

Participation of Community in Malang City from Preventing Flood Disaster

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Abstract

Flood disaster which occurred in several areas in Malang City of East Java, it resulted the immersion water of flood in several protocol roads and houses in Malang City. An event of flood events like this, it will continue to occur every year, if the main cause is not immediately addressed in a planned manner. Therefore, identification of the causes of flooding needs to be solved and the solution formulated in real terms. In general, the main causes of flooding that occurred in Malang City, in addition to heavy rainfall, the number of new housing (real estate), modern shopping centers, shop houses (shop) in the city of Malang, shallow drainage (drainage) and also due to damage forests in the upstream area which then carry the flood into the lower downstream area, and the number of locations that should have become green open spaces as water catchment areas are actually occupied by permanent buildings. Related to this, there needs to be a review of existing policies that can overcome the problem of flooding in Malang City and optimize Participation of Community to be able to take initial action in flood prevention.

Keywords: Flood, permanent building, Participation Community

1. Introduction

Geographically, Malang City is a city located in the surrounding highlands and surrounded by several mountains, including Mount Anjasmoro, Mount Arjuno, Mount Argopuro, Mount Bromo, Mount Welirang, Mount Kawi. Ironically, almost every year when the rainy season comes, Malang City always experiences floods, so that it causes flooding and destruction of dozens of houses and protocol roads submerged by floods. Among the areas of Malang City that were submerged in flood water included villages: Lowok Waru, Sumbersari, Tlogomas, Madyopuro, Lesanpuro, Kedungkandang, Gadang, Sukun, Tanjung and Kasin. Flood events like this, it will continue to occur every year, if the main cause is not immediately addressed in a planned manner. Therefore, this problem needs to be sought for the cause and to solve the prevention, mitigation solutions in a real, planned and integrated manner.

In general, the main causes of flooding in various cities, apart from the destruction of forests in the upstream areas which then brought flood waters and land to lower downstream areas, were also further aggravated by the number of cities that did not have master plans, both for management of river and drainage. Many cities do not provide recharge areas such as forests, parks, and some areas that are hydrologically able to absorb excess water

Therefore, flooding in various urban and rural areas can be avoided if the government and the community have local wisdom to keep the park, forest and carrying out the study to the plans that have been made as well.

Local protected areas, such as areas that should be water absorption that are free of buildings to a certain length, are actually occupied by buildings. The construction of new housing (real estate), Modern shopping centers and shop houses (Rukoh) in Malang City, is currently considered to be the cause of the emergence of new flood locations in Malang City.

Flood disasters in urban and rural areas can be avoided or prevented / overcome if the government has a good urban and regional spatial planning (RT-RW) and includes (participation) by the community for prevention or prevention of flooding in their respective regions (Djalal & Supriadi, 2001).

The frequency of floods in Malang city needs to be anticipated by the Government of Malang City by including the role of the community in order to reduce floods that result in property and human victims. During this time, the efforts made by the City Government of Malang with juridical means, namely the issuance of local and Regional Spatial Regulations (RT-RW) and structurally to the government below (District and sub-district / village) have not succeeded in preventing the occurrence flood in Malang city.

The occurrence of a series of flood disasters in a short period of time and always occur in every year, this requires greater effort to anticipate so that the losses caused by the flood, it can be minimized. Various efforts

made by the local Government which are still structural (structural approach) have not been fully able to overcome the problem of flooding. Likewise, sectoral, centralistic, and top-down policies without involving the community, this is not in line with global developments that demand the existence of decentralization, democracy, and stakeholder participation, especially those affected by the disaster (Ligal, 2008). Thus, flood prevention which is usually carried out with mere physical development (structural approach), it must be synergized with non-physical development (nonstructural approach) which provides wider space for the emergence of community participation so that more optimal results are achieved.

At present, the community in the process of formulating policies for the implementation of spatial planning in the form of regulations in Malang city which is related to flood prevention has not been optimized, then the development violation caused the flood in Malang city.

In connection with these failures, for the prevention and mitigation of floods, except being carried out in a juridical and structural manner by the Local Government of Malang City, it is necessary to have participation by building, making and repairing infrastructure and concrete actions to prevent flooding in Malang City as well.

