

# CLIMATE CHANGE PHENOMENON IS THE PART OF COASTAL COMMUNITY LIFE IN THE SEMARANG CITY

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## A. INTRODUCTION

Climate change can be recognized through the phenomena occurring at the north pole in the past 10 years. Phenomena, among others, changes in the hydrologic cycle, water masses and ocean currents that affect the melting of ice, an increase in temperature around the north pole, so that the volume is enlarged and raise sea levels. In 2010, the Arctic ice melts due to global warming. The melting of the past 10 years reached 11.5%. In September 2010 the amount of ice in the Arctic has decreased significantly compared to other periods. If all the ice in Greenland and Antarctica melted, there will be the world's sea level rise on average 6-7 feet (Susanta, 2008). The average rise in global sea level net subsidence, are expected to rise between 8-13 cm by 2030, between 17-29 cm by 2050, and between 35-82 cm in 2100 (IOM, 2008).

The most vulnerable areas to the global warming impact is coastal areas due to directly adjacent to the sea. When sea levels rise above the height of the land, the sea water will inundate the entire. Vulnerability as a result of climate change is identified in the scope of the sectoral, spatial, urban infrastructure and community development (Otto and Zimmermann, 2011). Each vulnerability sensitivity is different to climate change impact. In response and assess the level of vulnerability many researchers have done numerous studies and their forms of mitigation options. The trend is happening, the form of communication in this process occurs only in one direction. Often the study of climate change is only in the form of planning documents, while the shape is determined in a bottom-up mitigation and are one-way. A new paradigm for the role of society towards mainstreaming disaster management is necessary to change the physical system for disaster mitigation. Capacity building is at the root of the embodiment of community participation to climate change disaster. Capacity building scheme will be applied to the city of Semarang coastal communities who affected by climate change. The area identified as the coastal city of Semarang, the Gayamsari District, West Semarang District, Genuk District, Eastern Semarang District, North Semarang District, and Tugu District. These areas will form a different capacity building schemes based on the community character.

## B. RESEARCH PROBLEM

Development of capacity building in disaster-prone areas become sidelined. In fact, capacity building is very important to make the character a disaster resilient community. Establishment of capacity building have become important in Semarang for people to determine of disaster mitigation in accordance with the type of disaster and their abilities. Therefore, in this study will be discussed capacity building development and capacity building formulation of each feature vulnerability

## C. DISCUSSION

### 1 Vulnerability Level Analysis

Under existing conditions, the vulnerability that occurs in the coastal area of Semarang cumulatively have a score of 3. The score is based on the high level of vulnerability. Tidal flood as real catastrophe of climate change in the coastal city of Semarang. The impact of tidal flooding affecting environmental conditions. Mangrove cultivation as a barrier of tidal flood reach land, that can not be preserved, so that the embankment have higher salinity levels. Finally, the coastal communities left livelihood as fishermen. At the time of the switch livelihoods as informal sector workers, with coastal areas towards the outer coastal areas are also closed due to tidal flood. Tidal flood also crippled the region's economy. Coastal areas as the lifeblood of Semarang economy, especially industry, trade and services. Coastal areas to transport the movement of goods and services in the Semarang City. The air transportation, sea transportation, and land transportation connect with the coastal area. Therefore, tidal flood is the bottleneck of economic sectors in the city of Semarang. When tidal flood as the impacts of climate change adversely affect the economic and environmental, instead of climate change have a positive impact for socio-cultural perspective. Social bonding that occurs in the community more closely. Even the form of social interaction to work together to reduce the impact of climate change. Strength of policies and regulations that have been guarding the programs of reduce climate change has not been completed up to the root of climate change problems. As a result, these programs are only able to cope with climate change impacts in the short term. The following are details of the vulnerability of coastal features Semarang.

#### - Economic Vulnerability Features

Coastal communities only 10% were working as fishermen. They have left the job in the fisheries and marine sector since 1990. At the same time, construction of elite residential areas around the coastal areas and the increasing intensity of the floods. Communities began to change livelihood as traders, laborers, and vending services. With these livelihood, their income is not erratic. In one month the average income of Rp 500,000.00 to 800,000.00. Income is not enough to meet their daily needs. Expenditure in one month an average is  $\pm$  Rp 700,000.00 to 900,000.00. By comparing between revenues and expenditures, it looks weak financial capability. The communities does not have a residual income for stored / saved. Moreover, increasing expenditure if they have to undertake mitigation to prevent the entry of tidal flooding to their houses. Forms of mitigation which is chosen communities is the house exaltation. Cost required to raise the minimum Rp. 2,000,000.00. Elevation of the house is done 2-5 years. Cumulative, score feature economic vulnerability, which is 3. Here is a description of the features of economic vulnerability.

