The Role of Yogyakarta City Government in Building Communities Adaptation Capacity

Teti Deliany Putri[1*], S Sunarsih[2], Fuad Muhammad[2]

[1]Master's Program in Environmental Science, School of Postgraduate Studies, Universitas Diponegoro, Semarang, Indonesia
[2]Department of Mathematics and Natural Sciences, Universitas Diponegoro, Semarang, Indonesia

Abstract: According to the United Nations Economic and social institutions data in 2011. Climate change has emerged as one of the main problems at the beginning of the 21st century. The long history of Yogyakarta City as the center of government and center of activity has resulted in demographic pressures that have an impact on increasing GHG emissions. Human activities that tend to prioritize economic and social needs and exclude ecology can increase the potential for disasters due to the effects of climate change. This climate disaster requires attention because it can cause damage and if it is not addressed it will cause a greater loss of the new paradigm of Good Governance and Good Environmental Governance in the concept of sustainable development needs to be integrated into environmental planning. Furthermore, the role of local governments in improving community adaptability on a community scale through the Climate Village Program (ProKlim) is expected to succeed in the national GHG emission reduction target by adjusting to the potential and problems in their respective regions. The method used in this study with an analysis that is descriptive qualitative, in-depth interviews were carried out to several selected key persons. Based on the research, it is known that the stages carried out by the Yogyakarta City Government by the guidelines for implementing ProKlim include preparation, planning, implementation, development, and strengthening of actions that can increase adaptive capacity in the community. Through the implementation of ProKlim activities, the success of the activities is evidenced by the emergence of new villages that implement climate change adaptation and mitigation in each village every year.

Keywords: climate change; climate village program; role of regional government

1 Introduction

According to data from the United Nations economic and social institutions that in 2011, climate change has emerged as one of the main problems at the beginning of the 21st century. NASA's Goddard Space Studies Institute found that global surface temperatures in the past decade were 0.8˚C higher than in the early 20th century, with two-thirds of this warming occurring since 1975 (Hansen et al., 2010). Based on observations observed on several indicators of climate change there has been an increase in trends during the 21st century, such as increasing heat waves and high rainfall events (IPCC, 2001). Weather events and extreme climates must be anticipated to reduce significant risks due to the impact of climate change on society and ecosystems (IPCC, 2012).

Given the increasing role of urban areas globally and various internal processes and constraints (in contrast to rural areas) which have major challenges (but also opportunities) for adaptation to urban climate change, further progress of urban adaptation strategies is a major necessity (Birkmann, J., Garschagen, M., Kraas, F., Quang, 2010). Special attention must be given to urban areas for the following reasons:

1. The concentration of population, infrastructure and other assets in the city results in the potential for higher exposure and damage (Romero-lankao & Renewable, 2015).
2. Cities play a key role in a larger scale economic and social system (Hughes, 2013). Urban damage related to climate change will lead to crises on a wider scale (Garschagen & Kraas, 2011).
3. New economic growth such as in Asia, Southeast Asia and Latin America can have a negative impact on the initial resilience of urban systems, for example, social vulnerability, poverty, inequality, social and political instability or ecological risks and health related threats (Pelling, 2003; Satterthwaite, 2004) so that it has a negative impact on the prerequisites for successful climate change adaptation.
4. Apart from the potential for devastating major disasters, the daily dangers of small scale are often underestimated in urban areas. Even though the combination of small hazards can have more powerful effects than large scale disasters with low frequencies (Bull-Kamanga et al., 2003).

* Corresponding Author: teti.putri@gmail.com

5. In addition, given the high density and mobility of urban populations, the spread of disease will be easier within and between cities and can affect larger population groups, as shown, for example, by the global spread of SARS in urban areas (Glouberman et al., 2006) .
6. In many urban areas, especially in developing countries and new economies, infrastructure development lacks adequate sewerage systems or effective means of transportation for emergency response (Graham, S., & Marvin, 2011). This can contribute to increasing vulnerability to the effects of climate change.
7. Rapid growth and expansion in these cities often results in the loss of the government's ability to direct development and adaptation initiatives in a comprehensive, preventive and inclusive society (Roy, 2005).
8. Finally, the infrastructure built usually requires a longer time with a higher budget than in rural areas.

