal efforts to maintain the environment as the sector most related to tourism. Sustainable tourism requires the participation of the entire tourism-related stakeholders, ranging from the government, business actors to the community. The realization of sustainable tourism also provides a high level of satisfaction to tourists, sparking concern for sustainable issues, primarily environmental issues (UNWTO n.d.).

Numerous ways are pursued to achieve sustainable tourism, one of which is to introduce voluntourism. This tourism trend is a combination of tourism and volunteer activities. UNWTO supports the movement of voluntourism activities and is now gradually applied in various parts of the world (Puspasari 2020). Wearing (2004) defines voluntourism as one type of alternative tourism

that has a sustainable impact. More specifically, he stated that voluntourism is an activity that makes vacationing, a volunteer activity, such as helping to develop and conduct conservation efforts around the world that aims to create sustainable tourism alternatives and be able to improve the tourist experience, help develop communities, scientific research and also ecological restoration efforts (Wearing 2004). Based on this presentation, the author will examine the strategies that can be pursued by voluntourism programs to realize sustainable tourism and reduce waste in the oceans.

This study is a review study that uses qualitative method and data processing which is obtained through document analysis and meaning (Djaelani 2015). This research is intended to explore and clarify social phenomenon by describing the variables that have been formulated. The author uses the literature study method to obtain data collection by taking sources from books, journal, official documents, and several reading materials from internet sites such as government websites and news.

# Conceptualization of Sustainable Tourism as an Alternative Development

Sustainable Tourism is one of the concepts proclaimed by the United Nations World Tourism Organization (UNWTO) to realize a type of tourism that has a positive impact on essential aspects of life. The development is directed towards the utilization of natural resources and human resources in the long term (Budiani et al. 2018). Sustainable tourism can be interpreted as tourism that considers the impact on the economy, social and environment in the present and future to meet the needs of the tourists, environment, industry and hosts.

The concept of sustainable tourism is very relevant and can be implemented in numerous tourist circles and tourist destinations. The main points of sustainable tourism are the economic, environmental and socio-cultural aspect. Sustainable tourism must optimize the environmental function, which is the main element of tourism, as well as maintain ecosystems and help nature conservation programs. In the socio-cultural aspect, sustainable tourism respects local culture and culture in general, as well as contribute to introduce culture to the people residing

in the tourism destinations. Strong cooperation is needed between various stakeholders such as governments, businesses, communities, and organizations related to tourism to achieve sustainable tourism. Sustainable tourism also focuses on tourist satisfaction and awareness of the importance of contributing to sustainable development efforts (UNWTO n.d.).

To realize sustainable tourism, absolute cooperation must be carried out. The movements made must also be fundamental to touch the realm of society. This movement can be done through social movements. The definition of social movement is quite diverse, as academics use different approaches to interpreting 'social movements'. Therefore, the definition of a social movement is quite difficult to synthesize. Nevertheless, matters relating to religious sects, political organizations, revolutions, and campaigns on specific issues can be interpreted as social movements (Hartono 2020). Metta Spencer defines social movements as collectively made efforts to create a new order that is better than it once was (Wahyudin 2018)technical success, adverse events (AEs. The primary nature of social activities is to bring about a change from an existing order of life to better order. In this study, the social movement formed is a movement focused on environmental mitigation through tourism routes. Based on Spencer's type of social movement, environmentally-focused social movements can be categorized as the Reform Movement.

The reform movement aims to support the program launched by UNWTO, namely sustainable tourism through the volunteer tourism program, which is a combination of volunteer activities with travel activities to reduce waste in the ocean. Sally Brown stated that voluntourism is a type of alternative tourism that offers tourists to contribute to social movements voluntarily, such as cultural exchange with local communities (Brown 2005). One example of the implementation of voluntourism is voluntourism organizations in Canada, namely Intercodia Canada and Hero Canada. The two organizations facilitate volunteers who seeks to carry out volunteer tourism activities (voluntourism) in Latin America, Africa and several small countries in Eastern Europe (Kristanti et al. 2015). Voluntourism programs are widely shaded by non-governmental organizations. Insofar, voluntourism programs still tend to dwell on social, cultural, and educational aspects (Yoga and Nugroho 2016). Similar research was conducted by Suprastavasa (2011) which examines various activities in the fields of education, community development, environment, and

archaeology at large. It shows that the environmental aspect is also an important aspect that requires handling from all stakeholders.