**Table 1: Economic Vulnerability Features**

No	District	Score	Explanation
1	Gayamsari	2	<ul style="list-style-type: none"> <li>• Average income Rp 750.000,00-1.000.000,00/month</li> <li>• Average expenditure Rp 700.000,00-1.000.000,00/month</li> <li>• Residual income is saved an average of 50.000,00-100.000,00/month</li> <li>• Income that is used for disaster mitigation is small because the house exaltation is done 7-10 years</li> </ul>
2	West Semarang	3	<ul style="list-style-type: none"> <li>• Average income Rp 500.000-800.000,00/ month</li> <li>• Average expenditure Rp 700.000,00-900.000,00/month</li> <li>• No income is saved</li> <li>• Income that is used for disaster mitigation is big because the house exaltation is done 2-5 years</li> </ul>

No	District	Score	Explanation
3	Genuk	3	<ul style="list-style-type: none"> <li>• Average income Rp 750.000,00-1.000.000,00/month</li> <li>• Average expenditure Rp 700.000,00-1.000.000,00/month</li> <li>• Residual income is saved an average of 50.000,00-100.000,00/bulan</li> <li>• Income that is used for disaster mitigation is big because the house exaltation is done 3-5 years</li> </ul>
4	East Semarang	2	<ul style="list-style-type: none"> <li>• Average income Rp 500.000-900.000,00/month</li> <li>• Average expenditure Rp 600.000,00-900.000,00/ month</li> <li>• Residual income is saved an average of 50.000,00-100.000,00/month</li> <li>• Income that is used for disaster mitigation is big because the house exaltation is done 3-5 years</li> </ul>
5	North Semarang	3	<ul style="list-style-type: none"> <li>• Average income Rp 500.000-800.000,00/ month</li> <li>• Average expenditure Rp 700.000,00-1.000.000,00/ month</li> <li>• No income is saved</li> <li>• Income that is used for disaster mitigation is big because the house exaltation is done 2-5 years</li> </ul>
6	Tugu	3	<ul style="list-style-type: none"> <li>• Average income Rp 500.000-800.000,00/ month</li> <li>• Average expenditure Rp 700.000,00-900.000,00/ month</li> <li>• No income is saved</li> <li>• Income that is used for disaster mitigation is big because the house exaltation is done 2-5 years</li> </ul>

- Socio-Culture vulnerability features

Socio-cultural life of the coastal community has a unique character. Cooperation and *gotong royong* are still frequent. Close social ties and social interaction that intensive are the coastal communities characterize. Even those reasons that make them reluctant to leave the coastal areas, although the tidal flood inundate their settlement area. Non-formal institutions in society became evident closeness of community relations. In public life it is possible friction, but it does not lead to conflict. Cooperation is also visible in the effort community to reduce the climate change impact. Elevation of the road and drainage improvements as a form of mitigation done with cooperation. Characteristic features of the socio-cultural vulnerabilities throughout the coastal region (Gayamsari District, West Semarang District, Genuk District, Eastern Semarang District, North Semarang District, and Tugu District) is the same, ie close social ties, inter-intensive interaction, the cooperation in social systems, social organizations and institutions, namely the *Rukun Tetangga (RT)* up to district level. It's just to the West of Semarang District, still visible gap between people who live in elite residential areas and housing. Score feature vulnerability is 2, except west of Semarang District memiliki vulnerability score 3.

- Environment Vulnerability Features

Environment is directly related to the impacts of climate change. Then the impact of the vulnerability of the features will affect other aspects, such as economic and social. Tidal flood affect the ecological balance in the coastal zone. This condition is exacerbated by the development residential area towards the beach. Density buildings reduce softscapes in coastal areas such as green belt. Thus tidal flood may qualify for entry into the land without any vegetation as a barrier. Cumulative environmental vulnerability scores feature is 3. Here is a description of the features of vulnerability.

