



# Gender-Based Disaster Risk Reduction: A Case Study of Strengthening Women's Capacity in Pacitan District

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**Abstract.** This study aims to strengthen women's capacity to reduce disaster risk by BPBD Pacitan Regency. This study refers to gender analysis used as a reference by policymakers in creating gender equality and justice, especially in disaster risk reduction. There are four indicators of gender analysis as the primary data in this study, namely: First, equality of physical and non-physical access; Second, active participation of women in disaster risk reduction; Third, women's participation in disaster policy formulation; Fourth, the benefits derived from the results of the policies that have been implemented. This study uses a qualitative research methodology with a case study approach. The results show that the strengthening of women's capacity in disaster risk reduction by BPBD Pacitan Regency has been implemented, but still has a record of improvements in its implementation, such as still not implementing equal access in disaster risk reduction and the lack of women's involvement in disaster risk reduction. The study offers a reference model to strengthen women's capacity building in disaster risk reduction in Pacitan Regency.

**Keywords:** Strengthen Women's Capacity, Reduce Disaster Risk, Gender Analysis, BPBD Pacitan Regency.

## 1 Introduction

This research is motivated by the vulnerability of the position of women who are often victims of natural disasters [1], And the position of the Pacitan Regency area, which is included in a disaster-prone area [2]. In various disaster cases, women are the group that is the most quantitatively victims of natural disasters [3][4]. On a global scale, such as in the heatwave disaster that occurred in France in 2003, 70% of the 15,000 deaths were women [5]. On an Asian scale, the Oxfam survey revealed that four times as many women as men were killed in tsunami-affected areas of Indonesia, Sri Lanka, and India. In Indonesia itself, as in the tsunami disaster in Aceh in 2004, it was found that 55%-70% of the victims who died were women.

Four factors are the fundamental reasons for this fact occur [6], Namely: first, the presence of a community construction regarding women who are expected to be placed as actors prioritizing the safety of other family members over themselves in the event

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of a disaster; second, women often do not attend training for capacity building in dealing with disasters by the relevant authorities. This happens because the cultural construction of society towards women is limited to domestic affairs; the impact is that women rarely go out of the house to be involved in training; third, the effect resulting from the lack of women's involvement in the movement is the limited knowledge of women on disaster risk reduction. Limitations in technical knowledge, especially in efforts to save themselves during disasters, have implications for the vulnerability of women who are often victims of natural disasters; Fourth, there are factors such as the fading of local knowledge among the community regarding the early recognition of the early symptoms of natural disasters. So, for this reason, women become a vulnerable group with minimal access to the dissemination of this knowledge [7].

Pacitan Regency is one of Indonesia's regions located in East Java Province. Geographically, Pacitan Regency is an area that is included in the red zone with high status of vulnerability to natural disasters [8]. Types of disasters that often occur in Pacitan Regency such as floods, landslides, earthquakes, and tsunamis [9]. Based on the BNPB report, the types of disasters that often occur in the Pacitan Regency show a high-risk class. This can be seen from the disaster risk index score of Pacitan Regency in 2020 (Table 1).

**Table 1.** Pacitan District Disaster Risk Index Score 2020

No	Type of Disaster	Score	Risk Class
1	Flood	36.00	High
2	Earthquake	21.60	High
3	Tsunami	24.00	High
4	Forest and Land Fires	36.00	High
5	Landslide	24.00	High
6	Extreme Waves and Abrasion	24.00	High
7	Drought	36.00	High
8	Extreme Weather	13.60	High

Source. National Disaster Management Agency (2020)

Based on the data, it can be concluded that the disaster risk index of the Pacitan Regency simultaneously shows a high-risk class in 2020. The fact from past experiences that many highlight women as a vulnerable group in disaster events directly also makes the Pacitan Regency government, through The Regional Disaster Management Agency of Pacitan Regency (BPBD), seeks to strengthen the capacity of women to reduce disaster risk. One of the efforts that must be made is to provide opportunities for women to be actively involved in disaster risk reduction and obtain equal access, capabilities, resources, and opportunities [10]. So in her position, women are no longer positioned as objects, in the sense of being victims of disasters, but instead as subjects who can play a role in disaster risk reduction, including disaster risk reduction, from a gender perspective [11].