With existing of participation community, the prevention of flooding has only been overcome by making the local regulations and orders / tasks structurally for subordinate institutions and the construction of culverts or waterways. Then for the next way / technical prevention and flood prevention must be integrated in a real way, namely by including (participation) the community in order to obtain maximum results.

2. Research Methods

The type of research conducted in this study is sociological juridical (non-doctrinal) which based to doctrinal research. Jurisdiction of sociological or non-doctrinal research is a study in the form of empirical studies of the process of occurrence and regarding the process of legal work systems (spatial planning policies) in the community related to flood events. This Non-Doctrinal Research is also referred to as Socio Legal Research (Moleong, 1996).

The approach used in this study is the rational approach model, which is to build understanding of interpretation as the basis for a critical review of spatial planning policies (Faisal, 1990). Understanding this main concept, is space which includes land, sea and air as a unit of territory and place of human beings and has multi dimensions, so that in its utilization must prioritize the principles of justice, benefit and certainty (Kuswahyono, 1999).

In this study data was obtained using primary data and secondary data. The way to obtain primary data is by using two ways, namely: 1) In-depth interview technique (dept interview). 2) Observation. While secondary data is obtained through document studies (Sunggono, 2004)

In this study analyzing data that is regulating, sorting, grouping, giving code and categorizing it against notes or field data obtained through interviews (interviews), observation (observation) and documents in the form of reports relating to phenomena that occur in the event of a flood. After the above data is collected (sorting, grouping and coding), both primary and secondary data that has been considered valid, the next step constructs these data through a strategy or approach that relies on the logic of thinking induction conceptualists on the one hand, and emik logic thinking on the other side (Wignjosoebroto, 1998).

The next analysis is conducted by interpreting data and it obtained by induction and comparing, testing or verifying with existing theories. Comparison or testing is intended to determine findings with a theory that examines the things that are the focus of research.

3. Result and discussion

3.1 General Description of Spatial Planning in Malang City

Malang is a city located in East Java. Malang City is bordered by Pasuruan Regency in the north, Lumajang Regency in the east, Malang Regency in the south, and Batu City in the west.

Administratively, Malang City consists of five districts, 45 sub-districts and 12 villages. The five sub-districts are: Klojen District, Blimbing District, Sukun District, Lowokwaru District, and Kedungkandang District.

Malang City has an area of 124,456 square kilometers and is inhabited by 700,000 residents. Population density reaches 5,000 - 12,000 inhabitant per square kilometer with a growth rate of 3.9% per year.

In physiography of East Java, it is included in the zone of the Southern Mountains which consists of a highland surrounded by hills and mountains. Some of these mountain peaks include Mount Anjasmoro, Mount Arjuno in the north, Mount Kawi and Mount Batok in the West, Mount Semeru and Mount Bromo in the East. These hillsides generally form increasingly sloping hills approaching Malang City. The valleys formed between the mountains generally narrow, deep enough with steep cliffs up to steep and V-shaped. At the bottom of the valleys, there are river grooves which are the Brantas tributaries that cross the city of Malang stretching from the North-West towards the South of the City.

Many titles are aimed at Malang cities such as Paris of East Java, this title is given because of its beautiful

natural conditions, its cool and clean climate, like the city of "Paris" of East Java. In addition, Malang is also dubbed as the "City of Education", such a predicate that given because the city is very calm, the population is friendly, the price of food is relatively cheap and adequate education facilities are very suitable for studying. There are at least five public universities established in Malang: University of Brawijaya, State University of Malang, Maulana Malik Ibrahim Islamic State University Malang, State Polytechnic of Malang, State Health Polytechnic of Malang and dozens of Private Universities.