**Table 2: Environment Vulnerability Features**

No	District	Score	Explanation
1	Gayamsari	2	<ul style="list-style-type: none"> <li>• Green open space for domestic scale that can absorb run off when flooding intensity increase</li> <li>• Residential drainage works fine</li> <li>• In Gayamsari district, The river is able accommodate flood, so run off can be distributed to the sea</li> </ul>
2	West Semarang	3	<ul style="list-style-type: none"> <li>• The development of elite residential areas cause a reduction in catchment areas. The density population also reduce conservation area</li> <li>• Green belt and Green open space in the coastal area is decrease</li> <li>• Run off breaks into land</li> <li>• River systems in the region shallower due to sedimentation and community activities. Communities is not friendly to the environment</li> </ul>
3	Genuk	3	<ul style="list-style-type: none"> <li>• The development of elite residential areas cause a reduction in catchment areas.</li> <li>• The development of industrial sector resulted in pollution of the environment, such as air pollution and waste</li> <li>• The lack of green open space and green belt</li> </ul>
4	East Semarang	3	<ul style="list-style-type: none"> <li>• Green open space for domestic scale</li> <li>• East Semarang District also connect with Genuk District as industry area, trade and services area, and also distribution of goods. Air pollution and waste pollution caused by the activity</li> <li>• The density settlement reduces catchment area availability</li> <li>• Tidal flood inundated settlement areas</li> <li>• Slum impression created in settlements areas</li> </ul>
5	North Semarang	3	<ul style="list-style-type: none"> <li>• A very high density residential reduce land use as catchment area</li> <li>• Drainage infrastructure is not functioning properly, so it is not able to accommodate runoff in settlement areas</li> <li>• The lack of green open space make this area inundated tidal flood. Tidal flood does not just occur when sea level rise, but also high intensity rainfall</li> <li>• Slum impression created in settlements areas</li> </ul>
6	Tugu	3	<ul style="list-style-type: none"> <li>• A very high density residential reduce land use as catchment area</li> <li>• The lack of green open space make this area inundated tidal flood. Tidal flood does not just occur when sea level rise, but also high intensity rainfall</li> <li>• Slum impression created in settlements areas</li> </ul>

- Political Vulnerability Features

Capacity building for coastal communities also requires the stakeholders intervention. During the application of the program is one-way only. In the end, community do not respond to these programs. The programs that are determined by government is not necessarily in accordance with the needs of the community. In 1990-2002 the decision about disaster mitigation is top down. Entering the year 2003, community began to be involved in the decision making process of development program in the coastal area. Society has been able to make a proposal which is then submitted to the City of Semarang for further action. Top down paradigm has shifted to bottom up paradigm. But the decision-making that is bottom-up is still limited to certain areas. The decision taken is still too stiff, that can not touch the various levels of society, especially the middle and lower

layers of society. Cumulatively, scores of political vulnerability is the third feature. Here is explanation.

**Table 3: Political Vulnerability Features**

No	District	Score	Explanation
1	Gayamsari	2	<ul style="list-style-type: none"> <li>• Community participation in determining the direction has begun</li> <li>• Government appreciates the role of community in the development process</li> <li>• People more focused on infrastructure improvements, such as road elevation and drainage quality</li> </ul>
2	West Semarang	3	<ul style="list-style-type: none"> <li>• No initiation form from communities to participate in the development process</li> <li>• Decision making is top down</li> </ul>
3	Genuk	3	<ul style="list-style-type: none"> <li>• Communities is not aware about the programs that has been launched by the government</li> </ul>
4	East Semarang	2	<ul style="list-style-type: none"> <li>• The initiation communities to participate in the development process</li> </ul>
5	North Semarang	3	<ul style="list-style-type: none"> <li>• Communities is not aware about the programs that has been launched by the government because of understanding low level of community</li> <li>• Decision making is top down</li> </ul>
6	Tugu		

## 2 Capacity Building Development and handling sceme Analysis

Based on the analysis of the vulnerability, the development priority of capacity building by ranking, which features a major focus of environmental vulnerability, followed by features of economic vulnerability, the vulnerability features politicals, and the last features of socio-cultural vulnerability. Here is a scheme of the development of capacity building for each vulnerability.

### - Environment Vulnerability Features

Development of capacity building requires concrete actions as a form of cooperation between government, private, and public. Private in this case is a third party to mediate between the government and the communities desire. The role of the private sector to do the Non-Government Organization (NGO). Attractive interaction in the Focus Group Discussion (FGD) can be done to map the environmental problems in coastal areas, the efforts that have been made communities, the obstacles encountered in these efforts, and hope in the future the environmental aspect. The mapping is done for each district is different. Here is a stage of development and capacity building schemes handling. The scheme below is a development stage of capacity building for environmental vulnerability features. Then the further elaboration of the formulation development of capacity building programs and forms of mitigation in each district.

