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THE IMPACT OF ENVIRONMENTAL SANITATION ON COMMUNITY HEALTH

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ABSTRACT

This study aims to describe and discuss the impact of environmental sanitation on public health. The research method used is descriptive. The sampling technique uses purposive sampling. The results showed that: 1) the environmental sanitation conditions of the community were not good because they did not meet health requirements, 2) there was a relationship between the condition of the sewerage, landfills, latrines, and the condition of the house that was not yet healthy so that it had an impact on illnesses such as fever bleeding, tuberculosis, diarrhea and others.

Keywords: **Environmental Impact, Sanitation, Public Health**

INTRODUCTION

Based on Law Number 32 Year 2009, the environment is a unity of space with all objects, power, conditions, and living things including humans and their behavior that affect the life and welfare of humans and other living creatures. In life many environmental problems encountered and very disturbing life can even cause death. The magnitude of the influence of the environment that needs to be improved health status that needs to be done for environmental health efforts which is an attempt to prevent the occurrence of diseases related to the environment in the community (Barlian, 1992; Barlian, 1994; Barlian, 2010). If the environment is not healthy, then the surrounding creatures will get sick, but on the contrary if the environment is healthy then the ecosystem is healthy too (Barlian; 2017; Barlian, 2000; Chandra *et al*., 2020; Hermon *et al*., 2020).

Poor human behavior results in changes in the ecosystem and causes serious environmental problems such as sanitation problems. Sanitation consists of supplying good domestic water, sufficient quality and quantity, regulating the use of family latrines, garbage disposal, waste water disposal, establishing clean and healthy houses, and caring

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for the surrounding environment by eradicating animals that cause disease to humans such as flies, mosquitoes, fleas and other animals. Environmental sanitation is an attempt to achieve a healthy environment through controlling physical environmental factors, especially those that have a detrimental impact on the physical development of health and human survival (Hiasinta, 2001; Hermon, 2020; Indika *et al*., 2020; Juita *et al*., 2020; Juita *et al*., 2020; Marni *et al*., 2020). Health problems are complex problems, which are related to other problems outside of health itself (Utami, 2018).

IMPACT OF ENVIRONMENTAL SANITATION

According to WHO environmental health is a science and skill that focuses its attention on efforts to control all the factors that exist in the human physical environment that are expected to cause or will cause things that can harm his physical development, health or survival Aprihatin *et al*., 2020; Arlym *et al*., 2020; Armaita *et al*., 2020; Asman *et al*., 2020). Environmental health is essentially an optimum environmental condition or condition so that it positively influences the realization of optimum healt status as well. According to HAKLI (Association of Indonesia Enviromental Health Experts) environmental healt is an enviromental condition that is able to sustain a dynamic ecological balance between humans and their enviroment to support the achievement of a healthy and happy quality of human life.

So, environmental health science revolves around human efforts to manage the environment in such a way that the degree of human health can be improved (Oktorie *et al*., 2020; Oktorie and Bert, 2020; Oktorie *et al*., 2019; Prarikeslan *et al*., 2020). In other words it can be concluded that environmental health is a science that is a branch of public health science that focuses more attention on planning, organizing, directing, supervising, organizing and evaluating all the factors that exist in the human physical environment that are thought to have a relationship or related to development physical, health or human survival, such that the degree of health can be further improved.

According to Law No. 36 of 2009 Article 1 concerning health is a healthy state, both physically, mentally, spiritually and socially that enables everyone to live productively socially and economically. Many factors affect health, both individual health and public health. There are factors that affect health, namely: heredity, environment,

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behavior and health service. These four factors besides directly affecting health, also influence each other. Health status will be optimal if all four factors together have optimal conditions as well. One factor that is in a state that is disturbed (not optimal) then the health status will be shifted to the direction below optimal.

Sanitation is one component of environmental health, which is intentional behavior to cultivate clean living to prevent humans from being in direct contact with dirt and other harmful waste materials, with the hope of being able to maintain and improve human health. Environmental health in Indonesia is still concerning. Not yet optimal sanitation in Indonesia is characterized by the high incidence of infectious diseases and starting diseases in the community (Suryani *et al*., 2020; Wilis *et al*., 2020; Yanti *et al*., 2020; Yuniarti *et al*., 2020). At a time when other countries have shifted disease patterns into degenerative diseases, Indonesia is still troubled by cases of dengue fever, diarrhea, leprosy, and hepatitis A which seem to be endless.