Therefore, this study aims to strengthen women's capacity to reduce disaster risk carried out by BPBD Pacitan Regency. This research refers to gender analysis used as

a reference by policymakers in creating gender equality and justice, especially in disaster risk reduction [12]. There are four indicators of gender analysis as the primary data in this study, namely: First, equality of physical and non-physical access; Second, active participation of women in disaster risk reduction; Third, women's participation in disaster policy formulation; Fourth, the benefits derived from the results of the policies that have been implemented. The results of the analysis yield information on the extent to which women are actively involved and obtain equal access, capabilities, resources, and opportunities in disaster risk reduction in Pacitan Regency.

## 2 Method

This study uses a qualitative research methodology with a case study approach [13][14]. The selection of a qualitative methodology with a case study approach has gone through special considerations that holistically, women's groups have a high vulnerability to disasters because their construction is only limited to domestic affairs, so disaster mitigation education from the authorities is not considered as a public affair. Departing from this issue and adding to the fact about the high disaster risk index in Pacitan Regency. BPBD Pacitan Regency, as the authority related to disaster management at the regional level, became a case study for strengthening the capacity of women's groups in disaster risk reduction efforts. Using a qualitative research methodology, this research will examine the documents of the disaster law, related regulations, challenges, and opportunities in practice. There are three types of data collection efforts in this study, namely: Documentation Studies, Focus Group Discussions, and interviews with informants.

The literature study aims to obtain data related to disaster laws and related regulations; furthermore, by using FGDs, this research will receive data related to the challenges and opportunities in the focus of this research by involving different points of view at the same time as data collection; Finally, interviews will be used to obtain data from informants not included in the FGD. The literature study aims to obtain data related to disaster laws and related regulations; furthermore, by using FGDs, this research will receive data related to the challenges and opportunities in the focus of this research by involving different points of view at the same time as data collection; Finally, interviews will be used to obtain data from informants not included in the FGD.

Analysis of the qualitative data that has been collected will be analyzed using an interactive model, which includes three focuses of analysis [15], Namely: first, data reduction to sort the data results according to research needs; second, the presentation of data to describe the effects of data sorting; third, concluding to find out the final results of the research that has been done. Furthermore, the data obtained will be processed using the NVIVO 12 Plus software with the Crosstab Analysis feature.

### 3 Result and Discussion

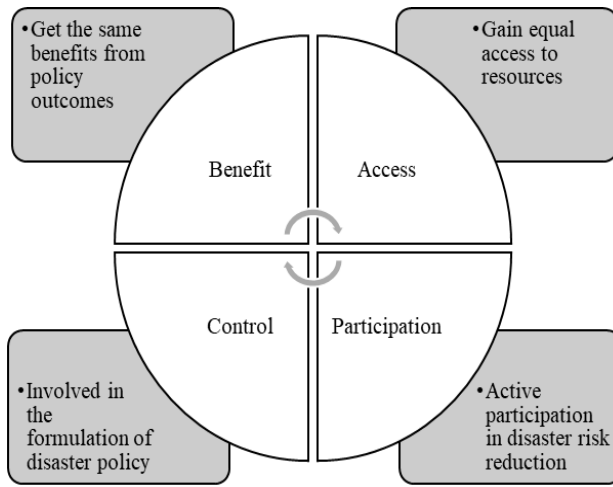
#### 3.1 Strengthening Women Capacity Against Disasters in Gender Analysis

Women are often seen as objects of disaster or vulnerable to becoming victims of natural disasters. The main factor of women's vulnerability is the lack of active involvement of women and unequal access, capabilities, resources, and opportunities [16]. The facts indicate that the efforts made by the government to reduce disaster risk have not included gender issues. So that the disaster risk reduction policy carried out by the government does not affect the position of women as disaster objects [17]. Gender issues in disaster risk reduction have been seen in the 2015-2030 framework document, which has become a reference for various world disaster management countries, including Indonesia. In the research framework document, the researchers found four important indicators of gender content in strengthening women's capacity for disasters, including First, encouraging the government to involve vulnerable groups such as women in policy formulation related to disasters; Second, promoting women's leadership in disaster risk reduction; Third, actively include women's participation in the implementation of disaster risk reduction policies such as being involved in disaster risk reduction forums; Fourth, empowering women for disaster preparedness.

