

CONCLUSION AND RECOMENDATION

6.1. Research Finding

6.1.1. Conclusion

- a. Based on analysis outcomes, most dominant of non structural method of flood management measures is analysis strategy modify susceptibility to flood damage and disruption, it is reach 15, 06 % of 20, 63 %. The detailed result from assessment of non structural measures assessment shows on table 5.3 on previous chapter (chapter V).
- b. Based on flood management cycle figure 3.2, can be seen that the most dominant measure was done before flood occurs. The measures which must do before flood occurs are planning, prevention, mitigation, and preparedness measure. The measures can be seen on figure 3.2 flood management cycle on chapter III.
- c. According to the result of research, flood will still occurs in north Semarang city because the implementation of non structural method was not optimal yet. Measures that have already existed only 20, 63 % from 100 % value and the measures only focus on pre-flood preparation. Successful of method for coping flood could be achieved with implementing non structural and structural method simultaneously.
- d. Based on interviewed with respondent, the structural method was needed to support non structural method. River normalization was selected as an alternative solution for coping floods. From the analysis of river Semarang normalization on Sta 1+526,08 to Sta 2+431,04 obtained the design dimension as follows:

Type : Single Trapezoidal Section

B	: 20 m
H	: 3.15 m
n	: 0,031
m	: 2
I	: 0,0001
w	: 0,6 m
Q design	: 48,308 (m ³ /s)

6.2. Recommendation for Further Non Structural Measures

1. Recommendation for the inhabitants in North Semarang City

- Involved public participation in keeping the environment cleanness in order to improve public awareness to mitigate flood risk.
- Advised to the local inhabitants not to throwing away the trash to the river and drainage channel, by good thrash accumulating system with better management. Therefore, it can prevent trash accumulation and will lessen floods.
- Scheduling of trash accumulating to keep away from scrapheap and illegal dismissal trash along the river.
- Rearrange the riverbanks for vegetation plantation to reduce the sediment transportation to the river because of run-off when the rain season. In order to minimize sedimentation on the river, so wide of the hydraulic radius will always according with the design.
- The local inhabitants should have an attempt to actively involve in the planning and development process of north Semarang city. There should be a community's representatives to bring out the local inhabitant's aspirations to minimize the negative impact of the development in those areas, especially on floods problems.
- The inhabitants must obey all the building policies including prohibition to build their home without permit to the local or regional government. It aimed to create better surroundings that outgoingness with the environment. Furthermore, to prevent or mitigate the area from flood risk.

2. Recommendation for Semarang municipal Government

- Development of north Semarang city must based on the environmental concept, because of the region including on flood prone area with high of inundation reach \pm 10-70 cm every years. With better concept of development hoped will reduce the impact of floods.
- The government should control throughout the implementation of development based on master plan of Semarang development (*Rencana Tata Ruang Kota Semarang = RTRK Semarang*). The government ought to be monitoring all the physical construction from the planning concept to building process. The realization result should considering on those master plan.
- The government must give a clear procedure on development progress and serious law enforcement to the developer and inhabitants who didn't obey the policy. In constructing building the developer must consider all aspects, so that the local inhabitants didn't get the negative impact of those development especially floods impact.

3. Recommendation for the developer

- The developer should consider all aspects, including local inhabitant's welfare and social living disturbed by development that might be causing negative effects to the inhabitants in north Semarang city, mainly in floods that will make serious problem on settlement and maybe change those area into slump area. So, the development of built areas should obey all the building policies to create a good result and positive response from the community on those areas. Moreover it can mitigate flood risk.
- The developer must responsible with all the development results if it not appropriate with the environment growth. They must professional on facing this situation by take some alternative problem solving. They must fix it and make it appropriate for the environment, also for the local inhabitants on against floods.

6.3. Research Limitation

This study only discusses about non structural method for flood management in north Semarang city and restricted only representatives by 400 respondents with different backgrounds. It means that the research only studying for the lowland area. This study is to get knowledge about the result implementation of non structural measure on coping floods in lowland area of north Semarang city. The discussion of Semarang river improvement (structural method) was given as an alternative solution to support the Non Structural method implementation. This alternative solution based on inhabitant's opinion regarding structural method that they wanted to coping floods in their region.

6.4. Suggestion for Further Study

From the analysis outcomes it can describe that floods in north Semarang city will still occur. How it happen, because Semarang location was lower than mean sea level and it's having land subsidence about 2 cm every year (*BAPPEDA, 2001*). Moreover, even if the communities of north Semarang city have maximal effort on mitigating floods by non structural method, floods will still occur on those areas, because solving this problem can't be done separately. It must also study about how the development on the middle area and up stream area can affect on floods occurrences. In the other word, it should need more and completed study for coping floods in lowland.