In environmental aspect, Schuyler discussed solutions in the form of transparent monitoring of programs to understand the causes of the increasing waste (Schuyler et al. 2021). Hence, the authors will complete the study by reviewing the voluntourism program as a program that seeks to reduce waste in the oceans by first discussing the causes of the influx of garbage into the oceans. Gledys Deyana also discussed efforts to combat waste in the oceans based on international law (Wahyudin and Afriansyah 2020). The study will seek to expand recommendations for activities that can be done to reduce waste in the oceans through the social voluntourism movement.

The amount of waste in the ocean is one of the causes that triggers the emergence of sustainable tourism innovation, which has three main points: economic, socio-cultural, and environmental. Various efforts were made to realize these targets, one of which is to form a voluntourism program that combines volunteer activities with tourism activities. However, more research is needed related to activities carried out in the voluntourism program to reduce waste in the oceans. Thus, based on the background and formulation of the problems described above, the author assumes that if the voluntourism strategy is implemented, efforts to reduce waste in the oceans can be implemented with the contribution of tourists and the wider community.

#### Voluntourism as an Environmental Movement

As one of the rapidly growing industrial sectors, tourism contributes to economic development and the introduction of culture to the broader community. However, the same thing does not happen in the environmental sector (Ahmad et al. 2018). Tourism has a negative impact on environmental sustainability, such as marine pollution. In this study, the marine pollution in question is pollution due to the amount of garbage in the ocean.

The increase in human needs and consumption goes hand in hand with the increasing human population, coupled with a high dependence on marine resources as a connector for human life, destroying marine ecosystems. One of the efforts that can be done to tackle waste in the ocean is through the voluntourism program. In its implementation, the voluntourism program requires good cooperation from various sectors, ranging from government, governmental or non-governmental organizations to the community. Meanwhile, voluntourism contributors, commonly referred to as voluntourists, are contributors from various actor such as organizations, recreational groups, companies, communities, school students, families, local communities, foreign tourists, and individuals (UNEP 2019).

Close cooperation between stakeholders needs to be supported by high tourist participation. The motivation of tourists to join and participate in voluntourism programs is diverse, such as the instinctive nature in humans to provide services to others and the surrounding environment (altruism), the desire to develop themselves, provide benefits to the community around tourist destinations, support the development of education and contribute to tourism, cultural, and environmental restoration (Wearing and McGehee 2013).

Brown (2005) found four main factors that dominate the motivation for implementing volunteer tourism programs. The first factor is introduction to culture, whereas in tourism activities. cultural introduction to tourists is made possible. The tourists will be served by the beauty of tourism destinations and the dynamics of local people's lives that maintain their authenticity in living with the direct and close connection to the nature. Furthermore. direct interaction between tourists and local residents triggers the emergence of a close-bond brotherhood. As a result, fraternal relations and friendships have been established for an extended period. Second, the motivation experienced by voluntourists is the instinct and desire to give and help others. Many tourists feel that they have the privilege of living a perfect life, hence they want to dedicate their lives to sharing with others. The voluntourism program is then considered more valuable to the voluntourists looking to give more values in their tourism activities, compared to only doing tourism for the sole purpose of finding pleasure. Voluntourism program is also suitable for finding one's life purpose, especially voluntourists. Third, the motivation for making friends, meeting and interacting with tourists who have the same goal in the voluntourism program is also one of the motivations that encourages voluntourists. The benefits obtained includes active contributions to changes in the beneficiary environment, increased relationships, and establishing friendships with groups that embodies the same interests. Fourth, many voluntourists

are motivated to do voluntourism in regards to strengthening the familial relations, as voluntourism programs can be carried out by people of all ages and from all walks of life. In this case, voluntourism plays a fundamental role in introducing to the families, especially the children, that there are individuals who are less fortunate than them and to give a closer look that reflects how the environment requires special attention from humans. This impacts on close family relationships and help raise awareness for children and the younger generation to actively contribute to community development and ecological restoration efforts.