During the last ten years, in general the physical development of buildings has grown rapidly, but these developments cannot be felt evenly in all corners of the city. There has been a rapid growth in physical development on the North and West sides of Malang Regency, while on the other hand, the development of physical development has been slow, namely on the East and South sides of the city. As a result, there is a buildup of load movements in areas that are developing very rapidly and this causes inefficiencies in daily traffic movements. One example is the construction of a large mall, namely MATOS (Malang Town Square) which is considered a monumental work by the local government, built in the West in the education environment, namely there are kindergartens, elementary schools, junior high schools, high schools and colleges. The construction of the Mega Mall, which was inaugurated on May 26, 2005, has left a reflection of the citizens of the city of Malang so that the Mall is not repeated again. If traced, the development of water catchment areas in the city of Malang, among others, is behind the Brawijaya Museum and the temporary channel that runs along the Jakarta road - Jalan Gede and Pulosari Road, has disappeared but in fact there has been a luxury residential area and also some shops behind the Brawijaya Museum. Thus, the city of Malang which had never been flooded at this time, at this time the most common event is when the rainy season comes, roads become flooded and in some places floods (although this flood is only brief, waiting for rainwater to flow to existing tributaries), such as in area of Gajayana Stadium, on the Ijen Highway, Pulosari Road, Patimura Road, Sawojajar Housing Area, Sukarno Hatta Highway, and so on.

3.2 Concept of Flood

Flooding is a natural phenomenon that occurs because of the heavy rains that occur in areas with a lot of river flow. In Indonesian Dictionary, stated that floods are interpreted as heavy and heavy water due to continuous rain that flows through the river so that it overflows out of the river so that it sinks the surrounding land (dry land). Whereas flash floods are large floods which flow profusely as flood waters that overflow and inundate river cliffs and land around rivers that hit plants, trees, cultivation / rice fields and settlements, can even cause victims of human lives and property. Flood is also interpreted as coming water in a large area so that it covers the surface of the earth. In the Regulation of the Director General of RLPS No. 04 of 2009 explains that flooding is a relatively high flow of water, which is not accommodated by the flow of rivers or waterways, or because the flow of water flow in the river is relatively larger than normal conditions. due to rain that falls in the upstream or a certain place that occurs continuously, so that the water cannot be accommodated by the existing river channel, then the water overflows out and inundates the surrounding area. In short, flooding is the overflowing of river water outside the river beyond the river cliffs caused by the continuous and heavy rainfall, so that the river cannot accommodate heavy rainfall.

Thus, flooding is an event in which the dry land becomes normally flooded by water, this is due to very high rainfall and the topography of the area in the form of low to concave land. In addition, flooding can also be caused by an overflow of surface water and its volume exceeds the capacity of the drainage system. The occurrence of flooding is also caused by the low infiltration / absorption capacity of the soil, then causing the soil to no longer be able to absorb water. Floods can also occur due to rising water levels due to rainfall above normal, temperature changes, dikes / collapsed dams, and stagnation in other places.

Adapun penyebab yang terjadi di kota Malang adalah akibat tidak ada resapan air. Banjir jenis ini diakibatkan karena tanah/daratan tidak mampu menyerap air (karena tanahnya padat, karena tanahnya lembab, karena tidak mempunyai resapan air). Banjir ini merupakan banjir yang terjadi akibat curah hujan yang tinggi dan airnya berlebihan sehingga meluap dan menggenangi wilayah daratan. Dalam hal ini terjadinya banjir lokal sangat tinggi.

The main cause of the disaster of flood in Malang city is the impact of no absorption of water. The type of this flood may be caused by the land which is not able to absorb the water (due to the solid soil, moist soil, there is no absorption of water). This flood is a disaster that takes place due to the high rainfall and excess of water, then it is overwhelmed the land. In this case, the flood like this is frequently happens.

3.3 Factors that cause flooding in Malang City.

3.3.1 Housing and Mall as the Cause of New Locations of Floods in Malang

The large increase in the number of new housing in the Malang City, is currently considered to be the cause of the existence of new flood locations in Malang City. This was conveyed by the Head of the Settlement Service of local Facilities and Infrastructure and the existing conditions in the area of Malang City emerged new flood

locations in Malang City. From the results of the study, it seems that the occurrence of the new floods is due to the absence of outlets or outlet of the drainage system.

These new housing needs will always be there. Meanwhile, housing usually depends on the existing main drainage channel. Logically, if the rainfall is the same but the drainage channel load increases, the water will overflow and there will be inundation or flooding. For this reason, legal instruments are needed and to be responded by the Government of Malang City to make a local regulation (PERDA) regarding the layout of the area. In this local regulation, it should include environmental drainage. the environment will absorb only 10 percent of the water while 90 percent is flowed and vice versa, resulting in a balance between water absorption from high rainfall and environmental conditions around the area. Importantly, the existence of local regulations that will clearly determine who has the right to publish or validate the site plan or layout of the area to be built.

