

## The Construction a Model of the Community Empowerment to Prevention, Preparedness and Response Disaster Emergency

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### ABSTRACT

*There are various methods or models of community empowerment, both in theory and in practice, policies and programs, in reality, none of them are really effective in overcoming various problems in the community, including in terms of prevention and preparedness for disaster emergencies. The aims of this study was to analyze and explain the development of community empowerment methods or models in disaster prevention and preparedness and disaster emergency response. The type of research was descriptive qualitative, with a case study design, phenomenology, exploratory-explanative, analytic-comparative, evaluative. The research location was in Bili-Bili Village, Bonto Marannu District, Gowa Regency, South Sulawesi Province. The sample was 125 families with purposive sampling technique. Data collection techniques are library research, documentation, observation, questionnaires, interviews and FGDs. The data were analyzed with a qualitative approach. Results and conclusions, community empowerment is not optimal due to the presence of internal and external factors both in society and the government as well as the weakness of the empowerment method used. The construction of the community empowerment method or model developed includes four domains, namely the core domain includes awareness, capacity building, empowerment, and civilizing, the second domain includes the involvement of formal institutions and non-formal institutions, the third domain includes potentials, constraints, disadvantages and advantages, and the domain The fourth includes assessment subvariables and indicators. Implication: without the application of the model, it is difficult to achieve empowerment goals and targets it.*

**Keywords:** model, empowerment, prevention, disaster preparedness.

### INTRODUCTION

Generally, the method or model of community empowerment has basically been constructed by several theories and practices in policies and programs. In the theoretical perspective, for example, people-centered development theory or also called alternative development theory pioneered by Korten (Mardikanto, 2013: 17-18) states that development must be oriented towards improving the quality of human life. Specifically in the context of empowerment, Wilson (1996) constructs four empowerment processes, include Awakening (problem identification, awareness), Understanding (competency learning), Harnessing (capacity building), and Using (utilization of competence and capacity). Likewise, Suharto (2012) constructs three empowerment processes, namely awareness, strengthening, and

empowerment. Meanwhile, construction from a practical perspective is reflected in various policies and empowerment programs carried out by the Government and its institutional ranks.

According to Astuti and Sudaryono (2010), the risk of potential disasters can be experienced by anyone or everyone so that disaster management becomes everybody's business or the business of all parties. In this context, it is necessary to share roles and responsibilities (shared responsibility) in order to increasing any preparedness at all levels, including children, adolescents and adults. And community members or people living at in vary advance countries which also disaster-prone such as Japan, the United States, Germany, South Korea, and Europe have shown their awareness, vigilance and preparedness that grows and develops through regular training program. In this regard, UNDP (1992:16-19)

and Sutikno (2003:4-6) argue that the impact of disasters is in the form of large losses to life, property and the social structure of the community that exceeds the ability owned people of the affected-disaster to cope it thus they require a protection and assistance from the other side.

In Japan, the results of a survey on the Great Hanshin Awaji earthquake in 1995 showed the percentage of survivors was caused by yourself by 35%, family members 31.9%, friends/neighbors 28.1%, passers-by 2.60%, SAR Team 1.70%, and others 0.90% (BNPB, 2018). This reality indicated that empowerment program can be a momentum for implementing any educational activities to increase understanding of risk with the theme 'Disaster Preparedness Exercise Ready, To Be Safe' as a shared main message that will be encouraged in the awareness process for self-improvement (BNPB, 2018)

In Indonesia, the phenomenon indicate that principal of disaster management has not been adequate or not optimum conducted yet in manage any activities needed both before, during and after a disaster so that it is still difficult to avoid a disaster or to overcome the impact if a disaster has occurred (Purnomo, 2010:9; BNPB, 2018). In this regard, the evaluation results of the National Assessment Report (NAR, 2013) identified a few obstacles in disaster management in Indonesia, including the lack of coordination within raising awareness of disaster-prone communities (Inarisk BNPB, 2015). Even an international institution UN-ISDR (Bencana Kesehatan, 2014) in its report criticized the weak policy of disaster prevention and protection in Indonesia in coordination between ministries/government agencies, the budget is very small, the concept of disaster risk reduction is not evenly distributed, risk analysis is weak. This condition

is exacerbated by the low quality of technology and the lack of disaster preparedness education.

In South Sulawesi Province, including in Gowa Regency, various types of disasters, especially floods, cyclones and landslides often occur, even among local people residents have to face these types of disasters almost every year, especially during the rainy season with moderate and high rainfall. Amount sub-districts such as Somba Opu, Bontomarannu, Pattalassang, Parangloe, Palangga, Kunciopao, and Manuju sub-districts experience floods, cyclones, and landslides every year (Bone Pos.Com, Gowa, 2019; BPBD Gowa, 2019). The disaster caused dozens of people to die, hundreds of them injured being treated in hospitals, thousands of others being displaced and evacuated (Gowa news id., South Sulawesi news id, Makassar news id, Kompas com.).

Especially in Bontomarannu District, one of the villages that is often affected by natural disasters, especially floods, cyclones and landslides is Bili-Bili Village, with a topographic position at an altitude between 46-200 m above sea level (asl), with an average rainfall of average in between 135 -160 days per year, and the average temperature is 28 - 35 °C (BPS District Bontomarannu, 2020). In the village, there is a large dam called the Bili-Bili DAM as a source of irrigation and water for generating electricity.

