



Civic Engagement through the Sendi Indigenous People in Realizing Ecological Citizenship in Overcoming the Impacts of Climate Change Based on Local Wisdom

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Abstract

Climate change is one of the studies of contemporary global citizenship caused by poor environmental management and has no ethics to be a topic of discussion of all world leaders who need to get immediate treatment with the involvement of citizens. The Sendi Indigenous Community as one of the community civics has a significant role in overcoming the impact of climate change that occurs in the area of Mount Welirang and Arjuno which is based on its local wisdom. The purpose of this research is to analyze the form of civic engagement of Sendi Indigenous People in overcoming the impact of climate change that occurs based on their local wisdom. This research uses qualitative research methods with a case study design and data collected using interview techniques, documentation, and observation which are then tested for validity using triangulation techniques to obtain valid data and in accordance with reality. Data were analyzed using an interactive model, namely data condensation, data presentation, conclusion drawing and data verification. The conclusion of this research is that the Sendi Indigenous People has a form of citizen involvement in the form of adaptation and mitigation in dealing with the impacts of climate change oriented towards sustainable agriculture and the use of agroforestry concepts in land management and settlements.

Keywords: *Climate Change; Sendi Indigenous People; Ecological Citizenship*

Introduction

The Preamble of the Constitution of the Republic of Indonesia, namely the 1945 Constitution of the Republic of Indonesia in the fourth paragraph explicitly states that the state protects the entire nation and for all Indonesian blood spilled and one of them is the protection of the environment. The occurrence of damage to the environment as one of the impacts of the tendency to catch up with economic growth. (Abdul Aziz Nasihuddin, 2017). In addition, the phenomenon of globalization which brings adverse effects, namely the absence of territorial boundaries between countries, brings the problem of environmental damage into reality and must be addressed immediately. (Mariyani, 2017). Environmental change for the worse is so obvious that it causes global climate change, closed community participation in

managing the environment, erosion of local culture reflected in environmental management, and forced exile of vulnerable groups such as indigenous peoples, the poor and other marginalized people.

The emergence of global climate change problems is one of the impacts of poor environmental management and is a real threat to various aspects of human life such as the economy, natural resources, infrastructure, tourism and socio-culture. (Dewi & Istiadi, 2016). Climate change is also a major contributor to the causes of disasters faced by humans, referring to by Turasih & M Kolopaking (2016) states that the occurrence of climate change is due to factors 1) human activities that produce greenhouse gas emissions, 2) increasing concentrations of greenhouse gases in the atmosphere, 3) Damage to the function of forests as a catcher of CO₂ gas (Carbon dioxide), 4) global warming or global warming which causes temperatures on the earth's surface to rise abnormally.

Hydrometeorological disasters as a result of climate change are a major contributor to the occurrence of natural disasters in the world as examples of disasters caused include flash floods, landslides, tornadoes, coastal abrasion, and heat waves that occur in several countries. (UNDP, 2009). Specifically in Indonesia as a country with a high frequency of disaster occurrence based on its geographical location, it can be grouped into hydrometeorological disasters and volcanological disasters as a result of data according to the National Disaster Management Agency throughout 2022 disasters including the category of very frequent frequency with a total frequency of disaster occurrence of 3,485 events out of 3,544 total disaster events that occurred in Indonesia. (Badan Nasional Penanggulangan Bencana, 2022).

The National Development Planning Agency (Bappenas) in 2021 developed a Climate Resilient Development Policy as a refinement of the National Action Plan for Mitigation and Adaptation to Climate Change (RAN-MAPI) released in 2014, but alleviating the problems of climate change is not only the task and obligation of the government to overcome it, but also requires the involvement of citizens (civic engagement) who have environmental awareness which can be referred to as ecological citizenship. Karliani (2014) explained that civic engagement identified with civic participation is an action or action taken by individual citizens to take a good role in various programs in the environment around them. Citizen participation related to climate change is needed in realizing ecological citizenship through adaptation and mitigation strategies based on existing local wisdom.