So far, according to Kimpraswili, the site plan area in Malang City regarding its drainage system is still unclear. There is no clear direction regarding the direction of the new building's drainage system. As a result, all overload the main drainage channels. This is what makes the problem of flooding in Malang City never finished.

The City Government admits, currently department of settlement and infrastructure of Malang still has twelve locations of floods from 25 locations that have been handled so far. According to him, the twelve flood locations will be completed this year. The remaining flood locations to be cleared by department of settlement and infrastructure of Malang including the three junction of Ahmad Yani road, crossroad of ITN, Veteran road located in front of MATOS, and so on. Approximately, apart from being clogged with rubbish, these drainage sites have narrowed due to the construction of new buildings. It was different from what was conveyed by members of the Malang City Council, who said that if there were still floods in Malang City, it meant that the planning program in Malang City was not right. That is to say that the construction of the culverts that have been fixed does not fit so that the water can return to abundance. This is what was conveyed by the Malang City Regional Representative Council (DPRD) Commission C (development field), Pujianto. According to him, the need for flood planning in Malang City is more appropriate and effective.

With the rapid development in Malang city, which certainly changes the function of the land which is supposed to be a green open space into sturdy buildings, including "Panorama Square" further strengthens the indication of the predicate of Malang city as "Mall City", no longer "Education City International" just what the academics in this city have been buzzing. Remembering clearly, how activists from various universities in the city strongly reject the development of Malang Town Square, followed by the mega project "Malang Olympic Garden" under the pretext of "only" to welcome the Asian Champions League event, and now, "Panorama Square". Economic equality is the alibi of the City Government. It is true, with the construction of "Panorama Square" it will conduct the equality of economy in Malang, no longer centered in the center of Malang, but also in North Malang. This development has resulted in flooding in Malang City.

The local government itself seems to prioritize the licensing of the construction of Malang Olympic Garden, Panorama Square, and others regarding the prestige of Malang city. How ironic, if later Malang gets Adipura but still found flooding here and there, especially in places that are very close to the green area of Ijen boulevard. The city government should also pay attention to the balance of recharge areas, so that the "culture" of floods can be minimized or even eliminated in Malang. It is realized that flood prevention cannot only be done if it only involves one or two government agencies. Therefore, what needs to be done is the mental recovery of the community first, how the community is made aware of the importance of participating in overcoming floods. Therefore, what needs to be done is the mental recovery of the community first, how the community is made aware of the importance of participating in overcoming floods.

With regard to the above phenomenon, it is a paradox of the principles and objectives of spatial planning. The principle of efficiency states that: existing space must be utilized optimally in line with its economic value. While the principle of equity or equity states that: spatial use must pay attention to social values, especially to ensure the possibility of equal access for the community to use space as the main source of development. Relocation of slum settlements for supermarkets, hotels, luxury housing or offices in several aspects shows the importance of excessive efficiency or equity.

The real fact of the problem of space (spatial) above appears to be a problem such as:

- a. The shift of fertile agricultural land into an industrial place.
- b. The occurrence of pattern of mixed used between industrial sectors with other socio-economic activities sectors with its opposite characteristics
- c. There are cases of environmental pollution and some rivers have been contaminated with hazardous wastes. Likewise for ambient air quality that has changed which tends to create a "greenhouse".
- d. The emergence of slum areas around the centers of industrial activity, mainly due to the planning of industrial activities not followed by planning housing labor and other supporting services.

Therefore, participation community is very necessary for flood prevention. The researcher remembered 3M from KH. Abdullah Gymnastiar, "Starting from yourself, starting from the smallest, and, starting from now." Yes, we don't need to be pretentious about proclaiming a non-logic program, starting from now managing

ourselves about the importance of cleanliness, start throwing garbage in its place first, and most importantly, start from now. Then a healthy environment will be formed, and hopefully it will be flood free.

3.3.2 Lack of Green Open Space, Deforestation, Water Infiltration and Narrow Culverts / Drainage in Malang City

But now, a fundamental reflection about Malang in the past is how to trace the history of Malang in the past that is associated with the state of Malang now? What made Malang's fundamental differences in the past with Malang today and even in the future?