The natural disasters event that occurred at Bili-Bili Village not only cause a risk of material and non-material losses (life casualties) as well as economic impacts, but also actually appear pose risks and impacts on health problems for among residents or community members in the village. Every time a natural disaster occurs, the many people experience a certain health problems and diseases such as digestive system and integumentary system disorders, leptospirosis, pyoderma, upper

respiratory tract infections, urinary tract infections, diarrhea, and others, some even experience mental health disorders and psychological and trauma problems (source: results of documentation and interview studies, 2021). Its phenomenon and the problematical that community empowerment using a method or model by a top-down approach in Bili-Bili Village is not optimal. On that basis, the formulation of the main problem and the research objective is the development of construction methods or models of community empowerment in disaster prevention and preparedness and disaster emergency response.

## METHOD

Kind of this research is descriptive qualitative (Nazir, 2014; Gunawan, 2013; Sarosa, 2012; Moleong, 2011; Bogdan and Taylor, 2009). Design by case study, exploratory – analytic, evaluative (Creswell, 2010; Sugiyono, 2014). Location at Bili-Bili Village, Bonto Marannu District, Gowa Regency. Population all people who are vulnerable to floods, landslides, and hurricanes. By purposive sampling (Sugyono, 2012) and taken sample amount 125 families was assigned as respondents. A qualitative descriptive to analyzed data (Miles & Huberman, 2012; Moleong, 2014) by Likert Scale and SWOT analyses (Salusu, 1996).

## RESULTS AND DISCUSSION

### Characteristics of Respondents

Characteristics of community respondents include **First**, the largest age group is the age of 26 years to 55 years, as many as 90 (or 72.0%) are classified as productive age. In addition, there are respondents with an easier age, namely under 26 years as much as 12.8% and an older age, namely above 55 years as much as 15.2%. This means that the productive age group is

quite appropriate to make any participation into empowerment programs in the field of disaster prevention and preparedness and response to any disaster emergency.

Second, the number of male and female respondents is not too much different so that the empowerment program will be evenly distributed among the sex groups. In terms of marital status, most of them are married and have family dependents. Third, the most education groups are junior high school and senior high school/equivalent as many as 66.4%, and aslo 23.2% elementary school education/equivalent. In addition, 10.4% diploma and undergraduate education.

Fourth, the types of occupations or professions of community respondents are relatively diverse or vary, the most of which are farmers (28.0%) and traders/entrepreneurs (24.8%), then daily laborers (12.8%), government employees (8.8%). In addition, there are also those who work as private employees (7.2%) and domestic workers (6.4%). While the other ones are members of the TNI/Polri (military personnel) (1.6%), retired civil servants (2.4%), teachers/educational staff (2.4%), health workers (0.8%), breeders (0.8%), students/students (4.0%). Fifth, most (94.4%) of the respondents are members of the ordinary community in addition to some (5.5%) being organizational administrators in their village.

### Empowerment of Community to Preventing and Preparedness to Face Any Disaster and Response Against Disaster Emergency

Based on the results of the study, can be a comprehensively obtained about the achievements of community empowerment in disaster prevention and preparedness and

disaster emergency response in Bili-Bili Village as formulated in Table 1.

**Table 1**  
Formulation of Community Empowerment Achievements to Prevent and Preparedness to Face Any Disaster and Disaster Emergency Response

No.	Subvariabel of Empowerment	Frekuensi (F, %)		Total (%)
		Good	Less	
1	Awareness	55 (44,0%)	70 (56,0%)	125 (100,0%)
2	Capacity building	49 (39,2%)	76 (60,8%)	125 (100,0%)
3	Empowering	30 (24,0%)	95 (76,0%)	125 (100,0%)
	Total (%)	<b>45 (36,0%)</b>	<b>80 (64,0%)</b>	125 (100,0%)
	Category	<b>Not optimum</b>		

Source: primary data processing, 2021

Table 1 shows that first, of all three sub-variables namely awareness, capacity building and empowerment, the achievement is low with an average score of 36.0% so that empowerment is in the non-optimal category. Second, the achievement of the awareness aspect score appears to be higher than capacity building and empowerment. Third, empowerment is still the most basic problem in addition to the aspect of capacity building and awareness in the empowerment. Thus, the empowerment still requires model development.

### **Internal and External Factors Support and Inhibit Community Empowerment to Preventing and Preparedness to Face Any Disaster and Response Against Disaster Emergency**

#### **1. Internal Factor**

The internal factors that support and hinder the local community's empowerment in disaster prevention and preparedness and disaster emergency response in Bili-Bili Village as shown in Table 2 below.

**Table 2**  
Formulation of Supporting and Inhibiting Internal Factors for Community Empowerment in Disaster Prevention and Preparedness and Disaster Emergency Response

No.	Indicators	Frekuensi (F, %)		Status of factor
		Good	Less	
1	Anxiety over the frequency of disaster events	106 (84,8%)	19 (15,2%)	Supporter
2	Experience to face or in dealing with disasters and risk of loss	86 (68,8%)	39 (31,2%)	Supporter and inhibitor
3	Perceptions about the importance of prudence, prevention, preparedness, and response to disaster emergency	110 (88,0%)	15 (12,0%)	Supporter
4	Competence in dealing with disasters	53 (42,4%)	72 (57,6%)	

5	Ability to respond to disasters	41 (32,8%)	84 (67,2%)	Supporter and inhibitor
6	Commitment and motivation to learn	45 (36,0%)	80 (64,0%)	
7	Need for support/assistance	82 (65,6%)	43 (34,4%)	
8	Participation	42 (33,6%)	83 (66,4%)	
	Total (%)	70 (56,0%)	55 (44,0%)	
		125 (100,0%)		

Source: processed primary data, 2021

Table 2 shows that of the eight internal factor indicators, there are two indicators that are the single supporting internal factors, namely the anxiety factor over the frequency of disaster events, and the perception factor about the importance of prudence, disaster prevention and preparedness, while the other six indicators (namely experience, competence, etc.), ability to act, commitment and motivation to learn, the need for policy support and assistance programs, as well as participation and participation) can be a supporting factor as well as an obstacle to community empowerment in disaster prevention and preparedness and disaster emergency response. Thus, the internal

factors in individuals and community groups can be a potential both strengths and weaknesses which can be considered to developing an approach or strategy within empowering local community or people in order to preventing, preparing and owned better response to any disaster emergency in around environemnt them.