The city of Yogyakarta, which is located in the middle of Yogyakarta, is also not immune from this threat, every year the city of Yogyakarta, which is visited by people from various regions in Indonesia, experiences demographic pressures which have an impact on the increase of Greenhouse Gas emissions. If the disaster cannot be avoided, the last strategy is to prepare the government and the community to avoid or respond to disasters appropriately and effectively so that losses can be reduced. The new paradigm of Good Governance and Good Environmental Governance in the concept of sustainable development needs to be integrated into environmental planning (Budiati, 2012). The role of local governments in implementing the Village Climate Program by adjusting to the potential and problems in their respective regions is expected to succeed in the national greenhouse gas emission reduction target. The guidelines for implementing ProKlim which included preparation, planning, implementation, and development and strengthening of actions as shown in Figure 1

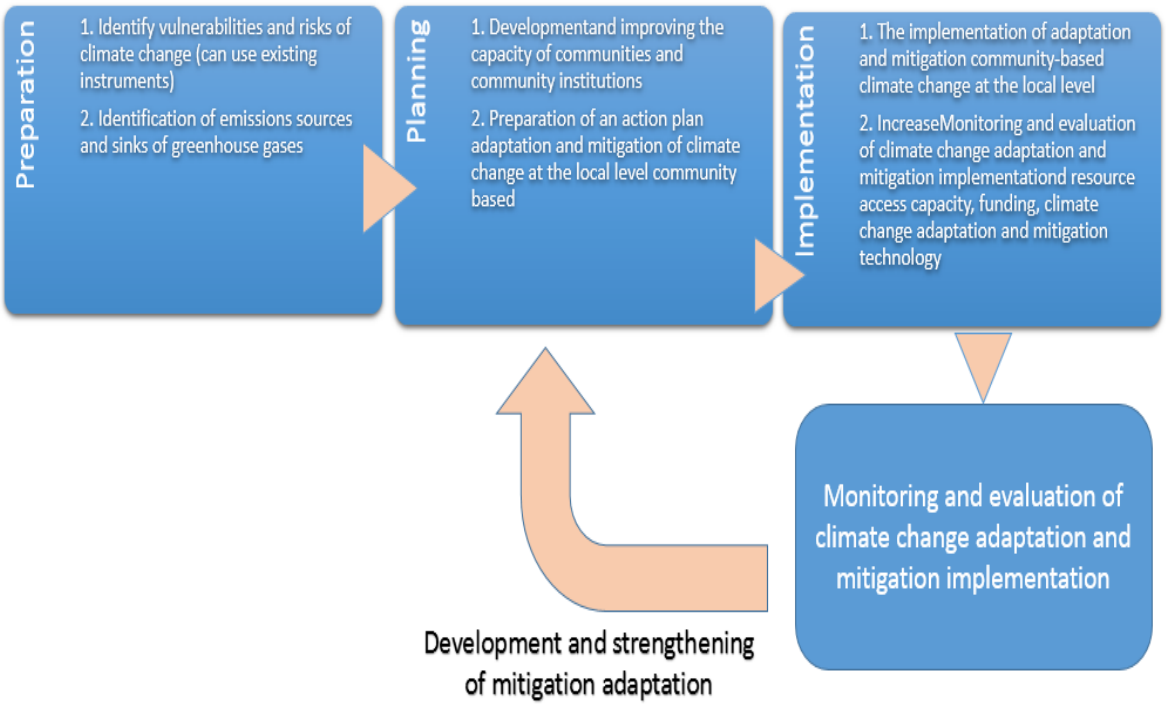

Figure 1. Implementation of The Climate Village Program

The development strategy is directed at achieving a social transformation based on human-*centered development value*. Thus ideally development projects are not designed and managed centrally and are more left to the community (Usman, 1998). Adaptation can be autonomous and incentives depend on policy makers. In line with Regional Autonomy, in this case the delegation of authority to local governments in the field of natural resource management and environmental preservation contains the intention to increase the role of local communities in environmental protection and management (Mina, 2016).

2 Material and Method

2.1 The study area

This research took place in the city of Yogyakarta. For details, the location of the study can be seen in Figure 1.