Indigenous peoples are an integral part of the Indonesian nation and have a very significant role in overcoming climate change, especially in maintaining ecosystems on land and sea, the involvement of indigenous peoples in dealing with climate change. Jawa Timur Province has the potential for ethnic diversity and indigenous communities, one of which is the Sendi Indigenous People, which has local wisdom in managing customary institutions, has its own government structure and customary law system. (Arofah, 2020a). In the context of protecting the environment, Sendi indigenous people have various regulations regarding the management and utilization of the environment such as the tradition of basuhan, cutting trees that are limited to a certain time, preserving and preserving springs called kucur tabut. (Adinda & Sarmini, 2021).

Based on a study conducted by USAID (2019) It is found that topographically, Pacet Village, Pacet Sub-district, Mojokerto Regency, where the Sendi Indigenous Community lives, is a high disaster-prone location for landslides and flash floods as a result of climate change.

Method

Researchers use qualitative research methods, as for the argument in using these research methods because it is to respond to the research questions in the background of the problem. The reason for choosing a case study strategy in this research is based on the perspectives of Yin (2016) Based on the literature and field observations, case study research usually focuses on how and why questions, has limited time to control the phenomenon under study, and focuses on contemporary issues. Based on the

literature and field observations, the issue of climate change adaptation and mitigation is the main concern and the strategies carried out by indigenous peoples in dealing with it are the focus of this research. This research uses primary and secondary data sources referring to the opinions of the following Mukhtar (2013) This research uses primary data in the form of interviews with leaders of the Sendi Indigenous People located in Mojokerto Regency, Jawa Timur Province, Indonesia, and direct observation related to their daily lives in realizing ecological citizenship based on local wisdom and secondary data in the form of documentation studies from laws and regulations related to the environment in Indonesia such as Law No. 32 of 2009 concerning Environmental Management and Regulation of the Minister of Environment and Forestry Number 13 of 2020 concerning Development of Nature Tourism Facilities and Infrastructure in Forest Areas, as well as international journals relevant to similar research. This research uses triangulation techniques, namely comparing the results of observations with the results of interviews conducted in digging data in the field, referring to the opinion of the researchers. (Creswell, 2014). Data analysis in this study used techniques from (Miles et al., 1994) namely data condensation, data presentation, conclusion drawing and data verification.

Result and Discussions

The existence of global problems that are so complex today requires alternative solutions as the right solution step with adjustments and innovations from what has previously existed. Risk-based problem solving as formulated by the World Economic Forum in 2023 explains

That currently the global world is no longer waiting for a long time to solve problems that are increasingly complex, the main problems faced by the global world today in various fields of life are being solved by various institutions or world forums. The current global problems refer to the fields of economy, environment, technology and health. Stakeholders are required quickly to solve the problem so as not to make it wider than previously thought. (World Economic Forum, 2023)

Based on the statement by WEF, it can be understood that there is a great risk for human life in continuing its life, related to the problem of climate change as one of the global problems, it can be understood that the opinion of the WEF is that climate change is a global problem. Victoria Tauli-Corpuz et al (2008) which explains that indigenous peoples are the group of people most at risk as victims of climate change which is currently leading to a climate crisis, it can be understood that there is a close relationship between the ecosystem where they live and indigenous peoples so that it forms an inseparable pattern of relationships.

The issue of climate change is one of the global issues of citizenship that has a destructive nature and has an impact on anyone, currently all levels of society in the world this is due to the emergence of the perception that the current climate change problem has threatened human life and become a social risk that has an impact on social reality. Currently, the problem of climate change has become a special concern, causing it to become a social threat at the global level.

As one of the community civics, the Sendi Indigenous People has local wisdom in managing the environment as a form of real citizen action in facing the real and massive impacts of climate change. The existing local wisdom is based on the concept of *sengkalaning diri*, which is the distinctive identity of the Sendi Indigenous People which has a fundamental in Javanese culture, namely *Memayu Hayuning Bawana*, which is all efforts to protect and care for the beauty of the world and its surroundings, so that from this fundamental concept, all residents who are members of the Sendi Indigenous People have a feeling to protect and care for the existing environment.