## 2. External Factor

External factors that can support or hinder the implementation of local community empowerment policies and programs in preventing, preparing and response for disaster emergency as shown in Table 3.

**Table 3**

Formulation of External Factors to Supporting and Inhibiting Community Empowerment for Prevention and Preparedness to Face Disaster and Respond to Disaster Emergency At Bili-Bili Village, 2021

No.	Indicators	Frekuensi (F, %)		Status of factors
		Good	Less	
1	Leadership role of the local government	41 (32,8%)	84 (67,2%)	Supporter and inhibitor factors
2	The role of leading sector institutions	48 (38,4%)	77 (61,6%)	
3	The role of community leaders and NGOs	49 (39,2%)	76 (60,8%)	
4	Policy and program factors	35 (28,0%)	90 (72,0%)	
5	Infrastructure factor	45 (36,0%)	80 (64,0%)	
	Total amount (%)	43 (32,4%)	82 (65,6%)	
		125 (100,0%)		

Source: result of primary data processing, 2021

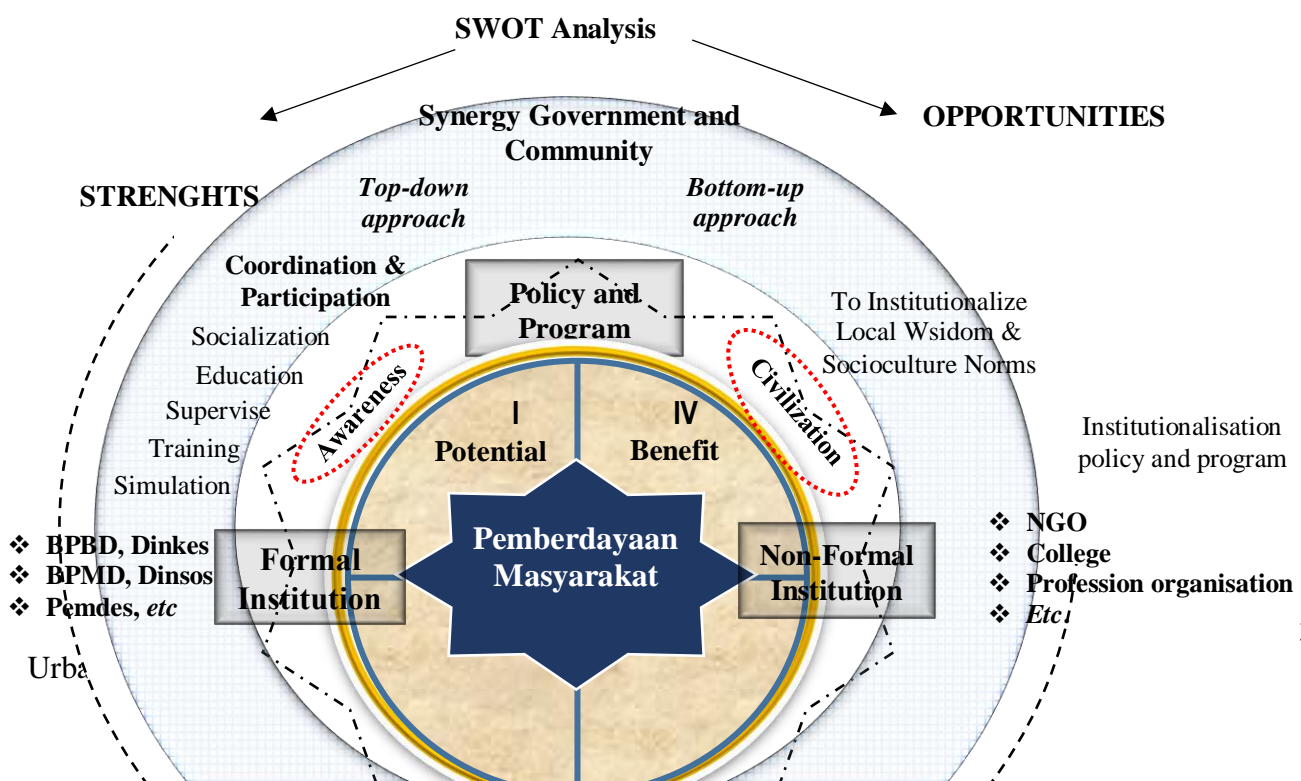
Table 3 shows that of the five indicators of external factor, all of them have the same potential as supporting and inhibiting factors for community empowerment in disaster prevention and preparedness and disaster emergency response in Bili-Bili Village. However, if we compare each factor indicator, it can be said that the highest achievement score is found in the role of community leaders and NGOs, then the institutional role of the leading sector. Meanwhile, moderate achievement is on the indicators of infrastructure factors and local government leadership role factors. The lowest scores are policy and program factors. This means that empowerment policies and programs are still a fundamental problem, so there needs to be a change in the model of community empowerment policies and programs in disaster

prevention and preparedness and response to disaster emergency.

