

## Collaborative Governance and Strengthening Household Resilience in Facing Disaster at Ciliwung Riverbank, Jakarta City

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### Abstract

The focus of this study is to analyze collaborative governance and strengthening household resilience to disasters. The theory used is the collaborative governance theory from Emerson *et.al* and the household resilience theory from Karbon *et.al*. This research uses a mix method research approach. Data collection techniques started from participant observation techniques, in-depth interviews, unstructured discussions, survey techniques and group interview methods. The unit of analysis in this study were individuals and households at the RW and RT levels. This study used data analysis of the Miles and Huberman model in qualitative analysis and Importance Performance Analysis (IPA) analysis in quantitative approach. The results of this study showed that households at the Ciliwung Riverbank remain resilient in disaster areas due to their success in building cooperation and creating new behaviors. Cooperation was carried out not only at the household level but also at the national level. This success showed that households were able to take action together, carry out risk reduction activities and are able to increase the capacity of economic life in the household. The novelty in this study is that collaborative governance creates new behaviors to reduce the impact of disasters and strengthen household resilience to stay in the disaster area.

**Keywords:** *Riverbank Disasters, Household Resilience, Collaborative Governance*

### Abstrak

Fokus kajian ini adalah menganalisis tata kelola kolaboratif dan penguatan ketahanan rumah tangga terhadap bencana. Teori yang digunakan adalah teori Collaborative Governance dari Emerson *et.al* dan teori ketahanan rumah tangga dari Karbon *et.al*. Penelitian ini menggunakan pendekatan penelitian mix method. Teknik pengumpulan data dimulai dari teknik observasi partisipan, wawancara mendalam, diskusi tidak terstruktur, teknik survei dan metode wawancara kelompok. Unit analisis dalam penelitian ini adalah individu dan rumah tangga di tingkat RW dan RT. Penelitian ini menggunakan analisis data model Miles dan Huberman dalam analisis kualitatif dan analisis Importance Performance Analysis (IPA) dalam pendekatan kuantitatif. Hasil penelitian ini menunjukkan bahwa rumah tangga di bantaran sungai Ciliwung tetap tangguh di daerah bencana karena keberhasilan mereka dalam membangun kerjasama dan menciptakan perilaku baru. Kerjasama dilakukan tidak hanya di tingkat rumah tangga tetapi juga di tingkat nasional. Keberhasilan ini menunjukkan bahwa rumah tangga mampu mengambil tindakan bersama, melakukan kegiatan pengurangan risiko

dan mampu meningkatkan kapasitas kehidupan ekonomi dalam rumah tangga. Kebaruan dalam penelitian ini adalah bahwa tata kelola kolaboratif menciptakan perilaku baru untuk mengurangi dampak bencana dan memperkuat ketahanan rumah tangga untuk tetap berada di wilayah bencana.

**Kata Kunci:** *Bencana Tepian Sungai, Ketahanan Rumah Tangga, Collaborative Governance*

## **Introduction**

Indonesia is a region that is prone to disasters (National Disaster Management Agency. 2018) . There is a lot of disaster in Indonesia (National Disaster Management Agency. 2018). Recently, disasters in Indonesia have increased in terms of frequency and intensity. The disasters caused the loss in material, environmental and even psychological for the people affected by the disaster (Irwan et al. 2020); (Irwan et al. 2019). Communities that experience disasters must be able to carry out disaster management, at least during the emergency and recovery stages. In line with this view, according to (Alexander David. 2015) emergency response is a process for the community to be prepare and reduce the impact of disasters. It will encourage and build communities to rise the pressures they experience (Irwan et al. 2020). This terminology is in the perspective of the sociology of disaster called collaborative governance.

Collaborative governance is carried out as an effort of households to solve problems and collaborate with several actors in achieving common goals (Arrozaaq 2016). Collaboration is a form of social process in the activities of actors to achieve common goals, carry out joint activities and help each other together. Exploring sociological studies that collaborative governance is a principle in building collaboration and being responsible for the work done. According to (Emerson Kirik, Tina Nabatchi 2012) states that collaboration governance includes the dynamics in collaboration, actions in collaborative governance, collaboration results and the impact of the collaboration. Thus, the collaboration carried out builds a system to survive and bounce back from the impact of disasters (Irwan et al. 2020). Therefore, collaborative governance built in disaster areas strengthens household resilience in disaster areas.