The concept of the flow of thinking of the Sendi Indigenous People if interpreted as the opinion of civic engagement by Adler & Goggin (2005) has the following linkages “*civic engagement describes how an active citizen participates in the life of a community in order to improve conditions for others or to help shape community’s future*”. Citizen involvement can be understood as an effort by citizens to

actively and directly participate in social life in optimizing situations and conditions in building a better future together with other citizens.

The existence of civic engagement carried out by the Sendi Indigenous Community in dealing with the impacts of climate change based on local wisdom when viewed from the opinion of the local community. Carpini (Pancer, 2015) which defines civic engagement as individual and collective activities that have a goal orientation to explore and solve problems that grab public attention. Based on the results of research findings in the field, activities to strengthen civic engagement carried out by the Sendi Indigenous People in managing the environment as an effort to deal with the impacts of climate change are stated to be carried out through the concept of thinking and action in the form of adaptation and mitigation based on local wisdom from the existence of traditions that are still preserved.

Based on their local wisdom, the Sendi Indigenous People always maintains what has become a noble habit in managing the environment, the purpose of maintaining activities is part of their line of thinking based on Javanese culture, especially environmental ethics. The topographical condition of their residence which is located in an area prone to hydrometeorological disasters results in efforts that must be made in dealing with the possibility of future disasters as a result of the impact of climate change which has now turned into a climate crisis. With the local wisdom possessed, it can be expected that activities by the Sendi Indigenous Community can reduce the occurrence of hydrometeorological disasters that are very likely to occur if there is no adequate local knowledge to survive.

The condition of the Sendi Indigenous People who are currently experiencing land ownership status problems with Perum Perhutani KPH Mojokerto which has an impact on their daily activities, It should be understood that the problem of land ownership disputes between the state through Perhutani and the Sendi Indigenous People has been going on for a long time, this is because the status of the village was lost due to the residents of the Sendi Indigenous Village who became diasporas in various villages below as a result of the swap between the Lurah during the Dutch East Indies with a swap scheme between the odd land and productive plantation land and then during the Dutch military aggression I and II which made the area where they lived a place of war between freedom fighters and the colonizers. (Arofah, 2020b).

The problem of land ownership disputes with KPH Perhutani Mojokerto did not stop the real action of Sendi Indigenous People's involvement in managing the environment as an effort to deal with the impacts of climate change. The involvement of citizens who are members of the Sendi Indigenous People emphasizes the aspect of mutual cooperation based on their local wisdom and provides a role model for other villagers who live under the area where they live. In addition, the involvement of the Sendi Indigenous People in dealing with the impacts of climate change is not only carried out collectively but also carried out by individual citizens as a form of responsibility and implementation of citizens' rights in managing the environment.

In carrying out adaptation and mitigation actions in dealing with the impacts of climate change, there are many obstacles, so a strategy is needed to strengthen the civic engagement of the Sendi Indigenous People to be more active in contributing to solving problems that have become the current public concentration, namely the issue of climate change. The following is a matrix of the forms of civic engagement of the Sendi Indigenous People in realizing ecological citizenship as follows:

Table 1.1 Civic Engagement in Facing Climate Change Based on Local Wisdom by Sendi Indigenous People