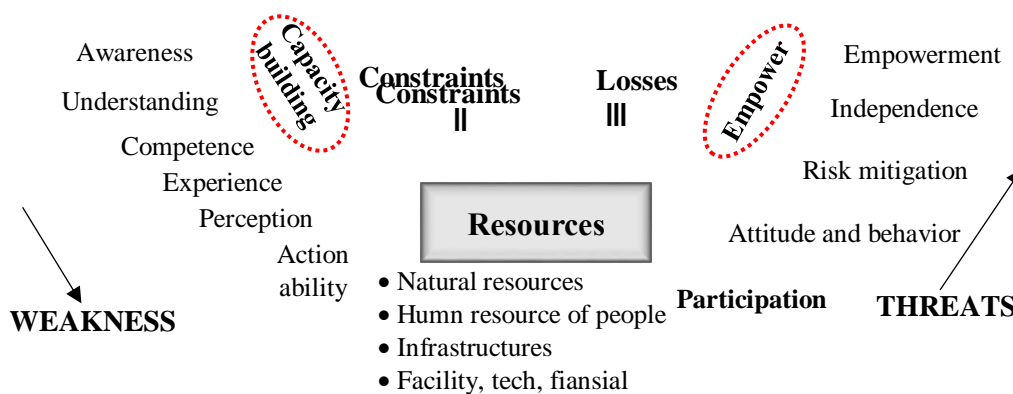
### To Development Construction A Model of Community Empowerment to Prevention, Preparedness and Response Disaster Emergency

Based on the results of research and analysis about the achievements of community empowerment in disaster prevention and preparedness and disaster emergency response in Bili-Bili Village, Bontomarannu District, Gowa Regency, as well as internal and external factors that support and hinder the empowerment, a method solution or solution can be developed a model of local community empowerment in disaster prevention and preparedness and community-based disaster emergency response, local culture and problem solution needs, as shown in Figure 1 below.

## THE CONSTRUCTION A MODEL OF COMMUNITY DEVELOPMENT







Source: research result dan analysis, 2021

**Figure 1**  
**Model Construction of Community Empowerment in the Disaster Scope**

At Figure 1, construction a model of the community empowerment in the disaster scope to explain that:

1. Core domain: Community empowerment includes awareness, capacity building and empowerment and cultivating individuals and groups in disaster-prone areas in order to realize empowerment and independence in disaster prevention and preparedness and response.
2. Second domain: Empowerment involves formal institutions (government and related institutions) and non-formal institutions (community institutions/NGOs, private sector)
3. Third domain: There are four main components to empower include potency, constraints, losses, and profit
  - a. Potential, namely the strength of internal and external supporting resources in the form of regional and environmental natural resources, human resources (HR), organizational resources, community and cultural institutions, infrastructure, infrastructure, facilities and technology, financial resources, and others, which all of

which become the basic capital for the implementation of community empowerment in disaster prevention and preparedness and disaster emergency response.

- 1) The potential internal supporting forces come from individuals and community groups such as belief, awareness, knowledge, understanding, motivation, experience, competence, perception, attitude, action, and positive and good behavior that influence (support) community empowerment in prevention and preparedness and disaster emergency response.
- 2) External supporting forces that come from outside such as leadership roles, institutional roles, policy and program support, availability of good infrastructure, facilities and technology that influence (support) community empowerment in prevention, preparedness and emergency response.

- b. Constraints, namely internal and external inhibiting forces
    - 1) Internal inhibiting forces originating from individuals and community groups such as lack of trust, awareness, knowledge, understanding, motivation, experience, competence, negative perceptions, attitudes, actions, and behaviors that are lacking that affect (inhibit) community empowerment in prevention, preparedness and disaster emergency response.
    - 2) External inhibiting forces originating from outside such as lack of leadership, institutions, policies and programs, weak and lacking infrastructure, facilities and technology that affect (impede) community empowerment in disaster emergency prevention, preparedness and response.
  - c. Losses, namely the impact and risk of property and life loss experienced by community members, especially victims due to disasters who require risk mitigation through community empowerment programs in disaster prevention and preparedness and disaster emergency response.
  - d. Profits, namely the benefits and advantages derived from the results of utilizing all potentials into community empowerment for prevention and preparedness to face disasters and disaster emergency response
4. Fourth domain: to explore any sub-variables and indicators of community empowerment in disaster prevention and preparedness and disaster emergency response.

Based on the results of the SWOT (Strengths, Weakness, Opportunities, Threats)

analysis, amount strategic steps to developing a community empowerment approach in the prevention and preparedness and response of disasters can be formulated as follows.

1. To performing, establish and intensify any socialization and to maximize the implementation of the Bili-Bili Village Regulation (PERDES) on Community Empowerment Programs in Disaster Prevention, Preparedness and Emergency
2. To establishing and intensify a socialization, and to maximizing the institutional role of the Bili-Bili Village Special Empowerment Institution which plays a role to organizing any community empowerment programs for preventing and preparing againts disasters and emergencies
3. To performing, establish and optimize the role of the Integrated Village Disaster Information Service Center
4. To establish a Village Health Education Institution (LPKD)
5. To performing a Disaster Management Agency Unit for the Health and Disease Control Sector
6. To institutionalize, maximize the actualization and internalization of the potential values of local cultural wisdom and socio-cultural norms into a strategy to prevention, preparedness, and response any disaster
7. To maximize the implementation any programs, include awareness, capacity building and community empowerment through extension activities, education and training, coaching, supervision, and village disaster simulations
8. To maximizing the increase in awareness, competence, commitment, motivation, experience, ability to act, positive perception, participation of village community members towards disaster prevention and preparedness and disaster emergency response.