First Stage	Second Stage	Third Stage	Fourth Stage
<b>Discussion (Community-Government- NGO)</b> - The phenomenon climate change in coastal area - Climate change impact in environment sector - Anticipation of climate change impact	<b>Discussion (Community-Government- NGO)</b> - Distribution of the communities government and NGO roles - Community behaviour to preserve ecosystems	<b>FGD</b> - Mapping the environment problems in coastal area - Effort that have been made communities - Obstacles encountered in these efforts - Hope in the future in environment aspect	<b>FGD</b> - Formulation development of capacity building - Mitigation programs based on environment aspect

**Picture 1**  
**Stages of Development Capacity Building on Environmental Vulnerability Features**

**Table 4: Capacity Building Development on Environmental Vulnerability Features**

No	District	Capacity building Formulation	Handling Scheme
1	Gayamsari	<ul style="list-style-type: none"> <li>• Discussion of climate change phenomenon and effect: 1 meeting for 3 hours</li> <li>• Distribution of the role of the stakeholders: 1 meeting for 2 hours. The result is that people act as drafting and implementing mitigation programs, NGO to assist the community and act as a facilitator, the government as policy maker; implementing monitoring and evaluation, and participate with the community implement the program</li> </ul>	<ul style="list-style-type: none"> <li>• Replanting mangroves along the coastal areas by involving all stakeholders. The process of planting done in a span of 2 months. Monitoring the condition of mangrove plants every 3 months by the community</li> <li>• Communities design green open space residential scale. Government and NGO represent design made public and also apply. NGOs / NGOs as well as donors to subsidize the financial and plants. The process of applying design to 4 months</li> <li>• Dredging of settlements drainage to reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</li> </ul>
2	West Semarang	<ul style="list-style-type: none"> <li>• Discussion of the climate change phenomenon and effect are followed by all levels of society (no gap between the elite residential areas and settlements): 1 meeting for 3 hours</li> <li>• Distribution of the role of the stakeholders: 2 meetings, each meeting for 2 hours. The result is that communities act as implementers of disaster mitigation programs, NGO to assist the community and act as a facilitator, government as a maker of policies and programs; implementing monitoring and evaluation, and participate with the community implement the</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation between all levels of society to create a green belt along the coastal. Replanting mangroves along the coastal areas by involving all stakeholders. The process of planting done in a span of 2 months. Monitoring the condition of mangrove plants every 3 months by the community</li> <li>• Planting vegetation that involves all stakeholders in an open space located in the elite residential area</li> <li>• Dredging the river to reduce sedimentation</li> <li>• Application silvofishery to preserve mangrove plants, but keep the fishpond production.</li> <li>• Dredging of settlements drainage to</li> </ul>

No	District	Capacity building Formulation	Handling Scheme
		program	<p>reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</p> <ul style="list-style-type: none"> <li>• Appreciation is given to villages that managed to preserve its territory. A token of appreciation is to educate and raise awareness, such as giving a gift of cleaning equipment</li> </ul>
3	Genuk	<ul style="list-style-type: none"> <li>• Discussion and FGD was attended by the industry and the communities delegation</li> <li>• Discussion of the climate change phenomenon and impacts by industrial activity and settlement: 1 meeting for 3 hours</li> <li>• Distribution of the role of the stakeholders: 1 meeting for 2 hours. The result is that communities act as drafting and implementing mitigation programs, NGO to assist the community and act as a facilitator, the government as policy maker; implementing monitoring and evaluation, and participate with the community implement the program, the industry group as a donor for the program and is obligated to send delegation to participate in the program</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation between all levels of society to create a green belt along the coastal. Replanting mangroves along the coastal areas by involving all stakeholders. The process of planting done in a span of 2 months. Monitoring the condition of mangrove plants every 3 months by the communities</li> <li>• Application silvofishery to preserve mangrove plants, but keep the fishpond production.</li> <li>• Dredging of settlements drainage to reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</li> <li>• Construction waste management in order not to pollute the environment</li> <li>• The industry must use environmentally friendly technology</li> </ul>
4	East Semarang	<ul style="list-style-type: none"> <li>• Cooperation inter region (East Semarang and Genuk District)</li> <li>• Discussion of the climate change phenomenon and effects as a whole group activity: 1 meeting, each meeting for 3 hours</li> <li>• Distribution of the role of the stakeholders: 1 meeting for 2 hours. The result is that the communities, industry sector, trade and services act as a disaster mitigation program implementers, NGO to assist the community and act as a facilitator, government as a maker of policies and programs; implementing monitoring and evaluation, and participate with the community implement the program</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation between all stakeholders including industrial activity, trade and services to make the scale of the conservation area</li> <li>• Industrial actors, trade and services are responsible for reducing air pollution, noise, and waste</li> <li>• Dredging of settlements drainage to reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</li> </ul>
5	North Semarang	<ul style="list-style-type: none"> <li>• Discussion of the climate change phenomenon and impacts by</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation between stakeholders to create a green belt along the</li> </ul>