Household resilience is the ability possessed by households in facing the pressures and being able to rise and grow from these pressures (Pramono 2016); (Karimatunnisa Aisyah 2018). The household resilience framework is certainly able to respond and strengthen functions more resiliently in achieving common goals (Irwan et al. 2019). to build, maintain, grow, adapt and re-enhance capacities experienced as a result of disasters or adversity as well as pressures. According to (Irwan et al. 2019) explained that people who experience disasters have joint actions to achieve common goals and build the strength of cooperation not only at the household level but also at the community level to the macro level. The strength of cooperation is carried out by the existence of collaborative actions or governance among the actors. Actors involved in disaster management collaborate and take action to achieve a common goal, especially households on the Ciliwung Riverbank.

Households at Ciliwung Riverbanks in Jakarta are vulnerable to disasters (Irwan et al. 2019); (Fitrianti and Fadhilah 2018). The form of disasters that occur in the form of

floods and landslides during the rainy season. Disasters that occur have an impact on household activities in the form of loss of property and even lives. Nevertheless, households in the Ciliwung Riverbank area still survive to live and carry out their usual activities. Even the Ciliwung River is a source of household income (Aisyah and Listiyandini 2015). Therefore, this study is interesting to analyze collaborative governance and strengthening household resilience to disasters at Ciliwung Riverbank, Jakarta City.

### **Method**

This study uses a quantitative and qualitative approach with a post-positivistic paradigm. Post-positivistic paradigm combines two approaches, namely quantitative and qualitative approach that is usually called as Mix Method Research (Creswell 2010). Mix Method Research is carried out simultaneously during the process in the field. Collecting accurate data, the research uses data collection techniques starting from participant observation techniques, in-depth interviews and unstructured discussions. Furthermore, data collection techniques using survey techniques and group interview methods during the process in the field. This research was conducted on the banks of the Ciliwung River, Jatinegara District, East Jakarta, Kampung Melayu Village, DKI Jakarta Province. The unit of analysis in this study is individuals and households at the RT or RW level in disaster-prone areas. The units of analysis were individuals and households, groups and communities were used to see collaborative governance in strengthening household resilience in disaster areas. Procedures for data management and analysis, qualitatively using the Miles and Huberman model (Miles 1992) and quantitatively using Importance Performance Analysis (IPA) (Ariyoso. 2009). The IPA analysis was conducted to analyze stakeholders in disaster management on the Ciliwung Riverbank. Steps were taken by calculating the average score, the percentage of adjustment and the gap with the situation as well as the conditions in the calculation process. The results are Figured in the form of a Cartesian diagram and described in each indicator into four parts, namely low importance, low influence; high influence, low importance; high importance, high influence and low influence, high importance. The part or square depends on the situation and conditions during the process in the field.

### **Result and Discussion**

Multi-stakeholder collaborative governance in dealing with disasters as the basis for preventing and reducing the disaster impact (Yuliato and Mutiarin 2018). Multi-stakeholder collaboration governance is build in determining the process of increasing household resilience in disaster areas at the Ciliwung Riverbank . Collaborative actions in disaster areas at the Ciliwung Riverbank carried out by multiple parties have resulted in successful relations between actors to achieve a common goal. These actions are in the form of the involvement of actors in dealing with disasters, the roles and responsibilities of actors to achieve a goal. Multi-stakeholder collaborative action and governance builds the strength of cooperation not only at the household and community level, but at the state (national) and even international level. Collaborative governance as a force to strengthen multi-stakeholders to prevent disasters from the occurrence (BNPB 2019).

Households on the Ciliwung River carry out the joint movements as a form of caring another. The involvement of actors in disaster management is to provide each other with information on disaster events. It is in line with the view (Emerson Kirik, Tina Nabatchi 2012) that states the collaborative governance carried out on three actions, namely engagement, providing motivation and increasing capacity in collaboration. It becomes the strength of households at the Ciliwung Riverbank to continue carrying out the activities as usual.