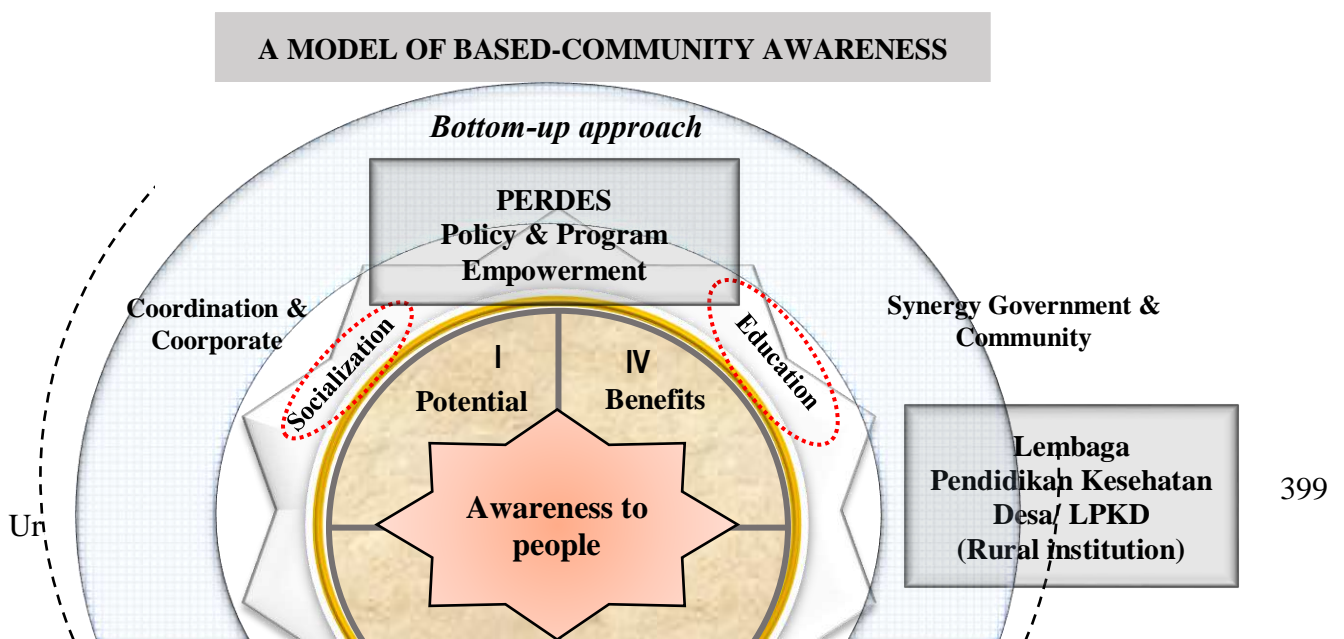
The description shows amount strategic approaches that needed to be taken if all parties want to effectively achieve any targets of community empowerment in preventing and preparing for disasters and responding to disaster emergencies. **First**, there must be a legal umbrella given available at the village level in the form of PERDES which is the basis for policies and programs of empowerment. **Second**, rural communities must have a special institutional authority include an autonomous, sovereign, and independent in accordance with their local culture and their needs over problem solutions in villages. For this purpose, it is necessary to form at least several institutions such as (1) Village Special Empowerment Institutions that play a role in organizing community empowerment programs in disaster prevention and preparedness and emergencies, (2) Village Disaster Integrated Information Service Center/PPITKD, (3) Health Education Institutions Village (LPKD), (4) Disaster Management Agency Unit for Health and Disease Sector. All these institutions will work to optimally manage all potential resources owned by the village and its community to seize opportunities for their empowerment and independence to prevention, preparedness and response any disasters, and will continue to work to overcome or minimize the weaknesses that exist in the village and its community. and at the same time to avoid or keep the community and villages away from all the impacts of the risk of loss due to disasters.

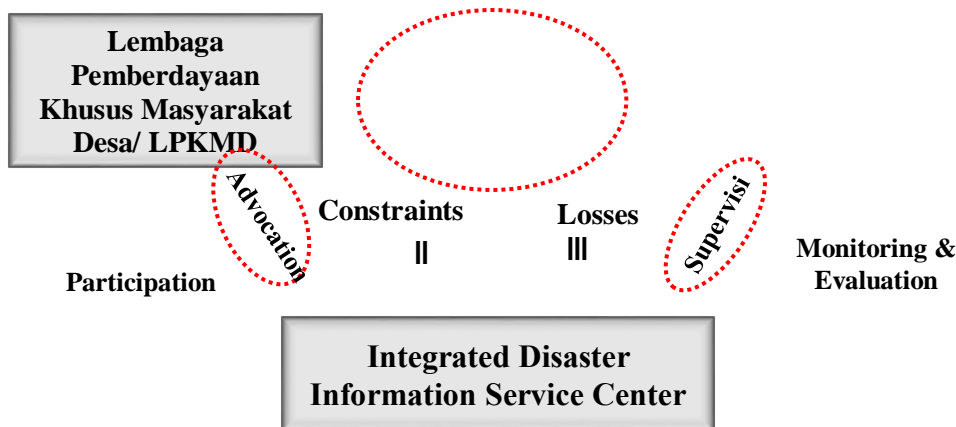
**Third**, so that the local village community is truly empowered properly and correctly, especially in terms of prevention and preparedness for disasters and disaster emergency response, the values of local wisdom and socio-cultural norms as well as living law (customary law, customary law, religious law) who live in society must also be united and institutionalized. That is, in this empowerment, the community and the roots of their cultural values should not be separated because the roots of cultural values are expected to be the main preservers, protectors and supports of that empowerment in the long term. Fourth, all things or everything that has been consensus or agreed upon in the PERDES must be carried out by consistently, openly, and continuously (continuously/sustainably). The rules or norms contained in the village regulations need to be reviewed or evaluated for their usefulness for further improvement and refinement so that they are truly efficient, effective, and meet the needs of problem solutions. Likewise, the institutions that have been formed must be actually utilized and provide any more significant benefits.