Indonesia's sanitation conditions are lagging far enough from neighboring countries. With Vietnam alone Indonesia is almost overtaken, especially compared to Malaysia or Singapore which has a high commitment to environmental health in the country. Sanitation will determine the success of the environmental health development paradigm for the next five years which places more emphasis on prevention from the aspect of treatment. With a good prevention effort, the incidence of diseases related to environmental prevent. In addition, the budget needled for prevention is also relatively more affordable than conduction treatment effort. Types of sanitation : 1) Steam sanitation, using steam flowing 76.70C for 15 minutes or 93.30C for 5 minutes. Steam sanitation can be done to sanitize materials and equipment for example by using, 2). Hot water sanitation, sanitation is done by soaking tools or materials such as knives, plates, small sized containers, using temperatures above 800C (not by pouring hot water / rinsing because it is not effective). Effects caused by denaturation of microbial cell protein molecules. 3) Hot air sanitation, sanitation uses a hot temperature of 82.20C for 20 minutes. This sanitation is usually used for sterilizing tools (dry sterilization) by using an oven. 4) Radiation sanitation, this sanitation is by utilizing UV rays or rays with a wavelength of 2500 A, which must be in contact with microbes for at least 2 minutes, 5) Chemical sanitation, using chemicals to kill microbes. Generally classified into aldehyde

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or reducing group. These are chemicals that contain the COH group, alcohol group, that is the chemical compound containing group X, phenol group, ammonium salt group, oxidizing group and biguanide group. The effectiveness of chemical sanitation is influenced by: contact time (minimum 2 minutes) optimum temperature of 21-800C if it is higher then it will evaporate (iodine) and be corrosive (chlorine), and if it is lower then it is not effective. Optimum pH 6-7, not effective on basic Ph. Tool cleanliness and agent contamination.

The scope of public health according to WHO there are 17 environmental health scopes, namely: 1) drinking water supply, 2) waste water management and pollution control, 3) solid waste disposal, 4) vector control, 5) prevention or control of soil pollution by excreta human, 6) food hygiene, including milk, 7) air pollution control, 8) radiation control, 9) occupational health, 10) noise control, 11) housing and settlement, 12) aspects of airiness and transportation, 13) regional planning and urban, 14) accident prevention, 15) general recreation and tourism, 16) sanitation measures related to epidemics / epidemics, natural disasters and population movements, 17) preventive measures needed to ensure the environment. In Indonesia, the scope of environmental health is explained in article 22 paragraph (3) of Law No. 23 of 1992, the scope of kesling is 8, namely: 1) water and air sanitation, 2) securing solid waste, 3) securing liquid waste, 4) securing waste gas, 5) security of radiation, 6) security of noise, 7) security of disease vectors, 8) health and other safeguards.

The problem of environmental health is a complex problem which requires an integration of various related sectors to overcome them. In Indonesia, problems in environmental health include: 1) Clean water, water used for daily needs whose quality meets health requirements and can be drunk if cooked. Drinking water is water whose quality meets health requirements and can be drunk directly. Clean water has a lot to do with waste management, waste management that is produced daily by the community and the disposal of wastewater that is directly flowed into the river channel. Will cause siltation of channels / rivers, blockage of river channels due to garbage. During the rainy season floods always occur and cause disease. Some of the diseases caused by poor sanitation and waste disposal and waste water that are not good include: diarrhea, dengue fever, dysentery, hepatitis A, cholera, typhus, worms and malaria. 2) settlement health, a

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large amount of human resources if it is inadequate to be the executor of development, then this will be a problem because the population is only the object of development instead of the implementer. So the state must work more to bear the lives of its inhabitants so that they can at least experience a decent life. But the fact is that there are still many Indonesian people who live in very poor conditions. Population density that occurred in Indonesia resulted in limited land for residence seedy. Of course this condition makes it difficult for residents to obtain a decent living facility, 3) waste, economic growth in Indonesia has increased the standard of living of its population. The increase in income in this country is shown by the growth of production and consumption activities. Garbage will cause air pollution, littering into open areas will result in soil pollution which will also affect the ground waterways, 4) insects and disturbing animals, insects as reservoirs or germs which are then referred to as vectors for example: rat fleas for pla/pestilence, anopheles sp mosquito for dengue fever, culex mosquito for elephantiasis disease.

CONCLUSION

Solutions to deal with environmental sanitation and health problems: 1) healthy water facilities, drinking water does not cause disease, the water should be endeavored to meet health requirements, at least try to approach these requirements, 2) settlements, healthy homes meet physiological needs, namely lighting, air and space sufficient motion to avoid disturbing noise. Meet the requirements for preventing transmission of disease between house occupants by providing clean water.

REFERENCES

Aprihatin, Y., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Direction for AHP-Based Community Nutrition Management Post Eruption of Dempo Volcano, Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p6-10

Arlym, L., D. Hermon, D. Lanin, O. Oktorie, and A. Putra. 2019. A Policy Model of Preparedness The General Hospital in Reducing Victims of Earthquake and Tsunami Disasters in Siberut Mentawai Island, Indonesia. International Journal of Recent Technology and Engineering (IJRTE). Vol. 8. Issue 3. p89-93

SENJOp
http://senjop.ppj.unp.ac.id/index.php/senjop
Science and Environmental Journals for Postgraduate
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p_ISSN 2655-5085
e_ISSN 2655-5239

Armaita., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Model of Community Adaptation using AHP in the Malaria Endemic Region of Lahat Regency-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p44-48

Asman, A., E. Barlian, D. Hermon, I. Dewata, and I. Umar. 2020. Mitigation and Adaptation of Community using AHP in Earthquake Disaster-Prone Areas in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p34-38