### **Stakeholders Collaboration in Disaster Management on the Ciliwung River Bank**

Stakeholders in disaster management have important role in reducing the impact of disasters. Furthermore, stakeholders took the action in the recovery phase and improve the quality of human and natural resources in facing the disasters. The role of stakeholders in disaster management in the Ciliwung Riverbank area is carried out by BNPB, BPBD DKI Jakarta, government agencies, private institutions, the role of religion and even international institutions that have been regulated in government regulations. Every private and government institution certainly has the main duties and functions in accordance with the provisions of the institution. However, the stakeholders who play a direct role in providing the most important role and authority in disaster management at the Ciliwung Riverbank are BNPB and BPBD DKI Jakarta.

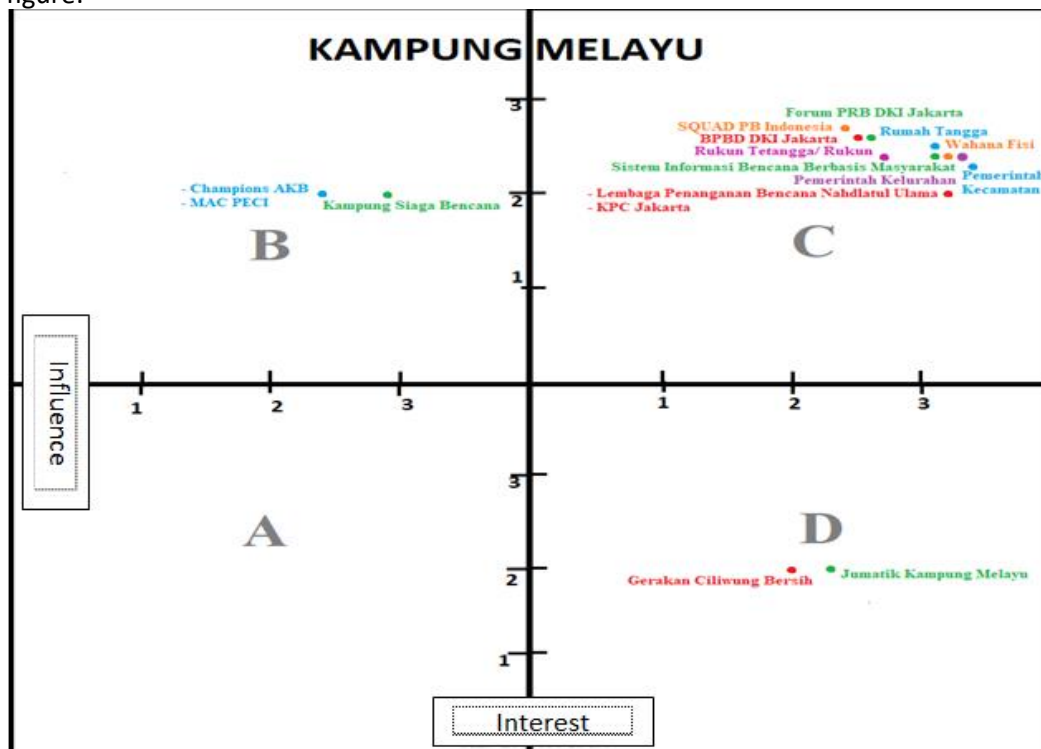
The important stakeholders in disaster management must take action and collaborate together, not only before the disaster occurs, but during a disaster and after a disaster occurs. The actions and collaborations carried out build the value of trust in disaster management. These stakeholders work hand in hand and trust each other in the tasks given during the disaster management process. Furthermore, stakeholders are expanding their network not only at the national level but also at the international level and strengthening social relations between the victims affected by the disaster at the Ciliwung Riverbank. Stakeholders who take joint action will strengthen and build information exchange in disaster areas. It is proved by the existence of groups on social media that take collective action and exchange information among disaster newspapers. In addition, the formation of institutions meets the needs of disaster areas at the Ciliwung Riverbank .