Voluntourism provides good benefits to the community and the environment. Moreover, voluntourism also actively contributes to efforts in realizing the sustainability aspects of life, especially in the long-term sustainability of environment in the world. Therefore, the movement of voluntourism is not only limited to one focus but is engaged in various fields such as aspects of education, social, economic, health, culture, agriculture, and infrastructure development (Lupoli and Morse 2014). One aspect that is closely related to tourism is the environmental aspect.

Tourism has a significant impact on environmental pollution. This is due to several factors such as technological improvements, industrial activities and changes in human behavior. Nowadays, many people use plastic packages such as mineral water packaged in single-use bottles. The lack of human knowledge on waste management results in the increasing pile of garbage from time to time, of which many can also be found amongst the tourist destinations. The author focuses this discussion on garbage in the ocean because the sea is a tourist destination that has a fundamental importance to humans. Therefore, if not addressed immediately, it will cause more severe contamination and eventually could result in ecosystem imbalance.

# The Implementation of Voluntourism as Sustainable Tourism: Reducing Waste in the Ocean

Voluntourism is essential in maintaining marine ecosystems, as the active role of voluntourism in forming new markets help accommodate human altruism's desire to be more attentive and to increase protection of the surrounding environment. Voluntourists must develop strategies implemented for communities around the

coast and other tourists so that efforts to reduce ocean pollution can be handled sustainably. This will have a positive impact, not only on the environment but also on communities such as tourists and local communities.

In this case, voluntourism is considered capable of bringing changes to tourist's behavior and to increase activities that provide valuable experiences for the tourists. There are six ways that can possibly be taken by the voluntourism program to reduce waste in the ocean. First, creating a campaign. As one of the fundamental sources of human life in the world, the sea is often used for trade and tourism. Nevertheless, the marine areas are currently being polluted which then caused ecosystem damage and the death of many animals such as birds, fish and turtles. Not only that, marine pollution also has an impact on human's social life such as the declining attractiveness of people tourism sector (Nyawira 2018). One of the efforts that can be done by voluntourism is to conduct a campaign. The purpose of the campaign is to increase awareness of the importance of protecting the environment so that all actors in the tourism sector are encouraged to be more caring in regards to the cleanliness and protection of the sea from garbage. The campaign can be pursued at any time and can be carried out as an option to celebrate environmental days such as the World Ocean Day or World Environment Day.

In this case, voluntourism has an essential role in the community and environmental resilience. Voluntourists can contribute to the community with their skills in order to make the community understand the urgency that marine pollution due to garbage needs to be addressed immediately through practical actions and management (Nyawira 2018). This campaign effort also makes the movement of the voluntourism program more sustainable, as it will not stop along with the end of a certain activity because the main target is to raise awareness. This is also in accordance with the concept of sustainable tourism, which seeks the realization of sustainable tourism in terms of economic, environmental and social aspects. Thus, the voluntourism program not only creates good habits for voluntourists but also has a positive impact on other individuals because it has the potential for increasing sustainability opportunities.

Second, voluntourism program can help strengthen cooperation with government, governmental and non-governmental organizations, as well as communities. In general, program

volunteers are carried out under the auspices of a voluntourism organization. However, the movement of voluntourism organizations cannot optimally run if it's not supported by actors who play an essential role in tourism, such as the government and local communities. Therefore, it is necessary to have good cooperation and strong support from the government, organizations and local communities, so that the voluntourism movement can have a broader impact, especially on efforts to reduce waste in the sea (Nyawira 2018).

As a fundamental actor that regulates several aspects of human and country life, the government has the task of formulating policies that are binding on the people under its control. One of the policies that can help reduce plastic waste is a policy related to production and consumption, whether carried out by business actors around tourist destinations, visitors, and local communities (UNEP 2020b). Through this policy, responsibility for production and consumption activities is expected to increase to help reduce waste in the oceans. Some policies that can be formulated are by encouraging the replacement of the use of tissue with napkins and plastic straws with stainless straws, especially in restaurants on the coast. Cooperation must also be carried out with experts to provide significant data related to the next movement that must be carried out and provide an evaluation of the efforts that has been made (UNEP 2020a).

The government's policy to reduce the use of single-use products by business actors in tourist destinations is a small policy that has a significant impact on the sustainability of the ocean area, considering that most types of waste found in the oceans are single-use products waste which are often found on the coast. Not only government policies, the performance of voluntourism organizations in setting the agenda and coordinating with communities around tourist destinations are also important aspects that determines the success of the voluntourism program.