Furthermore, a special model of awareness, capacity building, empowerment and civilizing can be designed as follows.

### 1. Model of The Awareness

A model of based-community awareness to prevent, preparing and response against disaster emergency designed at Figure 2 as follow.





Source: research result dan analysis, 2021

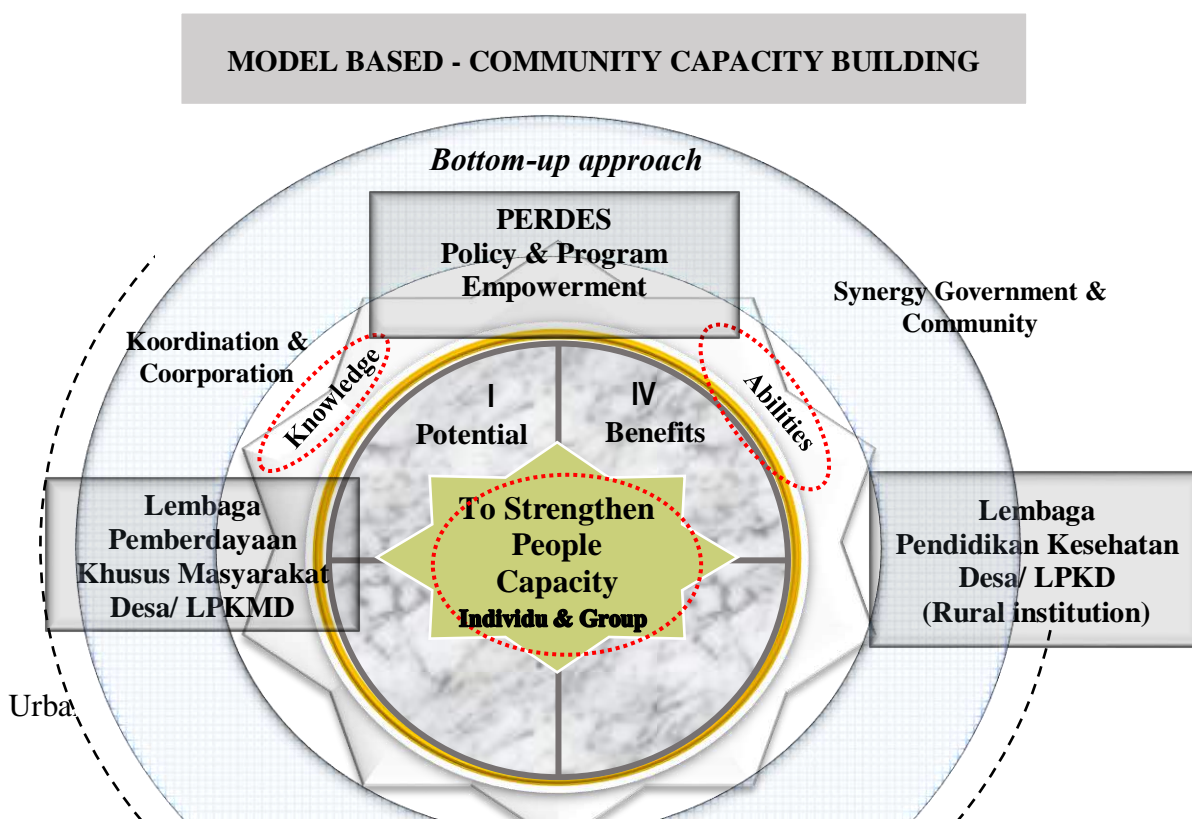
**Figure 2**  
**Model of Based-Community Awareness in the Disaster Scope**

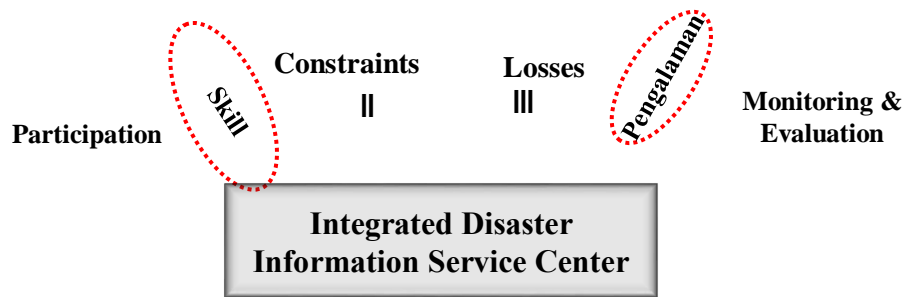
The community-based awareness model in the field of disaster is fully carried out by the institutions in the village, which directly involves the community leaders, as well as in collaboration with relevant and competent parties in the government. as well as professional institutions and universities for the implementation of awareness programs through

socialization, education, advocacy, and supervision activities for the disaster.