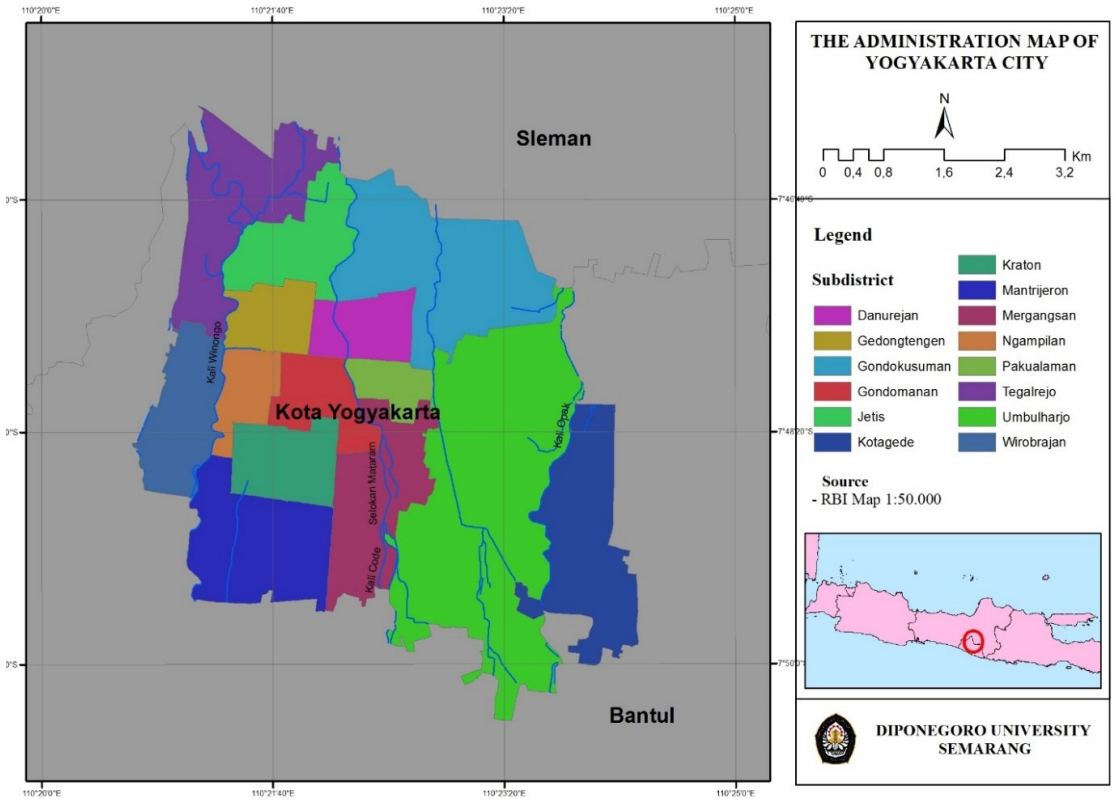

Figure 2. Research Location in the city of Yogyakarta

2.2 Data

Analysis of the role of the Regional Government in the development of ProKlim is done by using interactive model data analysis techniques according to(Miles, M.B. & Huberman, 1994). The stages of analysis include collecting data, reducing data *display* data and drawing conclusions / verification.

1. Data collection
   Data collection is done by conducting in-depth interviews and observations of selected informants.
2. Data reduction
   Data reduction is the process of combining and uniforming all forms of data obtained into one form of writing (script) to be analyzed. Records of interviews were changed to verbatim interviews and given the appropriate theme. The entire theme from the verbatim of the interview is then grouped and the flow is arranged into a regular and flowing discussion flow.
3. Display data
   Display data includes three stages, namely the theme category, theme subcategory, and the coding process. The clear flow of themes in the accumulated theme table is included in the categorization matrix according to the themes that have been grouped and categorized. The themes are then broken down in more concrete form and coded according to the sub-theme.
4. Draw conclusions / verification
   Withdrawal conclusions are carried out in 3 stages. The first step outlines the theme subcategories in the categorization and coding table along with verbatim interviews. The second stage explains the findings by explaining the research objectives. The third step is to conclude the explanation.
   Data triangulation is done to test the validity of the data obtained from the interviews. Triangulation is an examination of the validity of data that uses something outside the data for checking or comparison purposes (Christiyanti, 2018). Triangulation in this study was done by comparing primary data (the results of interviews with the Environmental Agency in Yogyakarta City and the District Office), secondary data (regulations) and the people who were the object of research.