No	District	Capacity building Formulation	Handling Scheme
		<p>industrial activity and settlement: 2 meeting for 3 hours</p> <ul style="list-style-type: none"> <li>• Distribution of the role of the stakeholders: 1 meeting for 2 hours. The result is that communities act as drafting and implementing mitigation programs, NGO to assist the community and act as a facilitator, the government as policy maker; implementing monitoring and evaluation, and participate with the community implement the program</li> </ul>	<p>coastal. Replanting mangroves along the coastal areas by involving all stakeholders. The process of planting done in a span of 2 months. Monitoring the condition of mangrove plants every 3 months by the communities</p> <ul style="list-style-type: none"> <li>• Application silvofishery to preserve mangrove plants, but keep the fishpond production.</li> <li>• Dredging of settlements drainage to reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</li> <li>• Population growth Programs "zero growth" with the provisions of population from the birth process, not the result of imigration towards coastal areas</li> <li>• Improving the quality of neighborhoods through "upgrading"</li> </ul>
6	Tugu	<ul style="list-style-type: none"> <li>• Discussion of the climate change phenomenon and the effects as a whole group activity: 1 meeting for 3 hours</li> <li>• Discussion in anticipation of climate change impacts based on best practice 1 meeting for 2 hours</li> <li>• Distribution of the role of the stakeholders: 1 meeting for 2 hours. The result is that communities act as implementers of disaster mitigation programs, NGO to assist the community and act as a facilitator, government as a maker of policies and programs; implementing monitoring and evaluation, and participate with the community implement the program</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation between all levels of society to create a green belt along the coastal. Replanting mangroves along the coastal areas by involving all stakeholders. The process of planting done in a span of 2 months. Monitoring the condition of mangrove plants every 3 months by the communities</li> <li>• Application silvofishery to preserve mangrove plants, but keep the fishpond production. Facilitators give training sylvofishery system to the communities</li> <li>• Dredging of settlements drainage to reduce household waste dumped in the drainage system. Dredging conducted independently, at least once a month</li> </ul>

- Economic Vulnerability Features

Capacity building development programs to reduce economic vulnerability due to climate change through the power of the local economy. Communities need to be able to live independently and not just rely on the fisheries sector income. Changing of community livelihood ]through improvement creativity of the community. Communities are trained to make handicrafts typical of coastal areas that could be made souvenirs. The discovery of talent and creativity through the stages of the training course conducted by the facilitator. The government in this case can provide start-up capital and equipment used by the public. In essence, the economy will be transformed into creative industries coastal communities.



First Stage	Second Stage	Third Stage	Fourth Stage
<b>Discussion (Community-Government- NGO)</b> - Climate change phenomenon in coastal areas - Climate change impact in economic sector - Climate change effects on marine resources	<b>Discussion (Community-Government- NGO)</b> - Decisions should be taken in order to survive in the coastal areas - Alternative livelihood as a substitute for the fisheries sector	<b>TRAINING</b> - Training manufacturing handicrafts are used as souvenirs of the coastal area	<b>FGD</b> - Formulation of capacity building development to realize the local economic