Comparing Malang in the 1980s, at least researchers entered and became acquainted with the Malang region, certainly very different from now. In the 80s, Malang was still very cold. To adapt to this cold climate it takes months. Even if we take a walk at night, almost none of these entertainment seekers are not wearing thick jackets or clothes to resist the cold.

The very cold climate is influenced by the geographical conditions of Malang which besides being flanked by mountains, there are still many rice fields, water catchments, and many trees. When the rainy season arrived, Malang's condition was really very cold at that time. However, it is almost impossible to find puddles in the streets or even heavy rainy. Infiltration of water is still ubiquitous, so water does not cause flooding on roads and houses.

That condition is what we no longer find in Malang, besides today the air temperature in Malang is very hot, every time the rainy season arrives, in various areas in Malang floods. In conditions of heavy rain, in several strategic locations and routes such as Sokarno Hatta, Borobudur, MT Harjono, and others, there have been floods. Even in a number of houses located on the roadside, "getting used" was flooded.

Now every time the rainy season comes, in the hearts of road users are also hit by anxiety or myopic feelings, the reason, is not only congestion that must be faced, but the flooded roads also make road users must make it a "serious challenge" that must be addressed, which can have an impact in damage to the vehicle if it is not careful and patient in driving it.

In recent years, massive flood news has overwhelmed the mass media, or in every rainy season, identical to the news about natural disasters in Malang. for example Today is heavy rain, the next day the newspaper has proclaimed various forms of events ranging from fallen trees and houses of residents who were severely damaged by the flood disaster.

for example in 2007, flooding hit parts of Malang City due to heavy rains and this resulted in hundreds of homes being flooded and water levels reaching two meters. This flood in Malang City resulted in around 111 houses in five urban villages submerged by water by the Amprong River overflow. The villages are Madyopuro, Lesanpuro, Kedung Kandang, Mergosono and old city of Malang.

Such a flood disaster in Malang is a sample that strongly criticizes the occurrence of paradoxical differences in the pattern of development in Malang. This difference makes the people of Malang suffer the consequences caused by the flood. This paradoxical difference can not be separated from the development model in the Malang region which is classified as very "radical" or even revolutionary. Malang has changed its condition by the government and powerful investors to become industrialized areas of shops, malls, entertainment, flats, or transformed as shopping areas that make people become consumptive and dissolve in a vortex of life that promotes the charm of the entertainment world.

Malang's development model that pursues the target of the realization of shopping industrialization has cost a lot of money, which is not borne by the government and the owners of strong capital, but by the people who accept the bad risk due to the loss of green open space, which is a recharge area water.

The results of the study show that green open space in Malang City only has four percent of the total area reaching 110.06 square kilometers. Whereas only 40 percent of water absorption land is left. This condition is already on the threshold and violates government regulations. PP No. 63/2002 has outlined that the area of open green space is at least 10 percent of the total area of each district / city

Green open space in Malang City only recorded an area of 3,188 hectares or 2.89 percent of the total area. The green open space is a 12 hectare park or city forest, 80 hectares of riverbanks, 150 hectares of land and gardens and 2,940 hectares of rice fields.

The more depleted area of green open space is clearly the root of a serious problem that makes Malang now different from "Malang Tempo Doloe". Malang in the 80s still had special "wealth" in the form of vast open green space, while Malang was now becoming "unfortunate Malang" due to the "poverty" of green open space.

The lack of green open space made Malang now have a new condition when the rainy season arrived which was called flooding or when the dry season arrived, the temperature in Malang was getting hotter. This condition must not be allowed to drag on, because if these conditions continue to drag on, it is feared that in the future (when the rainy season comes), Malang will sink or become more flooded everywhere, which makes Malang really worse.

Relying on the Regional Government Budget to overcome or reduce Malang city from floods can indeed help, but this budget is more healing, and does not dissect the root of the problem. Revitalization of culverts and

revamping of watersheds has been carried out by Government of Malang City. Other efforts that can be made by local governments include controlling the development or development of entertainment and shopping industrialization which clearly relates to the needs of land or land.