## 2. Model of The Capacity Building

A model of based community capacity building to prevent, preparing and response against disaster emergency designed at Figure 3 as below.





Source: research result dan analysis, 2021

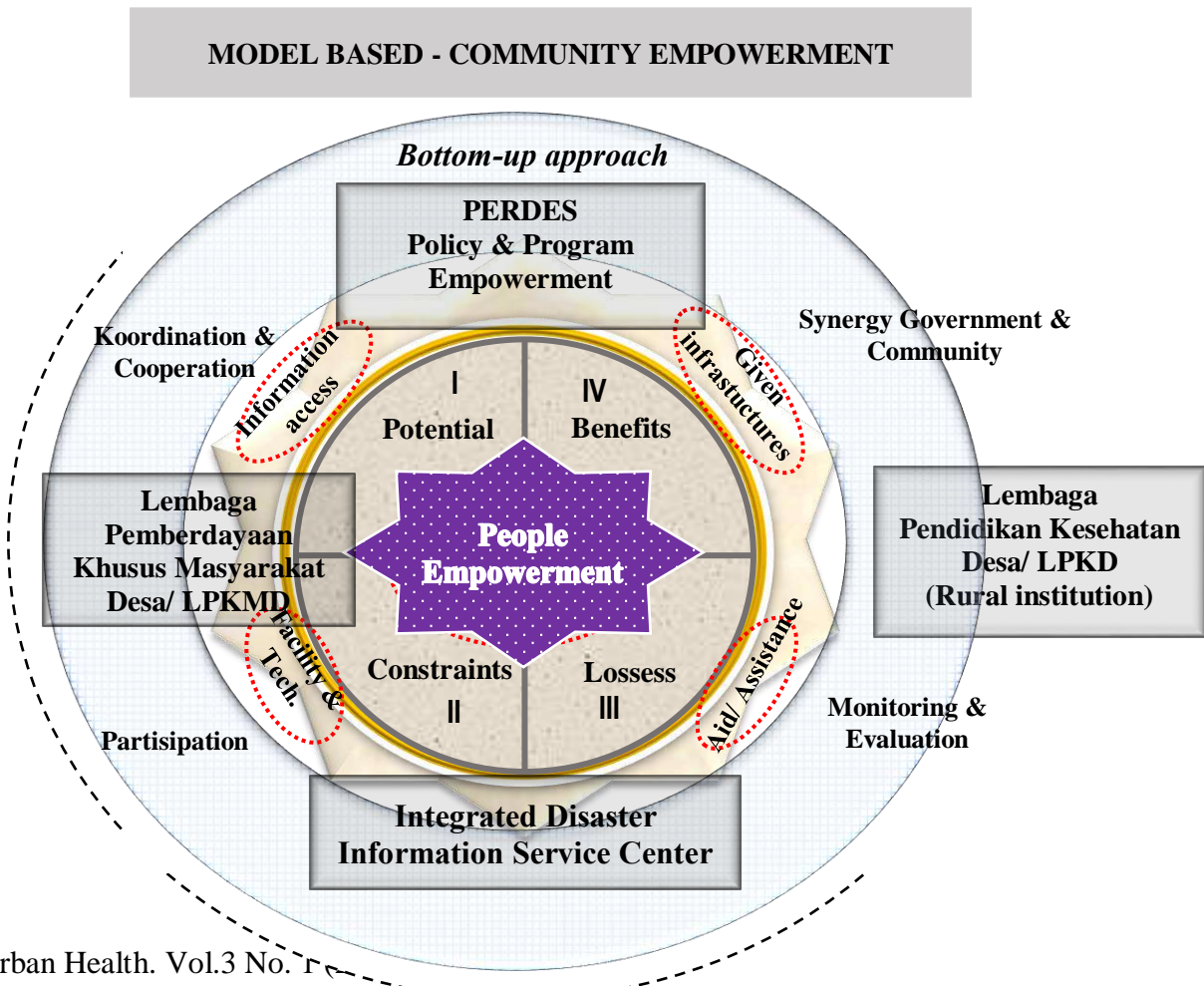
**Figure 3**  
**Model of Based-Community Capacity Building in the Disaster Scope**

The model of community-based capacity building in the field of disaster (prevention, disaster preparedness and disaster emergency response) is fully played by the local institutions in the village, in collaboration with competent and related parties, both in government and professional institutions and private parties. who will take part and play a role in increasing their knowledge capacity, technical and non-

technical capabilities, skills and learning experiences to conducted a prevention, preparedness, and response to any disaster emergency happened in around them.

**3. Model of The Empower**

A model of based community empowerment to prevent, preparing and response against disaster emergency designed at Figure 4 as below.