Certainly, different roles, duties and functions of stakeholders can have the different influences and interests in disaster management at the Ciliwung Riverbank area. At the research locus. Ciliwung Riverbank area, Kampung Melayu Village, Jakarta City, there are several stakeholders in disaster management. These stakeholders cooperate and care for each other among disaster victims at the Ciliwung Riverbank . There are several levels of stakeholders involved in disaster management at the Ciliwung Riverbank , namely the government level, the level of private institutions, communities and community organizations. The involvement of stakeholders in the field of disaster impact reduction or disaster mitigation, rescue when experiencing disaster pressure in the form of flooding and recovery after experiencing a disaster at Ciliwung Riverbank (flood).

The involvement and role of stakeholders in disaster management can be analyzed into four groups, namely: stakeholders with low interest and high influence on disaster management at the Ciliwung Riverbank , Jakarta City; Stakeholders with high influence

and low interest in disaster management in the Jakarta City ; stakeholders with high interest and high influence for disaster management in the Jakarta City as well as stakeholders with low influence and high interest in disaster management in the Jakarta City area. This level illustrates that stakeholders in disaster management have unequal involvement and roles and are in accordance with their respective duties. Stakeholders perform the action in disaster areas are in the form of program planning in reducing the impact of disasters, taking collective action and increasing the capacity of households in disaster areas in reducing disaster risk faced by households at the Ciliwung Riverbank , Jakarta city.

Actions taken by stakeholders, especially local governments, carry out flood disaster mitigation activities at the Ciliwung Riverbank, prepare disaster management plans in flood disaster areas which include mitigation activities before and after the disaster. The actions taken by the government of course coordinate with all layers involved in handling disasters at the Ciliwung Riverbank, Jakarta City. The research location in Kampung Melayu Village, Jakarta City has 16 stakeholders with active role in disaster management. The 16 stakeholders have different interests and influences in disaster management at the Ciliwung Riverbank. For more details can be seen in the following figure:



- A : Low interest , low influence
- B : high influence, low interest
- C : high interest , high influence
- D : low influence , high interest

Figure 1 Analysis of influential and interested stakeholders at the Ciliwung Riverbank , Kampung Melayu Village 2020

The figure above shows that stakeholders in Kampung Melayu Village, Jakarta City have an active involvement in disaster management. This involvement is not only at the household level but also at the national and international levels. Stakeholders with high influence in disaster management and low interest in disaster management are stakeholder champions AKB, MAC PECEI and disaster preparedness villages. These stakeholders have a strong influence in disaster management due to the relationship, network and trust gained by households at the Ciliwung Riverbank in disaster management. It shows that all activities in disaster management are always present and provide encouragement to reduce the impact of disasters. Households on the banks of the Ciliwung River, give very high trust and mutually strengthen social relations among flood disaster newspapers in Kampung Melayu Village, Jakarta City.

Stakeholders with very high influence and interest in disaster management are the DKI Jakarta DRR Forum, Squat On Indonesia, Wahana Fisi, households, neighborhood units, community units, community-based disaster information systems, BPBD DKI Jakarta, sub-districts, sub-districts, Institute for Handling NU and the Jakarta Ciliwung Caring Community. The number of stakeholders with high influence and interest is 12. All stakeholders have an active role in dealing with disasters in the form of reducing the impact and risk of disasters in disaster areas in Kampung Melayu Village, Jakarta City, reducing vulnerabilities that give negative things to disaster areas, taking joint recovery actions to deal with disaster impacts and taking action in terms of disaster relief. improving the quality of human and natural resources in disaster management in the Ciliwung Riverbank area. Therefore, all stakeholders who play an active role give influence to increase household resilience in disaster areas at the Ciliwung Riverbank, Kampung Melayu Village, Jakarta City.

Figure 1 above shows that there are stakeholders with high interest in disaster management but have low influence in handling disasters at Ciliwung River Bank area, Jakarta City. The stakeholders are Jumentik Kampung Melayu and the Gerakan Ciliwung Bersih. This shows that stakeholders do not carry out joint activities in disaster management and are less active in collaborating in disaster areas in Jakarta City. Actions taken by stakeholders as a form of reducing disaster risk and providing knowledge to households experiencing disasters. It also strengthens households to keep on rising even when they face catastrophic pressures in the form of floods.

