

# Community Activities in The Environment Managing *A Case Study of Sukunan Environmental Tourism Village*

Rusmawan Rusmawan, Elly Malihah, Enok Maryani and Nana Supriatna  
*Universitas Pendidikan Indonesia, Bandung, Indonesia*  
rusmawan2222@gmail.com, {ellyms, enok\_maryani}@upi.edu, nanasup@yahoo.com

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Abstract: The environment problems are current issues in the world. This research aimed to analyze the problems of environment and the finishing of the problems in Sukunan Environmental Tourism Village. The method of this research was case study. The data collected by observation, interview, and literature study. The result of research showed that the environment problems in Sukunan community are waste management system. That problems finished by Sukunan community through activities of restriction of waste dumps, reuse of waste, and recycle. The results of research on environmental management by these communities have implications (1) the government needs to facilitate the dissemination of ideas and facilitate the output of environmental management activities, especially community based waste; and (2) the Sukunan community needs to clarify the sustainability mechanism of community-based environmental management activities.

## 1 INTRODUCTION

Humans and the environment have dependent relationships. This interdependence as proposed by Soemarwoto (2007) that man as well as all living things interact with his environment. Humans affect the environment and human life is also influenced by the environment. Hala (2010) explains that the relationship between man and nature is important. Humans can use natural resources but can also damage them.

Environmental exploration by humans has long been done. As Koc argues (2013) that "the exploitation of the environment by humans has exhibited differences throughout the recorded history. In the hunting-gathering period, humans did not have the sufficient intelligence and technology to change natural environment. In this period, humans were striving for gaining a familiarity with the environment and they were leading lives totally depend on the natural environment". The environment has a carrying capacity that is the size of the ability of an environment to support certain populations of species to be able to live in that environment. The maximum environmental capability can be calculated by taking into account the environmental capability of supporting the above populations (Sumaatmadja, 1989). Environmental imbalances in the form of drought, erosion,

landslides, contamination, is an expression of the limitations of environmental carrying capacity as a result of human behavior is not in line with the carrying capacity of the environment concerned (Sumaatmadja 1989). Ecological imbalances or environmental imbalances that are primarily caused by human actions that ignore ecological principles and values, ultimately also befall and threaten human life itself.

Salim (1981) states that there are three main reasons why Indonesia feels the need to address environmental issues. *First*, the realization that Indonesia already faces serious environmental problems. *Second*, the need to pass on to the next generation of natural resources that can be processed in a continuous process of long-term development. And *third*, want to build a complete Indonesian man, not only advanced in the material and spiritual.

Thus, the anthropocentric perspective which sees that human beings are centers that can exploit and exploit the environment is no longer relevant because humans are not merely controlling life on earth. Supriatna (2016), explains that there needs to be a change of way from anthropocentric to ecocentric perspective that puts nature with all its contents as center. Man is only part of nature and not the only factor that determines continuity or survival. In this perspective, man can not be separated from the realm where he lives. This view

is also in accordance with Capra's opinion (2002), which reveals that the need for a paradigm shift from a mechanistic worldview to a holistic view in which the world is viewed as a whole and ecologically recognizes the fundamental interdependence of all phenomena on earth.

The community has an important role in environmental management. In enforcing the environment, community participation can be done in various forms such as decision making, program implementation, advocacy or environmental advocacy. Community participation in decision making is a form of democratizing decision-making in which there is access or participation of the people. Community participation in the implementation of the program is the realization of community awareness in environmental enforcement. While the participation of the community in the defense or advocacy in the event of pollution or destruction of the environment is an attempt to claim the rights of the community that has been violated or destroyed.

Environmental management relates to the ecological literate. This is as proposed by Karatekin (2013) that "in order for an individual to be knowledgeable of environment and environmental problems." However, according to McBeth and Volk (2010) components of ecological knowledge important but environmental behavior can be formed through daily interaction with the environment.