Source: research result dan analysis, 2021

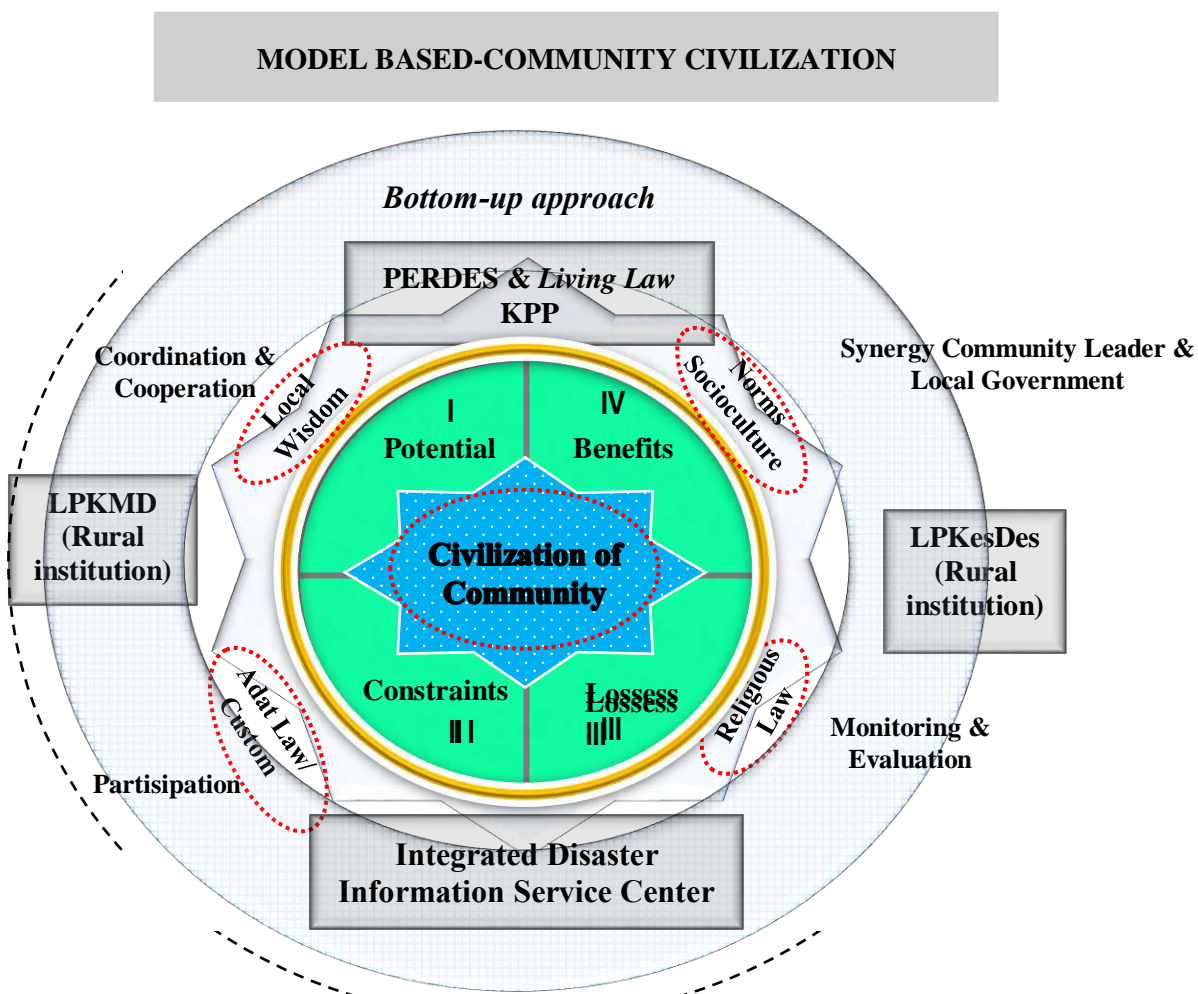
**Figure 4**  
**Model of Based-Community Empower in the Disaster Scope**

The community-based empowerment model in the field of disaster (prevention, preparedness and response to disaster emergency) is fully played by the local institutions in the village, which coordinate and cooperate with the government and private parties who will assist in meeting or to satisfy anymore their needs over disaster information service access facilities, procurement of infrastructure facilities, development of technological facilities, as well as providing other assistance needed in the prevention, risk

mitigation and disaster impacts. At beginning phase, before they owned independent and power, local people need many more aid and assistance to increase and promoting their ability or capacity both individu and group.

**4. Model of The Civilization**

A model of based community civilization to prevent, preparing and response against disaster emergency designed at Figure 5 as below.



Source: research result dan analysis, 2021

### Figure 5 Model of Based-Community Civilization in the Disaster Scope

The community-based civilizing model in the field of disaster (prevention, disaster preparedness and disaster emergency response) is fully played by existing institutions in the village, involving all elements of community leaders (traditional/cultural leaders, religious leaders, youth leaders, women leaders, political elites, economic elites, and others) and village community institutions (NGOs, Destana, Poskesdes, Posyandu, Karang Taruna, PKK, and others) and the Village/ Rural Government in coordination and cooperation for the implementation of PERDES and Living Law through internalization and actualization local wisdom values, socio-cultural norms, customary/customary laws and religious laws in community empowerment policies and programs for disaster prevention and preparedness and disaster emergency response.

#### CONCLUSIONS

The model of community empowerment to prevent, preparing and response against disaster emergency includes four domains, namely First, the core domain: awareness, capacity building, empowerment, and cultivating individuals and groups in disaster-prone areas in order to realize empowerment and independence in prevention and disaster preparedness and disaster emergency response. The second domain is the involvement of formal institutions (government and related institutions) and non-formal institutions (community institutions/NGOs, private sector). The third domain, an assessment of the four main components in the empowerment strategy, namely potential, constraints, losses, and

advantages. The fourth domain pays attention to a few sub-variables and indicators in the assessment of community empowerment in disaster prevention and preparedness and disaster emergency response.

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