If the rest of the open green space in Malang is still going to be projected by the government to fulfill the ambitions of capital owners or sustain business acceleration, the people of Malang City are worth more worry if Malang will only be *tuyang-tuyang* which is remembered as the “*seribu satu malam*” city which is only used as a fairy tale for children who want to go to bed (sleep).

Malang City Government, said Poedjiono, has confidence that the culverts in Malang City will be able to overcome the flood if it is functioned properly. However, unfortunately, until now the culvert blueprint of Malang City is in the Netherlands. "The City Government has asked for a blue print of the culverts in Malang City from the Netherlands. However, until now the Dutch people who are expected to help re-function the culverts are still missing

An expert of Urban Drainage from University of Brawijaya Brawijaya, Agus Suharyanto denied that culverts would be able to overcome flooding in Malang City. According to Agus, the culverts will not be able to hold water because the water catchment area is decreasing. "Water is not absorbed by the soil so that the culvert will not be able to accommodate," he said. What the City Government of Malang must maximize is to clean the drainage system.

Apart from that, the rise of new housing (real estate), modern shopping centers and shop houses (shop) in Malang City, is currently considered to be the cause of the existence of new flood locations in Malang. This was due to the presence of these buildings which seemed to have no outlets or drains from the drainage system.

4. Community Participation Model To Prevent Floods

4.1 Community Participation

Participation in English "participation" means taking part or participating, and "participating" means taking part, or taking part. In the Indonesian Dictionary "Participation" means participating or taking part in an activity, or participation. According to Keith Davis, participation is a person's mental and emotional involvement in achieving goals and taking responsibility in them. Participation also means "decision makers from the group or community participate in the form of submitting suggestions and opinions, goods, skills, materials and services. Thus the definition of community participation is community participation or taking part by the community in the process of identifying and solving problems that exist in the community. In short, community participation is the participation of the community in the process of solving problems faced by the community itself, starting from identifying, selecting, and making decisions from the community to always play an active role.

The definition of community participation in development is the role of community participation including all members or community representatives to participate in making decisions. in the process of planning and development management including in formulating and deciding plans for activities to be carried out, benefits to be obtained, and also how to evaluate the results of their implementation. The existence of maximum participation from the community in planning is expected to build a strong sense of ownership among the community towards the development results that occur.

From this opinion, it can be concluded that community participation is the involvement of community members in managing development that occurs in the community. Community participation should take place voluntarily and sustainably. The intended participation is participation that views society as the subject of all rules and development not as objects of development.

4.2 Model of Community Participation in Flood Mitigation

Prevention of flooding in the city of Malang is not only the monopoly of the local government, but also the community. They must be involved or participate, because those who are victims and suffer losses due to flooding are the community and the Local Government. The community suffered loss of property (house, place of business / industry, agricultural land, livestock) which was also carried along by the flow and casualties. In addition, the losses suffered by the government were damaged roads, infrastructure facilities in their area, because they were eroded by floods.

The flood prevention model (carried out before the flood) and mitigation (carried out when / after the flood), by the Local Government, is by way of first making regulations / regulations (regulations) governing urban and regional spatial planning. In the regulation that is regulated are (a) structuring urban spatial planning, namely the regulation of the determination of residential areas / residential areas; small business area / industry, shopping area, education area, tourism area, animal husbandry, agricultural area, green open space (RTH). the area of green open space (open space) is at least 20-30% in urban areas; (b) Regulations / rules regarding IMB and small, medium and large scale industries; (c) Regulations concerning the prohibition on building buildings and business places / selling in open green spaces, on rivers / gutters or in places of flow / river / rainwater drainage, land owned in the State / Local Government; (d) Regulation on the prohibition of closing the yard of the house /