Third, in efforts to reduce waste in the ocean, there is a high urgency to improve and strengthen the performance of voluntourism organization. In the voluntourism program, the organization is the leading actor that determines the direction of the voluntourist movement. The voluntourist's satisfaction with the voluntourism program is the full responsibility of the voluntourism organization (Ngah et al. 2021). Some organizations in the world that prioritize their focus on environmental sustainability are the United

Nations Environmental Program (UNEP) and the Global Plastic Tourism Organization. Indeed, the Global Plastic Tourism Organization is an organization under the auspices of UNEP and the United Nations World Tourism Organization (UNWTO). Both organizations are focused on environmental sustainability and assume that tourism is one sector that has a role in reducing pollution in the sea, especially caused by garbage (UNEP 2020b). These two organizations have similar focuses, such as aiming to reduce waste, especially non-fundamental plastic, attract industry players and organizations to contribute to the Global Tourism Plastic Initiative program, and invite stakeholders to reduce the impact caused by single-use plastic (Indonesian Waste Platform 2021).

One of the activities that directly oversees international voluntourism is the International Coastal Clean-Up (ICC). The ICC was launched more than 30 years ago and sought to initiate the coastal clean-up movement directly. The activity, which was started in the United States, has succeeded in attracting voluntourists from more than 100 countries to contribute to coastal cleaning. These activities continue to spread and generate similar movements in various countries. Over the past 30 years, the initiative has attracted 16 million volunteers and collected 340 million pounds of waste (Ocean Conservancy 2021c).

ICC can be implemented in various countries in any part of the world. Some countries that also adopted the movement were Singapore, Vietnam, Pennsylvania, South Africa and Italy. In fact, all countries can implement these initiatives and form sustainable organizations to deal with waste in the oceans. However, several things need to be done in preparation for program implementation, starting from the pre-program implementation to the final stage of implementing volunteer tourism activities. Before the coastal cleaning activities are carried out, the absolute permit is approved by the tourist destination management. Volunteers must also confirm their arrival and show identification. No less important is ensuring the availability of personal necessities such as gloves, stationery, snacks, drinks, first aid kits and trash bags (Ocean Conservancy 2021a).

Another aspect that needs to be prepared is a strategy so that the implementation of the voluntourism program could provide effective results and does not contribute to add more waste into the oceans. Some of the aspects that were highlighted started

from food, drinks, transportation and also trash cans. In terms of food, volunteers are encouraged to bring their own food and take their leftovers home. However, if the organizer wants to provide food, it is better to provide minimal food in single-use waste such as fruits and sandwiches that do not require cutlery. Likewise, in the provision of beverages, organizers are discouraged to use single-use packaged beverage bottles. Meanwhile, in terms of transportation, volunteers are encouraged to go by bicycle, walk, or use public transportation. Aside from that, garbage classification is also an important part of the trash management and it must be done by classifying garbage cans so that voluntourists are able to understand how to sort waste and provide more knowledge to the volunteers (Ocean Conservancy 2021a).

In implementing the voluntourism program, it is necessary to provide guidance to the voluntourists regarding the timing of activities, as well as things that all voluntourists are encouraged or avoid to do. Regarding the implementation of the activities, all volunteers must have the information as to where and when the activity starts, including when to gather at the post to rest and end the activity. The organizer of this program must also ensure that there is someone on duty at the post to handle participants who are late or experiencing health problems. All participants must also thoroughly understand the actions taken if encountered with poisonous animals and sharp objects. The program then can be concluded by distributing activity documentation to all participants, either via email or social media. To support the program's sustainability and as a form of campaign, volunteers are encouraged to share their experiences through social media platforms, to create awareness and attract more people to participate and contribute in protecting the cleanliness of the sea (Ocean Conservancy 2021b).

In practice, the voluntourism program can first be targeted for youth, such as through school activities specifically focused on high school students and college students. Youth is considered to have a substantial enough contribution to contribute to the voluntourism program. If it has run well enough, the program can be continued and opened to the whole community. Therefore, voluntourism organizations need to cooperate with all stakeholders to attract broader public interest and implement policies to support efforts to reduce waste in the ocean.