**Picture 2**  
**Stages of Development Capacity Building on Economic Vulnerability Features**

**Table 5: Capacity Building Development on Economic Vulnerability Features**

No	District	Capacity building Formulation	Handling Scheme
1	Gayamsari	<ul style="list-style-type: none"> <li>• People have to able survive independently</li> <li>• Communities does not restructuring livelihoods</li> <li>• Strengthening the local economy to improving saving ability</li> </ul>	<ul style="list-style-type: none"> <li>• Enhancing the role <i>koperasi</i> and <i>BKM</i></li> <li>• Establishment community organization that cpecializez physical defelopment for mitigation. Saving and managing from communities</li> </ul>
2	West Semarang	<ul style="list-style-type: none"> <li>• Structuring of changing livelihoods</li> <li>• Ttraining of creatives industries, held 1 month for 4 meetings, each meetings 2 hours</li> <li>• Facilitators mentoring when Communities has been doing production proces</li> </ul>	<ul style="list-style-type: none"> <li>• Handicrafts production as souvenir made in house of one communities. The production is carried out in groups</li> <li>• The establishment <i>koperasi simpan pinjam</i> and <i>koperasi distribusi produk</i></li> </ul>
3	Genuk	<ul style="list-style-type: none"> <li>• Communities have turned livelihood as factory workers</li> <li>• The communities does not need restructuring livelihoods</li> </ul>	<ul style="list-style-type: none"> <li>• Enhancing the role <i>koperasi</i> and <i>BKM</i></li> <li>• Establishment community organization that cpecializez physical defelopment for mitigation. Saving and managing from communities</li> </ul>
4	East Semarang	<ul style="list-style-type: none"> <li>• Classification of communities require for restructure of changing livelihood. Comparision between independent communities and non-independent communities is balanced</li> <li>• Training of creatives industries, held 1 month for 4 meetings, each meeting for 2 hours</li> <li>• Mentoring for communities who have been doing the production process</li> <li>• Election alternative of handicrafts accordance creativity</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of the business community to make coastal souvenirs</li> <li>• Pembentukan kelompok usaha</li> <li>• Handicrafts production as souvenir made in house of one communities. The production is carried out in groups</li> <li>• Establishment <i>koperasi simpan pinjam</i> to facilitate the community to get venture capital and save the profit</li> <li>• Scale target aimed at tourist. Therefore, souvenir distributed on tour destination, such as <i>Lawang</i></li> </ul>

No	District	Capacity building Formulation	Handling Scheme
		communities	<i>Sewu dan Gereja Blenduk</i>
5	North Semarang	<ul style="list-style-type: none"> <li>• Training of creatives industries, held 1 month for 4 meetings, each meeting for 2 hours</li> <li>• Mentoring for communities who have been doing the production process</li> <li>• Election alternative of handicrafts accordance creativity communities</li> </ul>	<ul style="list-style-type: none"> <li>• The production process is carried out on the communities home which lower risk of tidal flood</li> <li>• The selection of transportation lane to distribution souvenir products to prevent constraints tidal flood</li> <li>• Establishment <i>koperasi simpan pinjam</i> to facilitate the community to get venture capital and save the profit</li> </ul>
6	Tugu	<ul style="list-style-type: none"> <li>• Comparison between the communities that need restructuring livelihood and independently is balanced. Therefore we need the classification society</li> <li>• Training of creatives industries, held 1 month for 4 meetings, each meeting for 2 hours</li> <li>• Mentoring for communities who have been doing the production process</li> <li>• Election alternative of handicrafts accordance creativity communities</li> </ul>	<ul style="list-style-type: none"> <li>• The production process is carried out on the communities home which lower risk of tidal flood</li> <li>• Establishment <i>koperasi simpan pinjam</i> to facilitate the community to get venture capital and save the profit</li> </ul>

- Political Vulnerability Features

Features of the political vulnerability of coastal areas have the same characteristics. Therefore, the discussion will be carried out thoroughly to coastal areas. In political vulnerability, the need for intensive coordination between stakeholders. Decision-making and determination of the program is done bottom up. Decision making through the stages of discussion and focus group discussions. An example is the selection of the alternative livelihoods that do not rely on fisheries and marine resources. Coordination between stakeholders can be done at least 1 month for 1 meetings.

- Socio-Culture vulnerability features

Socio-cultural life of coastal communities have been good. It is characterized by the interaction between communities and cooperation in the face of climate change. Socio-cultural character of relatively similar in regions. Improvement needs to be done to civil society organizations. During this time, community organizations only as a association has no specific goals. The establishment of community-based organizations as the collecting aspirations is very important. Through these organizations, the communities can participate in the development of coastal areas. Members of organizations should come from a diverse group of communities with a diversity of livelihood.

#### D. CONCLUSION

Development of capacity building is more effective in dealing with climate change. Communities is prepared to survive in tidal flood. Changing livelihoods, improving environmental quality, and strengthening community organizations a solution that can be applied by the communities. The government initially always make decisions that are one-way. Now, beginning to hear people's aspirations. The community also has the right to determine which programs they can access.