government office / private company, and the shoulder / roadside / outside the fence of the house / building with cement / concrete / asphalt; (e) Regulation on the prohibition of disposing of garbage in any place (river, ditch / ditch or water channel to the river, and on the highway). Second, structurally the Local Government should prepare a trained workforce for prevention and prevention of flooding in each village or village; Local governments must try to fulfill / add to water catchment places as determined by the Law on Spatial and Regional Affairs and the Ministry of Home Affairs at a minimum of 20-30%; Third, the Local government should prepare facilities and infrastructure for prevention and mitigation of floods so that each of the facilities and infrastructure needed is available; Fourth, involving and educating the public to prevent flooding, including: (a) prohibiting people from disposing of garbage in the watershed / ditch / ditch; (b) prohibit people from building buildings on streams / ditches / ditches; (c) prohibit the community from closing the river flow around / their house / building; (d) appeal to the general public not to cover the surrounding water absorption / absorption land, either on privately owned or privately owned / government-owned land; (e) prohibit the community from felling trees from forest trees in rainwater catchment areas and calls on the community to plant trees in order to resist soil abrasion; Fifth, take legal action in the form of fines, administrative sanctions and building / demolition of buildings that violate regulations made by the Central Government / Local Government.

4.3 Prevention and mitigation of flood

Because Malang City is a mountainous area far from the sea, flooding in Malang City is not a flood caused by tidal floods that generally occur in coastal areas. Floods in Malang City are generally caused by overflow of river water in the event of heavy rains, causing a sudden flood. Besides that it is caused by a lack of catchment / water uptake areas, this is due to the conversion of land that has turned into a new residential or settlement with many built housing, entertainment / tourism places, the construction of industrial and trade places (mall / supermarket), and many the community is building a business place and a house on the river bank which can lead to silting and narrowing of the river flow. In addition, almost all water catchment / absorption sites belonging to the local government and the community are covered with asphalt / cement.

To overcome and prevent flooding in the city of Malang, the efforts or actions that can be taken by the Local Government and the people of Malang are as follows:

- a. Keeping the environment around the river, gutters or ditches to be well maintained. Do not let the community dispose of garbage in the canals or streams, or do not let sewers and ditches be used as garbage dumps;
- b. Avoid making buildings / houses on the banks of rivers, because this can cause flooding, and the society's order becomes irrelevant and slum (the area becomes slum);
- c. The selective logging should choose trees that are old or prone to collapse. logging should be replaced, the goal is to regenerate trees so that the forest does not become deforested and as a place to collect water in the forest, so that rainwater does not directly descend into the lowlands which results in flooding;
- d. Make movement to throw garbage in its place. Avoid littering, especially throwing garbage into rivers or streams into rivers because it can have a negative impact, which is garbage that accumulates in streams or river channels that can clog the flow of river water resulting in flooding. To avoid dumping garbage in any place or in a river, it is necessary to provide waste management and processing facilities.
- e. Clean the canal or flow of water into the river. Repair and cleaning of waterways must be carried out in mutual cooperation that involves the local community regularly or continuously. The goal is that if there is heavy rain, the water will not be clogged, so that the water can flow smoothly to the rivers and estuaries of the rivers that eventually reach the sea.

5. Conclusion

Based on the description above, conclusions can be drawn as follows:

1. The occurrence of flooding in the city of Malang can be influenced by several factors, including:
 - a. Low Awareness of Malang City people in throwing trash in its place, so it can clog the waterways to the culverts.
 - b. The rise of new houses (real estate) and modern shopping centers that are not matched by adequate drainage systems
 - c. The conversion of land that is supposed to be a green open space (RTH) and water catchment area has turned into a development area.
2. Community participation as one of the stakeholders is needed in an effort to stem the occurrence of floods. Making the community the subject that has a joint role with the government starting from the process and implementation of policies made by the government in spatial planning in Malang. this is a necessity that must be carried out in response to floods. Community participation has a huge influence in the process and implementation of policies.

6. Recommendation

In preparing policy recommendations, community participation in flood prevention activities, The level of participation needs to be more carefully determined at each stage of the activity, according to the type of flood prevention activities.

1. The amount of direct or indirect impacts that will be received by the community;
2. Amount and diversity of recipients of the impact of activities;
3. The social cost intensity of an activity that will be accepted by the community.

The formulation of community participation cannot be done without looking at the position and urgency of other stakeholders, such as intermediaries and decision / policy makers. From the point of view of the level of stakeholder participation, there are limits that not all flood prevention activities can be carried out by all stakeholders to the level of empowerment. The more parties involved, too many interests must be accommodated and too many bureaucratic lines between sectors, so the process of coordination across sectors and implementation of activities is very likely to be hampered, even canceled. Thus the level of interest, influence, and importance of each stakeholder must be identified in advance so that the stakeholders are involved.

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