In Indonesia, the role of society in managing the environment has been regulated in Law number 23 of 1997 (UU/23/1997) on Environmental Management. In the Article 7, first paragraph stated that the community has the same opportunity and as much as possible to play a role in environmental management. Furthermore, in paragraph 2, it is explained further about the provisions of the implementation of the role of the community in managing the environment as follows: (1) increasing independence, community empowerment, and partnership; (2) cultivate community capability and pioneering; (3) cultivate the public's ability to exercise social oversight; (4) provide opinion advice; and (5) submit information and / or submit reports.

One of form community-based environmental management can be seen in Sukunan Environmental Tourism Village. Sukunan Environmental Tourism Village is located in Sukunan, Banyuraden Village, Gamping District, Sleman Regency, Yogyakarta. Sukunan became an eco-tourism based village because the Sukunan Village community runs the waste processing process independently at the

household level up to the group level. This activity also produces a variety of processed waste products that have more value such as various handicraft products from plastic waste, handicrafts from patchwork and compost from organic waste. This study aimed to explain: (1) environmental problems faced by Sukunan community, and (2) Sukunan community activities in managing the environment.

## 2 METHOD

The method of this research was qualitative with case study. Research location was Sukunan Environmental Tourism Village. The subject of this research was Sukunan community in managing the environment. The data collected by observation, deep interview, and checking the document. The data validity used triangulation.

## 3 RESULT AND DISCUSSION

### 3.1 Environmental Issues in Sukunan

Sukunan is one of village in Gamping District, Sleman Regency, Yogyakarta Special Region Province. It located at west side of Yogyakarta City.

The result of research showed that the environmental problem faced by the Sukunan community is a matter of waste management.

Environmental problems faced by the Sukunan community is a matter of waste management, both organic and inorganic waste. This problem began to be felt since the beginning of 2000. Along with the expansion of the city of Yogyakarta, the growing population and the entry of immigrants to the Sukunan village.

*The first* problem, the entry of garbage into the rice fields. Farmers in Sukunan complain about the increasing amount of garbage entering the rice fields. The waste includes plastic, glass and cans. The impact of garbage entry into the rice field area includes the destruction of rice, rice roots are blocked by plastic, soil fertility decreases, and yield decreases. In addition, broken glass that enter the rice fields often result in injuries for farmers when working the fields.

*The second* problem, the more limited land to dispose of waste. The Sukunan people are getting better from both inside and out. As a result Sukunan area increasingly dense with housing so that the yard

land becomes narrow. The impact of waste generated by the population more and more, while the land that can usually be used to dispose of waste is reduced. This causes the suspicion in placing garbage because there is no garbage service from the Government and private. Finally, people throw their garbage on empty land owned by others, on the side of roads, irrigation channels and rivers.

*The third* problem is the inappropriate culture of waste management. The habit of burning garbage freely is already entrenched in the community. The Sukunan community has not realized that the current waste tends to be dominated by synthetic chemical waste such as plastic, rubber, styrofoam, metal, and glass. If the waste is burned it will release toxic gases that can endanger the health of the people who inhale and exacerbate the quality of the air environment. Disposable synthetic chemical wastes are selected for practical reasons. People are reluctant to use and use it again even though it can still be used over and over again. People tend not to bother to take care of him. These habits have started to develop in society. In addition to waste, of course, it has an impact on the swelling of waste production. Fourth problem, lack of understanding about the concept of reuse, reduce, and recycle. The concept of reuse is to reuse used goods that can still be used, reduce is trying to reduce waste, while recycle is to recycle garbage to be utilized. The low of community understanding of reuse, reduce, and recycle result in the abundance of waste production generated by the community. Wild final dumps are popping up and mushrooming everywhere. People generally assume that all the waste is useless, dirty and disgusting, so it must be removed from the eye. Many people then throw garbage away from settlements, sweep away the river, bury it in the ground and burn it. Garbage handling by the Government in general is still consumptive oriented. In addition, waste handling is still limited to moving waste to other places. Whereas the presence of waste in landfills more often cause problems for the surrounding community and pollute the environment.