Following up on the Sendai framework document, which has placed its attention on gender issues, the Government of Indonesia, through BNPB, has prepared a National Disaster Risk Reduction Plan (Renas DRR) document for the 2020-2024 period as a framework to implement Law Number 24 of 2007 concerning Disaster Management. In the paper, it is found that efforts to strengthen women's capacities against disasters are found. This can be seen from the National DRR policy and strategy, which focuses its priority on increasing the role and protection of women in the implementation of disaster risk reduction. There are three indicators in realizing the priority focus: institutional strengthening and women's empowerment services; Second, there are guidelines for disaster-resilient women; Third, increasing women's knowledge in disasters. Not only in the National Disaster Management Agency (Renas DRR) document, the Head of the National Disaster Management Agency Regulation No. 13 of 2014 concerning Gender Mainstreaming in the Field of Disaster Risk Reduction has included gender issues. The regulatory document is a reference for all institutions related to disaster risk reduction at the central and regional levels. Indicators of policy priority focus on strengthening women's capacity for disaster become a reference in disaster risk reduction in the regions, especially areas in the red zone prone to disasters, such as in Pacitan Regency. Through the BPBD of the Pacitan Regency, the government must implement disaster policies that contain gender issues so that women can gain equal access, capabilities, resources, and opportunities in its application. In addition, strengthening women's capacity in disaster risk reduction does not only place women's position as policy objects or benefit groups but also as policy subjects who participate in disaster risk reduction in Pacitan Regency.

Therefore, gender analysis is needed to ensure that women's capacity building in disaster risk reduction by BPBD Pacitan Regency has obtained easy access, capabilities, resources, and equal opportunities in disaster risk reduction. In addition, gender

analysis is needed to ensure that women actively participate in the disaster risk reduction process. So that gender analysis can provide information on efforts to strengthen women's capacity for disaster risk reduction in Pacitan Regency, which has provided equal access and active participation in disaster risk reduction. To ensure that women have involved both object and subject of policy in strengthening disaster risk, gender analysis has four reference indicators: access, participation, control, and benefits. In detail, indicators in gender analysis can be seen in Fig. 1.



**Fig. 1.** Four Focuses on Gender Analysis (Source: KPPA and UNIFEM, 2010)

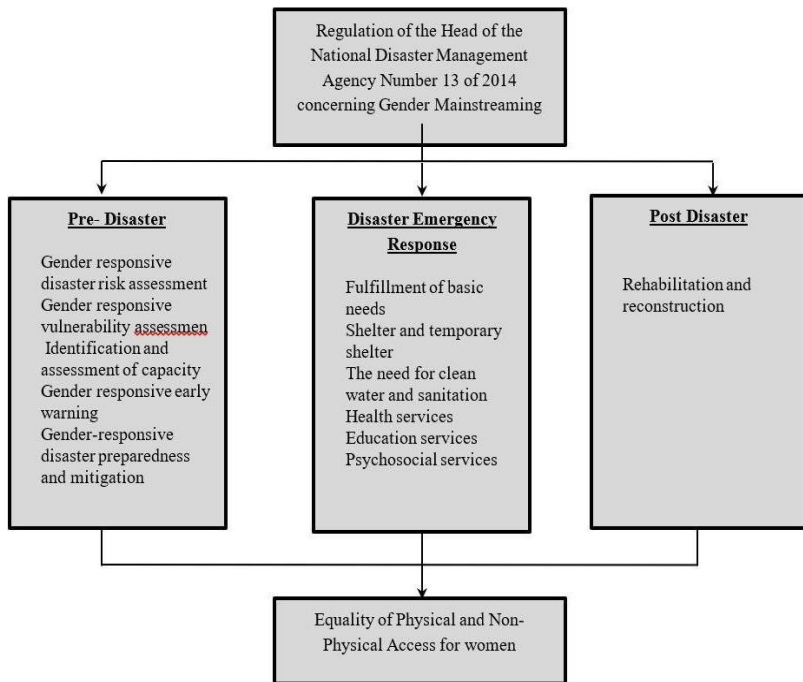
Fig. 1. is the focus of the four gender analyses; based on the image; it is known that each indicator has its own goal in realizing gender equality. The first indicator of access is to play a role in ensuring that women have equal access to resources; The second indicator is participation which plays a role in ensuring the active involvement of women in the disaster risk reduction process; The third indicator of control is to ensure that women participate in disaster decision-making; The fourth indicator of benefits plays a role in ensuring that there are no gaps in the policies that have been implemented.

### 3.2 Equality of Access: Physical and Non-Physical

Access is one of the indicators in gender analysis that ensures equal access between men and women in disaster risk reduction. In various cases of disasters, women often experience inequality in access physically and non-physically [18][19], Such: First, women have lower access to resources while in refugee shelters than men; Second, limited privacy space, such as the use of shared toilets between men and women during the evacuation, which has the potential to trigger sexual violence against women; Third, inequality in access to information for women such as disaster socialization; Fourth, inequality in access to disaster education, counseling and disaster simulations which have an impact on the lack of knowledge and skills related to disaster risk reduction;

and Fifth, the social view of society that places women in the domestic sphere so that it has an impact on the lack of access to resources, information, mobility, individuals, housing and job security.