No	Table of Civic Engagement in Facing Climate Change Based on Local Wisdom by the Sendi Indigenous Community	
	Adaptation	Mitigation
1	Preserving the <i>tradition of ngangsu banyu aras</i> as a means of maintaining identity and efforts to protect water sources	Prohibiting the cutting down of trees without permission from Pamengku Adat and subject to social sanctions in the form of planting 10 trees for every 1 tree cut down without permission.
2	Conduct planting patterns by limiting the use of chemicals as fertilizers	Managing forest areas with a sustainable system by registering ownership through social forestry schemes.
3	Providing advice or advice to always be friendly to nature by Kasepuhan through community meetings.	Providing building standards that are friendly to the surrounding environment while maintaining the local wisdom of the Sendi Indigenous People.
4	Conducting agricultural activities by using the <i>titimangsa</i> as a guide in conducting agricultural activities	Prioritize the distribution of land for forests and agriculture and supervise the construction of new settlements by prohibiting the ownership of land by other people who are not descendants of Sendi natives.
5	Opening up areas that have potential as tourist attractions by prioritizing local wisdom and applicable customary laws.	Limiting the use of plastic waste and prohibiting landfilling of non-biodegradable waste.
6		Planting bamboo trees at points prone to landslides and planting various types of plants that do not absorb much water in the spring area

The discussion of strengthening citizen involvement carried out by the Sendi Indigenous People is one form of learning experience gained through community civics which plays a role in the formation of knowledge, skills and character of citizens through civic education in in formal education or community-based learning. In accordance with the opinion of (Cogan, 1999) which explained that “*the more inclusive term and encompasses both these in-school experience as well as ot of-school or nonformal/informal learning which takes places in the family, the religios organization, community organization, the media, etc which help to shape the totaly of the citizen.*” *Citizenship education* Civic education is carried out in non-formal or informal education which is organized outside the school as a formal institution. Civic education learning carried out by the Sendi Indigenous People in improving the knowledge capabilities, attitudes and skills of citizens in overcoming the impacts of climate change based on existing local wisdom.

The findings of this study were analyzed using the theory of communitarian citizenship, where there is a large contribution from the community or group of citizens in shaping the personality of individual citizens. Interactions carried out through adaptation and mitigation activities in dealing with the impacts of climate change in the context of shaping the character of citizens into individuals who have a sense of belonging to the environment where they live. Kalidjernih (2009) argues that political community in communitarian citizenship theory is an important means for people to elaborate collective identities and can then form group membership.

Communitarianism support the concept of active citizenship, which means active participation in a community as a group of individuals bound by consensual good values. In line with the opinion of Winarno (2009) It is evident that the Sendi Indigenous People is implementing every local wisdom in

various forms of citizen involvement with the main objective of achieving awareness of their rights and obligations in managing the environment.

As a civic ecology movement, as Deane Curtin argues (Isin & Turner, 2002) which explains that ecological citizenship has a core concept in the form of new ideas or thoughts that are oriented towards the goal of optimizing citizen awareness to be actively involved in efforts to manage the environment and become a fully flawless individual. With regard to the concept of ecological citizenship, Sendi Indigenous People can be said to be part of the ecological movement because the activities carried out by them have a clear orientation in environmental management, especially in dealing with the impacts of climate change based on local wisdom.

In line with the opinion of Deane Curtin (Karatekin, 2018) also explains that there is a dimension in ecological citizenship, namely participation, so that as a smart and good citizen must be able to participate in efforts to solve problems related to environmental issues, one of which is climate change. The Sendi Indigenous People in managing the environment also try to realize that as individual citizens they must participate in efforts to resolve and reduce the impacts of climate change as has been felt, namely the hydrometeorological disasters that have occurred in the period 2002-2016.

Conclusion

Poor and unethical environmental management by humans is the cause of climate change which ultimately harms humans themselves, the study of climate change is part of the discussion of ecological citizenship which seeks to increase awareness of the role of citizens in managing the environment. As one of the civic communities as well as the ecological citizenship movement, the Sendi Indigenous Community has a very significant role in overcoming the impacts of climate change based on their local wisdom. Various forms of citizen involvement activities incorporated in the Sendi Indigenous People community are adaptation and mitigation in the face of climate change, adaptation activities that are very influential in overcoming the effects of climate change are the use of the Javanese calendar, namely *titimangsa* as the basis for agriculture in order to produce abundant harvests, while for mitigation actions carried out by the Sendi Indigenous People are the existence of sustainable agricultural management and the concept of settlement with agroforestry.

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