From the above description it can be concluded that the environmental problems faced by the Sukunan community are the garbage problems that include the entry of garbage into the rice fields, the limited land to dispose of garbage, lack of proper waste management, and the lack of public understanding about the concept of reuse, reduce, and recycle in waste management.

### 3.2 The Problems Solving of Environmental Issues

The result of ressearch showed that the environmental issues in Sukunan, encouraging Sukunan people to find ways to manage waste. Beginning by Iswanto, one of the new comer residents in Sukunan, who mobilized the right waste management system. Iswanto believes that waste management can be considered appropriate if: 1) can be done by the community itself, 2) can provide real benefits for the community (productive), 3) can solve all waste (comprehensive), and 4) not pollute the environment environmentally friendly). Pandagan is then disseminated to Sukunan residents.

The Sukunan community began to solve the problem of natural organic waste in 2002. Problem solving was done through simple composting experiments at the household level. Through the experiment found a composting model using a ground barrel. The experimental results show that the barrel with volume of  $\pm 100$  liter can accommodate organic waste generated from family with 4 person family member for 3 months. While the composting process naturally lasts between 2 - 3 months. Thus to solve organic waste in each household need to provide 2 pieces of barrel. Each barrel can accommodate garbage for 2 - 3 months and is used interchangeably.

Inorganic garbage problem settlement began in 2003. Problem solving begins with field study to temporary waste collection at Kwarasan, Tambakboyo and North Square, and to final settlement in Piyungan. And then interview with waste pickers and collectors. The result of field studies and interviews found that almost all waste can be utilized or economic value after the sorting. Means if the garbage is removed from the household, then the resulting no longer in the form of garbage again, but in the form of goods of economic value. If the garbage generated from each household is then collected and sold, then the proceeds from the sale of the waste can be used to pay the operational costs.

Sukunan waste management system The waste management system conducted by Sukunan community includes: 1) after being separated according to its type, it turns out that almost all waste can be sold; 2) to reduce the operational costs of transporting and sorting then the separation of waste should be done at the source of the household; 3) organic garbage that is easily decayed, it must be overcome and processed until it becomes compost in each household; 4) the

operational cost of waste management can be fulfilled from the sale of waste and waste recycling products; 5) profits on waste sales after deducting operating costs can be incorporated into the village treasury for development and development funds.

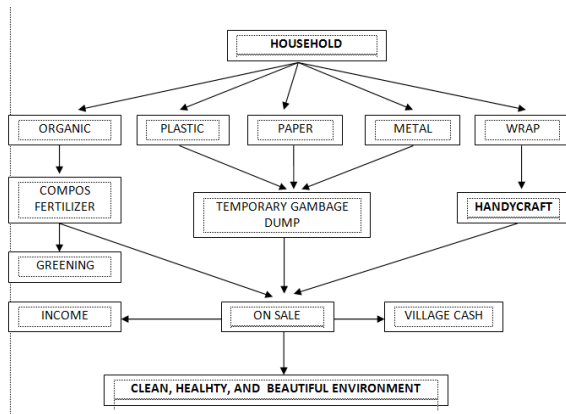


Figure 1: The Process of Waste Separating in Sukunan.

In general, the Sukunan self management waste management system includes the following activities: 1) each household segregates the waste according to its type. Inorganic waste is inserted into the bag, while organic waste is put into the compost bin; 2) after the bag is used to hold the full inorganic waste, then each household brings and puts the waste into the nearest waste drum according to its type; 3) after the full garbage can be picked up and transported to the village waste bin (TPS) by the Officer; 4) after entering the TPS, more specific sorting is done and followed by packing then sold to the Trash Collector; 5) the proceeds of waste sales for operational costs and the rest in the village cash; 6) especially for organic waste, after producing compost in the house each partially packed and sold and partly used alone for greening the home and village environment. While inorganic waste is recycled into handicrafts. The handicrafts can be used alone or sold.