Disaster management carried out by multi-stakeholders is a form of joint action to help each other among disaster victims. Multi stakeholders also have actions to strengthen each other in handling disasters at the Ciliwung Riverbank. This encourages households to collaborate and act together, not only at the household level but at the level of the central government, communities, private institutions and even organizations and related agencies in disaster management in the Ciliwung Riverbank area. Disaster management carried out by households has different strengths and abilities and expertise. Each region in the disaster area has the ability and expertise and strength in reducing the impact of the disaster. In the Ciliwung Riverbank area, Jakarta City shows that each stakeholder has different strengths in dealing with disasters. In addition, the abilities and expertise also differ according to the main tasks and roles in disaster management at the Ciliwung Riverbank, Jakarta City. Besides that, each

stakeholder in household relations in the disaster area at the Ciliwung Riverbank has different skills and value orientations. It can be seen in the following Figure:

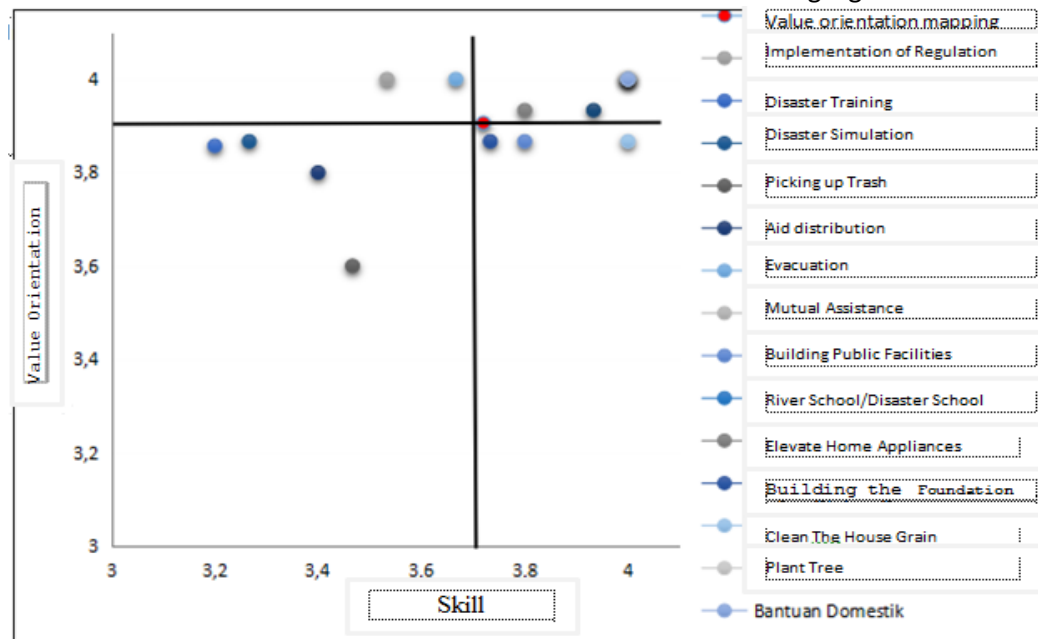


Figure 2 Stakeholder Analysis Based on Expertise and Value Orientation on the Ciliwung River Bank, Kampung Melayu Village in 2020

Based on Figure 2, it shows that Kampung Melayu Village in disaster management has high expertise and low value orientation in handling flood disasters. Fields that include high expertise and low value orientation are aspects of evaluating and implementing laws. It shows that the city of Jakarta is a low-lying area and has a dense population. Settlements in the Jakarta City area are dense in life activities, both in the economic, trade and other aspects. During a disaster, it is difficult to find an evacuation place. Therefore, evacuation sites in dealing with disasters in the DKI Jakarta area are the first priority and become necessary to make improvements in disaster mitigation.

Households at the Ciliwung Riverbank area, on average have already known the law regarding the prohibition of not living at the Ciliwung Riverbank. However, until now, households in the Ciliwung Riverbank still live at the disaster area and are still carrying out household activities. The implementation of the law in the field of prohibiting littering, planting trees, temporary shelter during a disaster, domestic assistance, elevating the yard, river schools and mutual cooperation are the most important things in households in disaster areas. This action becomes a priority for achievements carried out by households in disaster areas, needs to be increased to continue to take joint actions and must be maintained in disaster management in flood disaster areas in Jakarta. All activities in disaster management are the most important thing for each stakeholder to cooperate and strengthen each other.