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3 Result and Discussion

3.1 Dynamics of the Yogyakarta Community

The role of the local government of the city of Yogyakarta is very important in increasing community participation in participating in protecting the environment. The Segoro Amarto Movement (The Spirit of Mutual Cooperation "Agawe Majune Ngayogyakarta") is a noble idea from Sri Sultan Hamengkubuwono X and has been implemented for the first time by the City of Yogyakarta. Segoro Amarto was built in the city of Yogyakarta to mobilize the social power of the community more comprehensively while handling poverty in an integrated manner. This movement is more about changing values that are reflected in attitudes, behaviors, lifestyles, and forms of togetherness in life to be better and include all physical and non-physical aspects.

As a cultural movement to foster the values of cooperation, care, and independence among citizens, "the poverty alleviation paradigm is behind, not 'I accept what?' but what do I give? " In Segoro Amarto the government and the community together build a spirit of discipline, independence, social care, and cooperation as a pervasive way of life that is pervaded by all levels of society "We care, we cooperate, we are empowered". Development can succeed if all components of society can unite into a part of development, there is no name for development that is successful because of one person. In total, the philosophy of Segoro Amarto can be interpreted as a shared spirit to realize a better life in its environment, village, city or country. Segoro Amarto as a place to live and live (natural resources with all its wealth) and is a means of interaction and transformation between Nation and Culture.

The poverty that still occurs is also closely related to the spirit of progress, enthusiasm for change. The Yogyakarta City Government through the Climate Village Program (ProKlim) seeks to synergize various potentials with conditions in the community to complement each other. In the hope that this can build mutual values of concern "Sadaya nyawiji rila gumreget ambangun diri lan nagari" which means together sincerely to build themselves and the State.

3.2 Implementation of the Climate Village

The next climate village program in brief with ProKlim launched by the Ministry of Environment and Forestry is a government program that aims to increase understanding of climate change and its impacts so that all parties are encouraged to carry out concrete actions that can strengthen community resilience in facing climate change and contribute to efforts to reduce greenhouse gas (GHG) emissions. One of the benefits of the Climate Village Program is increasing community resilience in the face of climate variability and the effects of climate change (Kementerian Lingkungan Hidup dan Kehutanan, 2016).

The forerunner to the development of a climate village has been initiated by the Yogyakarta City Government through the Green Village Program since 2004. The Village Hijau program is carried out by residents in every sub-districts in the city of Yogyakarta (consisting of 45 sub-districts in 14 districts) each year and activities implemented in Village Hijau almost the same as the Climate Village category. However, the Climate Village Program is more detailed in the law that is carried out in the lowest administrative area at the level of the residents or hamlets and at the highest level at the sub-district or village level or areas where the community has continuously adapted and mitigated climate change at least 2 (two) last year.

For the objectives of implementing a climate village to be realized, the strategies implemented by the Regional Government of Yogyakarta City include preparation, planning, implementation, and the development and strengthening of actions. Details of activities are as follows:

Phase I. Preparation

1. Increased human resource capacity of Government institutions
   Yogyakarta City Environmental Agency as the authorized agency in developing climate villages each year continues to carry out capacity building in supporting climate change adaptation and mitigation efforts. One of them is through socialization to all stakeholders to develop the potential of their communities to build climate villages. Village Urban climate does not only emphasize physical aspects but aspects of development and behavior change and of course sustainable, because the ideal city starts from the ideal village.
2. Strengthening community capacity in implementing climate change adaptation and mitigation efforts and forming institutions that also accommodate cultural/traditional/customary activities. Furthermore, planning for aspects of capacity building and community institutions is carried out by the local government through the identification of training needs and planning for community capacity building, among others: socialization, counseling, training, education, comparative studies, attending seminars.
3. Encourage the creation of leadership at the community level to ensure the sustainability of the implementation of climate change adaptation and mitigation activities and the economic activities of the community.

Phase II Planning

1. Arrange participatory and collaborative activities/program plans.
   In principle, proposals are prepared and delivered in stages/levels starting from the level of RT/RW, Village, District, and the last in the Regency/City. Data from proposals from all villages/sub-district that have been collected will be discussed and discussed, the results of the subdistrict deliberations are set out in one document in the form of a list of proposed sub-district activities that will be proposed at the the district/city plan. At the stage, all aspirations that enter through the district/city plan will be accommodated together with proposed activities from each Regional Work Unit. This forum is a discussion of incoming proposals, it is

also a facility and facility to coordinate between Subdistricts and the relevant Regional Work Unit specifically to synchronize proposals for activities in each sub-district. Sub-district proposals will be grouped and adjusted to the type of Regional Work Unit activities that are authorized to accommodate the proposal. At this stage, the Regional Work Unit will verify the sub-district proposal before it is written in the list of proposed Regional Work Unit activities. Programs/proposed activities that have passed the verification phase will be included in the Regional Work Unit Work Plan by regional development priorities sourced from the capacity of the Regional Budget and the community. Besides, planning for development activities must pay attention to the three pillars of the principles of sustainable development, which are related to economic aspects, social aspects, and environmental aspects.