Barlian, E. 1992. Dampak Pembangunan Terhadap Penguasaan Tanah Ulayat di Sumatera Barat. FPIPS IKIP Padang

Barlian, E. 1994. Pengembangan Budaya Kerja di Lingkungan Pendidikan Sekolah Dasar. FPOK IKIP Padang

Barlian, E. 2010. Kajian Degradasi Lahan Di Kota Padang (Kecamatan Pauh, Lubuk Kilangan dan Kuranji). Pascasarjana UNP

Barlian, E. 2017. Aktivitas Motorik Suku Anak Dalam Desa Muaro Kelis, Kecamatan Tengah Ilir, Kabupaten Tebo Provinsi Jambi. Prosiding Seminar Nasional Pascasarjana Unsyiah

Barlian, E. 2000. Peran Serta Masyarakat Petani Dalam Pengelolaan Lingkungan Taman Nasional Kerinci Seblat. Jurnal Lingkungan dan Pembangunan. p235-246

Chandra, D., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Prediction of Tsunami Hazard Levels Based on GIS Analysis in South Bengkulu Regency. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p54-57

Hermon, D., Ikhwan, A. Putra, and O. Oktorie. 2020. Spatial Analysis of Tsunami Vulnerability Zones as a Basic Concept of Coastal Disaster Mitigation in Development Planning of Pariaman City. Journal of Advanced Research in Dynamical and Control Systems – JARDCS. Vol. 12. Special Issue 07. 681-690

Hermon. D. 2020. Introduction to the Editor-in-Chief about Disaster of COVID-19: How is COVID-19 Mitigation in Indonesia?. Sumatra Journal of Disaster, Geography and Geography Education. Vol. 4. Issue 1. p1-4

Hiasinta A. 2001. Hygiene Sanitation and Work Safety in Processing Food. Yogyakarta. Kanisius

Indika, P.M., D. Hermon, I. Dewata, E. Barlian, and I. Umar. 2020. Malaria Spatial Pattern as an Outbreak Mitigation Effort in South Bengkulu Regency. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p214-218

Juita, E., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Disaster Management of Dempo Volcano Eruption, Pagar Alam City-Indonesia Based on Local Wisdom. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p49-53

Juita, E., E. Barlian, D. Hermon, Dasrizal, and E. Zuriyani. 2020. Morphological Changes Batanghari Watershed Due to Illegal Mine: Case Study of Solok Selatan Regency – Indonesia. Journal of Advanced Research in Dynamical and Control Systems – JARDCS. Vol. 12. Special Issue 07. 664-670

SENJOp
http://senjop.ppj.unp.ac.id/index.php/senjop
Science and Environmental Journals for Postgraduate
Vol. 2 No. 2 (pp. 64-70) June 2020
p_ISSN 2655-5085
e_ISSN 2655-5239

Marni, L., E. Barlian, D. Hermon, I. Dewata, and I. Umar. 2020. Service Policy of Puskesmas Based on Dempo Volcano Disaster Mitigation using AHP in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p20-24

Oktorie, O., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Model of Disaster Mitigation for Liquefaction Potential in Pagar Alam City-IndonesiaIJISET-International Journal of Innovative Science, Engineering & Technology. Vol. 7. Issue 5. p107-113

Oktorie, O and I. Bert. 2020. Spatial Model of COVID 19 Distribution Based on Differences an Climate Characteristics and Environment of According to the Earth Latitude. Sumatra Journal of Disaster, Geography and Geography Education. Vol. 4. Issue 1. p17-21

Oktorie, O., Rusdi, Heldi, E. Barlian, A. Putra, and R. Ramadhan. 2019. Disaster Mitigation Based on Environmental of Coastal Area Communities in Pariaman City Indonesia. Sumatra Journal of Disaster, Geography and Geography Education. Vol. 3. Issue 2. p202-207

Prarikeslan, W., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. A Land Cover Changes Model Based on Carbon Stock in the Mount Patah Region of, Bengkulu-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p1-5

Suryani, I., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Policy Direction for AHP-Based Disaster Mitigation Education the Post Eruption of Dempo Volcano in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p39-43

Utami, Resty Aprilia. 2018. Impact of Sanitation on Public Health Coastal District of Kota Agung Districtso this forced the community to form a settlement

Wilis, R., E. Barlian, D. Hermon, I. Dewata, and I. Umar. 2020. Evaluation of Carrying Capacity Lands for Food Agriculture Based on Land Degradation in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p15-19

Yanti, E., D. Hermon, E. Barlian, I. Dewata, and I. Umar. 2020. Directions for Sanitation-Based Environmental Structuring using AHP for the Prevention of Diarrhea in Pagar Alam City-Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p25-29

Yuniarti, E., D. Hermon, I. Dewata, E. Barlian, and I. Umar. 2020. Mapping the High Risk Populations Against Coronavirus Disease 2019 in Padang West Sumatra Indonesia. International Journal of Management and Humanities (IJMH). Vol. 4. Issue 9. p50-58