It is important for disaster management to involve all actors and continue to take action together. Stakeholders with low expertise and low value orientation in disaster management in waste scavenging activities, disaster training, distribution of aid and disaster simulation. It shows that households living at Ciliwung Riverbank are busy making a living in the household and their average economy is at the bottom. It shows that this aspect becomes the first priority to deal with the flood area disaster in Jakarta.

### **Stakeholder Collaboration Governance and Household Resilience in Disaster Areas at Ciliwung River Bank, Jakarta City**

Collaborative governance acts as main principle to build and strengthen joint actions, build cooperation in a network and grow a high sense of trust to achieve common goals. The goal is to create the strength the disaster victims (Irwan 2021). Cooperation built and strengthened in disaster-prone areas starts from involvement in taking collective action, having knowledge to know about disasters and raising awareness values in taking the action. Actions taken in cooperation with the regions include helping out such as borrowing goods when they are under disaster stress, helping and guiding residents affected by the disaster to go to refugee camps, helping and cleaning houses that were badly affected by the disaster, providing assistance in the form of food, clothing and medicines as well as providing information about the disaster conditions and situations faced by households in the disaster area.

Collaborative governance built by disaster-prone households is to strengthen the resilience level of disaster-affected households by planning the impact of disasters they face. Collaborative governance at the planning stage is carried out to reduce the risk of disasters caused by floods in DKI Jakarta. Planners as elements in disaster mitigation and actions that have an effect or impact to be ready to face disasters occurred due to flooding at the Ciliwung Riverbank.

The planning stage carried out by stakeholders in disaster management includes carrying out activities such as cleaning the environment around their house, improving g knowledge, ideas in understanding disasters especially in rescue and recovery, rebuilding facilities and economic conditions for households affected by disasters. Flooding in the Jakarta as well as supporting and participating in government programs in providing knowledge about disasters, especially to early childhood children called disaster schools or river schools as well as disaster safe school programs in DKI Jakarta. This planning stage will foster competitiveness and strength to understand disasters in each disaster-prone area.

Furthermore, strengthening resilience in the household is carried out and supported by the values of trust among disaster victims and stakeholders who play an important role in dealing with disasters. Parties who are active in dealing with disasters are not only at the household level but also at the national and even international levels. Indirectly, trust is a form of formulating various strategies and sustainable development in disaster-prone areas. It is in line with (Coleman JS 1998); (Bourdieu Pierre 1985) that explains that trust is expectation that grows from all actors involved and generated by the values of honesty, togetherness and order based on mutually agreed norms. It shows that there are actions taken together to achieve a common goal. Collaborative governance that is built as social capital to stay afloat in the pressures that occur in disaster areas. The strength of cooperation and mutual assistance and the body also develops the value of trust that will expand the network of fellow disaster victims to survive in the disaster area. It supports the household as an element and able to collaborate not only at the household level but between households in the disaster area.



The networks that grow and develop built process is due to the interaction and communication to achieve a common goal. (Inayah. 2012) describes the network as the ability that exists in actors in communicating and interacting and allows the development of cooperation between each actor creates the value of trust to obtain a common goal. The actors or all stakeholders in the Ciliwung Riverbank area expand networks that can be carried out together and foster actions to be involved in carrying out activities in disaster areas. The involvement of all actors or stakeholders begins with disseminating information and expanding networks in disaster areas.

Collaborative governance in disaster areas is a step to take collaborative action and be involved in all actions. The collaborative process is carried out as a force to reduce the impact of the disasters and being able to carry out rescues when experiencing disasters and being able to take recovery actions after they experience disaster stress. The form of collaborative governance in disaster areas in the city of Jakarta is by carrying out activities such as scavenging garbage as a weekly activity carried out by communities in the Ciliwung Riverbank area. In addition, the actors and households participate in all disaster response activities and training at the disaster simulation stage, stakeholders and households living at the Ciliwung Riverbank carry out activities in building public facilities in disaster areas and participate in activities carried out such as disaster safe schools and river school.