The results of the implementation of the self-managed waste management system since 2004 in Sukunan include: 1) growing awareness, willingness and ability of communities to manage waste at the household level; 2) improved hygiene and environmental health; 3) the results of waste sales and recyclables can cover the operational costs of waste management; 4) waste management activities can absorb labor as a carrier, recycle bag craftsman, composting maker, buying and selling garbage and garbage facility maker; 5) many people who come to

learn waste management include from outside province.

### 3.3 Discussion

The increasing number of Sukunan people causes the increasing need for shelter. This is consistent with the view of Koc (2013) which explains that along with rising humanitarian standards environmental issues are also increasing. Humans not only develop science and knowledge but also produce additional environmental problems. Whereas according to Brody, et al (2014) that literacy about a healthy environment fosters a healthy life as well.

The result of the research shows that Sukunan people are aware of environmental problems indicates that Sukunan people have environmental literate. McBert & Volk (2010) argued that environmental literate have some components: ecological knowledge; ecological attitudes (including environmental verbal commitment, environmental sensitivity, and general attitude to the environment; cognitive skills include issues of identification, issue analysis, action plans; and environmental behavior includes actual commitment.

Environmental utilization activities should consider the sustainable development paradigm. The World Commission on Environment and Development (1987), defines 'sustainable development as 'Sustainable development is a process to meet the needs of the present generation of meetings'. This means that sustainable development is a process to meet current needs without compromising the ability of future generations to meet their own needs. Keraf (2010) describes the paradigm of ecological sustainability. Communities participate in preserving the ecology and socio-culture of society to ensure the quality of life of a better society is needed to support human survival in the future.

In the context of community rights in environmental management, the United Nations established an International Convention in Aarhus, Denmark on 25 June 1998 signed by 39 European countries and communities by producing The Aarhus Convention which contains three pillars which guarantees the rights of the people in the framework of sustainable and environmentally sustainable development that is: access to information, participation in decision making, and access to justice enforcement (UNEC for UEROPE, 2014). Based on UNEC for UEROPE, the

participation of Sukunan community in decision making, visible from appears in the right of the public to participate in the practice of community participation in environmental management. The participation of Sukunan community in managing the environment is a central part in the existence of Sukunan as an eco-tourism village. The community participates in the process of decision-making, implementation, monitoring, monitoring, evaluation.

What the Sukunan people do as Cutter, Renwich & Renwich (1991) views that an ecosystem is a system of goods and energy exchanging between ecosystems and the wider environment. Therefore, because the environment is very important for human beings, then humans must preserve it and use it wisely.

Environmental literate can empower a person or group in dealing with environmental issues as Pe'er, Goldman, & Yavetz (2007) notes that "one purpose in developing environmental literacy is to empower people with a belief in their ability to contribute to environmental solutions through personal behavior, either as an individual or part of a group". Roth (1991) in Wright (2008) states that ecoliteracy is assessed from three continuum stages that include nominal, functional, and operational. The Sukunan community in this regard has reached the stage of operational ecoliteracy. Someone in the operational stage has a comprehensive understanding of building based on environmental knowledge and concerns that help them use questions, analysis, deduction, logic, and objectivity to better understand and seek environmental issues.

This stage of environmental literate is demonstrated by the application of 3R concept, ie reuse, reduce and recycle Sukunan community in managing environment especially garbage problem. The concept of reuse appears in the reuse of used goods that can still be used. The concept appears in the use of organic waste into compost, whereas the concept of recycle appears in the recycling activities of inorganic waste into various handicraft items.

#### 4 CONCLUSIONS

This ressearch can be concluded that the environment issues in Sukunan community were waste management system. The problems solved by Sukunan community trough activities of restriction of waste dumps, reuse of waste, and recycle. In Sukunan, waste management can be assessed appropriately if: can be done by the community itself (self-supporting); can provide real benefits

for the community (productive); can solve all the waste (comprehensive), and not pollute the environment (environmentally friendly). The results of research on environmental management by these communities have implications (1) the government needs to facilitate the dissemination of ideas and facilitate the output of environmental management activities, especially community based waste; and (2) the Sukunan community needs to clarify the sustainability mechanism of community-based environmental management activities.

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