2. Make climate village implementation guidelines to support the implementation of climate change adaptation and mitigation efforts and community economic activities. The components of climate change adaptation and mitigation actions that can be developed in ProKlim as shown in Figure 3.

Figure 3. Components of ProKlim'Activities

3. Encourage the optimization of the potential use of sub-district funds to support the implementation of the climate Village Program

Phase III Implementation of Climate Villages

1. Establish partnerships with related Regional Work units, business world, and non-governmental institutions. The implementation of ProKlim implementing a partnership will be very strategic as a multi-sector integration program. With this approach, the stakeholders interact actively in the process of solving problems related to climate change to strengthen social capacity at the local level. Implementation of adaptation is carried out by coordinating and integrating adaptation activities into each task and authority of related Regional Work Unit such as the Department of Agriculture, Food Security Agency, BNPB or integration with programs from the Central Government such as the Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Energy and Mineral Resources, Ministry of Energy and Mineral Resources and Fisheries and others
2. Conduct an assessment of the Climate Village Program annually. In the course of the journey, not all green villages run optimally for example from the side of the manager who lacks enthusiasm. Increased motivation of residents was then carried out by the City of Yogyakarta Environmental Agency by giving awards to green villages that were considered good management.

Phase IV Development and Strengthening of Action

1. Disseminate the success of climate change adaptation and mitigation efforts at the local level so that it becomes a best practice that can be replicated by other locations.
2. Cooperate with universities to develop and implement appropriate technology that supports climate change adaptation and mitigation efforts at the local level as well as community economic activities.
3. Conduct monitoring and evaluation. One of the objectives is the selection of the location of the Climate Village which has received an award of at least 2 years before and that can develop its activities to be proposed as a candidate for Climate Village locations at the national level

Development is a conscious and planned effort carried out continuously by the government supported by full participation community members (Mardikanto & Soebiao, 2013). Furthermore, Martopo & Mitchell Sumarwoto in (Sugandhy, A dan Hakim, 2007) said that sustainable development is a change that leads to a positive or better in social aspects, the economy of which implementation does not neglect ecological or environmental and social aspects where all layers of society depend on environmental aspects. The successful implementation of sustainable development requires policies, planning and social learning processes that are carried out in an integrated manner. Climate change adaptation and mitigation efforts can be integrated with environmental management activities that have been carried out by the community at the local level by taking into account climate risk factors and the impact of climate change that might occur. This is where the role of the Yogyakarta

City government as a form of an entrepreneur, coordinator, facilitator, and stimulator in determining the policy of the direction of development and adhered to by all components of society.

The development program that comes from above/top-down is currently felt to be incompatible with the era of democracy in the community of the city of Yogyakarta. The top-down mechanism causes the feeling of handarbeni (togetherness) to be less visible because it is often not under the real conditions needed by the residents. Through the development planning meeting which starts at the lowest level at the sub-district level, then it will be leveled next to the Sub-district and District/City which focuses on community participation in the entire development process. The development planning meeting runs by adhering to the values and spirit of cooperation that has taken root in the culture of Indonesian society that every citizen has the right to decide and plan what is best for themselves and the environment and the best way to make it happen.

4 Conclusion

In implementing climate change adaptation activities, local governments need to make innovative planning, incentives, internal programs, ideas, and knowledge that are needed through local networks and pilot projects, and the ability to build partnerships with various existing stakeholders. Local governments also need to formalize adaptation planning, for example in the form of laws and legislation, to strengthen the legitimacy of the process and facilitate implementation and coordination across sectors, prioritize adaptation into existing development, disaster risk reduction, public health, or sustainability plans. Effective stakeholder engagement and management of knowledge of adaptation and mitigation of change at the site level is one of the important aspects to achieve climate change control targets at national and global levels.

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