The fourth action that can be taken as means to reduce ocean waste

is also implemented through communicating with communities around tourist destinations. Voluntourism is a program that all elements of society can carry out. The program has various objectives, one of which is to give positive impact to the community around tourist destinations. The purpose of the activity is an important thing that must be formulated before implementing the activity, and all actors involved have rights and obligations for these objectives. Regarding the purpose of voluntourism, which is to impact the surrounding community, it is necessary to have intense communication with the relevant community to find out their needs, especially in the regards to protecting the sea from being polluted with more garbage. Not only that, the importance of communication with the surrounding community is also to identify the impact felt by the surrounding community of the ongoing voluntourism program. It is important to gather the point of view of the voluntourism organization and the community, as well as to provide a midpoint from two different points of view regarding each actor's purposes (Lupoli and Morse 2014).

Fifth, carry out direct coastal clean-up actions. Marine pollution is a phenomenon that is no longer strange in the world. Starting from fishing activities and activities on land, all of them significantly impact marine pollution. Various efforts have been made to save the oceans from more severe pollution over time as collective response to these problems. One of the efforts made is to promote eco-tourism and allow tourists to contribute to activities in it. Tourists can contribute to various activities, such as collecting garbage which polluted the ocean (Lonne 2019).

There are several countries in the world that are actively trying to invite tourists to volunteer in working to save the environment. For example, Indonesia which is known as an archipelagic country, has a very diverse natural wealth, especially its marine life. Several voluntourism organizations in Indonesia initiated the movement to reduce marine pollution. The organization invites tourists (voluntourists) to assist researchers in collecting seawater samples to examine the microplastic content in seawater. In addition, volunteers are also invited to study the causes of marine pollution due to plastic waste and find solutions to overcome these problems. Other organizations also hold a movement to pick up trash in the sea every week and invite volunteers to join in these activities. The aim is to reduce marine debris and educate tourists, especially youth, about the impact of marine pollution caused by garbage (Lonne 2019).

Similar activities were also carried out in the Philippines, where tourists who voluntarily want to spend their time doing cleaning will be invited to jointly learn the methods of diving and picking up trash on the seabed and the sea coast. Another country that has also contributed to this effort is Egypt. The country, which also has an area directly adjacent to the sea, has initiated a volunteer movement to reduce waste in the ocean. One of them is conducted through 'Project Azraq', which invites tourists to study the environment, both practically and theoretically. By supporting the project, the funds paid by the tourists will be used for research on environmental issues in Egypt (Lonne 2019). Direct beach cleaning is one of the activities that can be implemented by all groups of people from individuals, organizations, families, schools to the government. These efforts are pretty easy to do and directly impact the ocean area, especially the coast.

Sixth, there is also an urging need to provide waste management efforts in the ocean. Based on the explanation above, various stakeholders continue to improve efforts to reduce waste in the ocean through volunteer activities that directly involve tourists. To avoid waste accumulation in other locations, it is necessary to do special processing of the waste that the volunteer has collected, both in the form of organic waste and inorganic waste. The processing of the waste that the voluntourists have collected can be done in various ways. However, waste that can no longer be recycled will be sent to a landfill.

As explained above regarding waste classification and collaboration with stakeholders, all voluntourists are obliged to sort out the collected waste to be deposited with the waste recycling manager. In this case, voluntourism organizations must clearly understand the type of waste received by the manager, such as plastic, metal and glass waste. For organic waste, the processing is necessary to turn the waste into compost. Voluntourism organizations can work with local communities to manage the area to compost organic waste and make them useful in the future. This is because if organic waste ends up in a landfill, it will be mixed with inorganic waste which could then trigger combustion that produce gases that are more dangerous than carbon dioxide (Ocean Conservancy 2021a).

Furthermore, potentially hazardous waste such as battery waste, paint, tires and electronic goods also need a distinct and proper disposal. Improper disposal of these types of waste can cause environmental damage and human health problems due

to the presence of hazardous substances within them. The most appropriate way to deal with electronic waste is to strengthen policies related to producing and using electronic goods. However, another effort that can be made is to turn these waste into a work of art with high economic value (Hardianto et al. 2019). The similar procedure also needs to be done in dealing with paint waste because there's a risk that its content can interfere with human health. Nowadays, some organizations help manage paint waste, such as 'PaintCare' in the United States (PaintCare 2021).