Disaster-affected households in disaster areas at the Ciliwung Riverbank conduct activities as a form to build collaborative governance in disaster areas. The collaboration process is carried out as a process in involving and strengthening households and be ready to face disasters. Collaborative actions are built by conducting programs that can provide benefits for one of the collaborative processes in disaster areas. The parties involved in collaborative governance are BNPB, BPBD DKI Jakarta, sub-district government, urban village government, RW/RT and parties involved in managing the Ciliwung River namely the Environment Service, Center for the Ciliwung-Cisadane River Area and BPDAS Ciliwung-Citarum as well as multi-stakeholders who are able to build cooperation to reduce the impact of disasters at the Ciliwung Riverbank.

The collaboration process developed by all parties resulted in activities and fulfillment of needs in disaster areas at Ciliwung Riverbank, Jakarta City. Collaborative governance developed creates activities and makes it easier to obtain information in disaster areas. Households on the banks of the Ciliwung River remain resilient or survive with the strength of social capital built by fellow disaster victims and driven by collaborative processes or governance that strengthen and develop each other. Collaborative governance and the involvement of all actors enables households to survive in disaster areas and carry out activities. Households at the Ciliwung Riverbank are active and participate in programs from the government, organizational institutions and communities regarding disaster response or are ready to face the pressures that arise from the flood disaster at the Ciliwung Riverbank, Jakarta City.

#### **Stakeholder Collaboration Governance Strengthens Household Resilience Disaster Areas at Ciliwung Riverbanks, Jakarta City**

Collaborative governance on households in the Ciliwung Riverbank disaster area strengthens households to survive despite the pressures faced (Irwan 2021).

Household needs are also encouraged by the absence of new settlements owned by households, economic condition that is depended on the area, land house that they already have a land certificate as legal force, they have been born in the area and others. It makes households do not leave their settlements and carry out joint activities in the disaster area at the Ciliwung Riverbank .

Households on Ciliwung Riverbank are still resilient where they were born as a form of the collaborative process carried out as a strength in maintaining the household economy. Collaborative governance actions are developed to make adjustments in the disaster management process at the Ciliwung Riverbank . Multi-stakeholder networks and collaborative collaboration may have the ability and capacity to respond and deal with disasters in the Ciliwung Riverbank area. Therefore, the role of the government, organizational institutions, communities and society plays a function to solve the problems occurred. So that households affected by the disaster are able to deal with it and survive the disaster area at the Ciliwung Riverbank , Jakarta City. In the Ciliwung Riverbank area, the role of the government, communities, organizational institutions, and the community in dealing with disasters is high because the DKI Jakarta is the capital city of Indonesia.

Household resilience in this paper illustrates the actions taken by households affected by disasters in the form of building awareness and capacity building in dealing with disaster stresses or shocks. It encourages households to survive, even though the shocks continue to be experienced and as a form of disaster risk reduction, rescue and recovery in disaster areas at the Ciliwung Riverbank , Jakarta City. The collaborative governance is built in the household is able to adapt and change behavior for the actions taken. This power encourages households to not leave the settlements occupied. The actions taken and the programs implemented in the Ciliwung Riverbank area are able to add insight, knowledge, experience and strong capabilities. All parties are able to carry out the activities to improve wider relations

## **Conclusion**

Collaborative governance in disaster areas at the Ciliwung Riverbank , Jakarta City, is to strengthen resilience in households to continue carrying out activities in disaster areas. Taking action simultaneously can increase household knowledge and experience in dealing the disasters at the Ciliwung Riverbank . The household carries out the risk reduction activities to the disaster experienced and skilled in recovering after a disaster occurs and able to increase the capacity of economic life in the household. Households remain resilient (resilience) driven by the success of household relations in taking joint actions, especially mutual assistance which is manifested in the form of cooperation. These households interact with each other and strengthen social networks and build the trust values in dealing with disasters. Actions are taken not only at the household level but also at the multi-stakeholder level to reduce the impact of the disaster. This activity arises the intensive multi-stakeholder interaction. The activities carried are encouraged with considerable involvement from each stakeholder. Collaborative governance is to strengthen households to survive in disaster areas and create new behaviors in reducing the impact of disasters on Ciliwung Riverbank.

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