Based on the explanation above, various efforts can be made to reduce waste in the ocean, of which one of them could be implemented through voluntourism. As an effort to reduce waste in the ocean, voluntourism requires strong collaboration with various stakeholders to create a sustainable environment. Voluntourism efforts to attract tourists are considered excellent as it ensures the sustainability of the program because the activities are aimed at environmental restoration and the provision of education for tourists to be more knowledgeable in regards to the environment, especially the ocean.

With these benefits, voluntourism is one of the programs that are expected to be adopted into government policies in various countries, especially those with areas directly adjacent to the waters, to realize sustainable tourism, primarily focusing on cleaning the sea from garbage. Vast and wide-encompassing territorial waters requires active movement from all countries around the world. Countries' participations are necessary to make them able to continue to formulate the implementation of voluntourism properly and maturely, as its impact on environmental sustainability is significant. The voluntourism program can also be adopted by regional organizations such as Association of South East Asia Nation (ASEAN) and the European Union. Non-governmental organizations also continue to strive for the implementation of voluntourism programs.

The benefits of the voluntourism program are not only felt by the environmental sector. Aligned with the concept of sustainable tourism, which focuses on the sustainability of the economic, environmental and social sectors, the voluntourism program is considered a program that is very relevant to realize sustainable tourism. In terms of the economic sector, the implementation of voluntourism programs in tourist destinations can be a unique attraction for these destinations, thereby attracting tourists to visit

and contribute to the program. Meanwhile, in terms of social sector, the voluntourism program provides the possibility of increasing the community's welfare around tourist destinations. The increase in tourist's visitations will increase business opportunities and the quality of the community through a coaching program carried out by voluntourists.

#### Conclusion

The problem of waste in the ocean is an important aspect that must be highlighted, considering the importance of the sea for human life. Most of the earth's surface area is the ocean and therefore, humans are very dependent on the stability of its ecosystem. However, marine pollution has currently occurred due to various causes, one of which is garbage. Marine pollution has significant impacts, such as declining tourism interest, the breakdown of the food chain, the decrease in oxygen levels in the water, as well as damage to marine ecosystems and negative impacts on human health. The impacts will be worsened if they are not handled immediately, thus a solution to the current marine pollution is urgently needed.

One essential sector which has a close relationship with the ocean is the tourism sector. Therefore, UNWTO formulates sustainable tourism efforts as a tourism model that considers the present and future needs and benefits in terms of economic, environmental and socio-cultural aspects. UNWTO formulated eight possible actions to improve the quality of the environment. Several actions were taken to respond to environmental issues and pursue sustainable tourism, such as strengthening government policies related to sustainable tourism, recognizing that tourist destinations are part of economic development efforts, increasing protection of natural wealth, promoting natural wealth in tourist destinations, improving human resources capabilities, strengthening the integration of coastal area management and ensuring all elements of tourism, especially tourists to contribute in minimizing marine pollution.

To balance the policies formulated by the government, it is necessary to have contributions from other stakeholders, especially the traveler. One of the efforts that can be done to increase the interest and knowledge of tourists related to efforts to reduce waste in the

sea is through voluntourism program. The program combines volunteer activities with tourism activities and seeks to change the focus of tourism from merely visiting or sightseeing-oriented to a beneficial development effort. In responding to the issue of marine pollution by garbage, voluntourism carries out various efforts such as conducting campaigns to increase awareness of the importance of maintaining environmental stability, strengthening collaboration with various stakeholders, improving the performance of voluntourism organizations, communicating with communities around tourist destinations to unite goals, carrying out sea-cleaning actions, and directly formulate efforts to manage the collected waste.

These efforts are made to reduce the severely dangerous impact of marine pollution caused by garbage. Voluntourism is one of the programs expected to be adopted into government policies in all countries, especially adjacent to water areas, to realize sustainable tourism in creating a more sustainable marine ecosystem. The effectiveness of this program implementation will be more optimal if it is carried out with the cooperation of various countries integrated in international organizations, such as ASEAN and the European Union. The program is considered able to answer the problem of marine pollution because the efforts made are not only aimed to directly clean the sea but also to educate tourists and other stakeholders to care about the issue of marine pollution due to garbage. Thus, the voluntourism program is considered as sustainable and have positive impacts towards the efforts in reducing the amount of waste in the ocean.

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