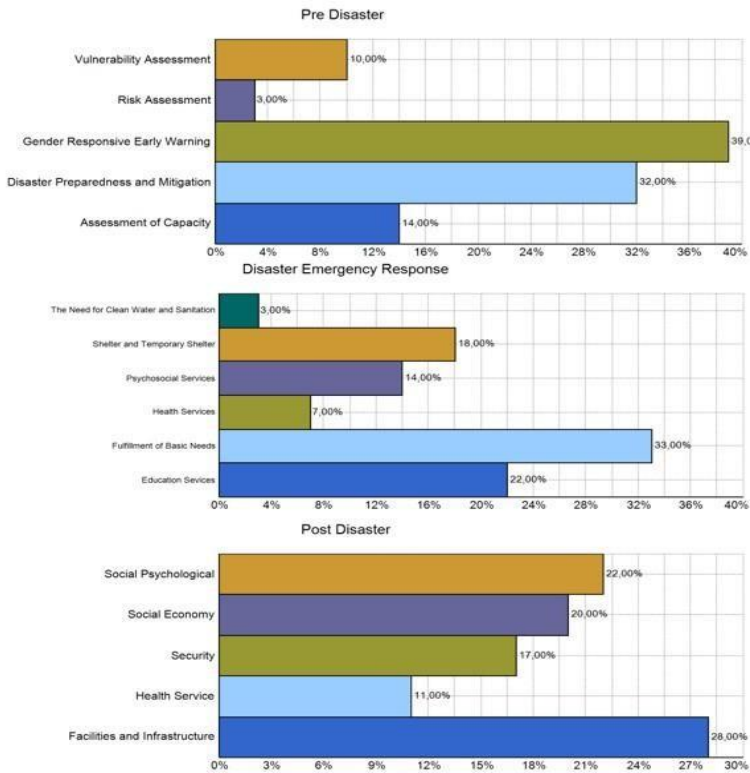
Several identifications of gender issues regarding inequality of physical and non-physical access to women have become a concern for the government to focus its policy priorities on gender issues, including efforts to provide equal access to women. Efforts are needed in the form of equality of physical and non-physical access during pre-disaster, emergency response, and post-disaster, such as the provision of women-friendly facilities as well as access to information, education, and counseling that increases women's preparedness in the event of a disaster. Efforts to achieve equal access to women have been seen in the document of the Head of the National Disaster Management Agency Regulation Number 13 of 2014 concerning Gender Mainstreaming in the Field of Disaster Risk Reduction. The form of efforts to realize equal access in disaster risk reduction. Details of the actions regulated in the regulatory document can be seen in Fig. 2.



**Fig. 2.** Equality of Physical and Non-Physical Access to Women (Source: Regulation of the Head of the National Disaster Management Agency Number 13 of 2014 concerning Gender Mainstreaming, 2014)

Based on Fig. 2., it can be seen that the government has focused its priorities on gender issues, especially equality of access both before the disaster, during the disaster, and after the disaster. The existence of this regulatory document is a reference for local

governments whose territory is included in the disaster red zone, such as in Pacitan Regency. When referring to the paper, the government, through the BPBD of the Pacitan Regency, must ensure equal access to women both before, during, and after. So that the goal of equal access to women can be applied at the local level, the efforts made by the BPBD of Pacitan Regency have been reasonable but still have a record of improvement in implementing equal access to women. The details can be seen in the analysis image that has been processed using the NVIVO 12 Plus software (Fig. 3).



**Fig. 3.** Equality of Access Physical and Non-Physical (Source: Data Analyzed Using NVIVO 12 Plus, 2022)

Based on the picture above, it is known that the Pacitan Regency BPBD still has a record in providing access to disaster risk reduction such as: First, in the pre-disaster stage, Pacitan Regency BPBD pays less attention to the implementation of disaster risk studies. This is important because disaster risk studies play a role in recording the number of women in vulnerable areas, paying attention to women's risks, and identifying the level of knowledge of women in disasters. Second, at the stage of disaster emergency response, women still pay less attention to the provision of clean water and sanitation needs. Third, at the post-disaster stage, BPBD Pacitan Regency pays less attention to health services after natural disasters.

### 3.3 Active Participation of Women in Disaster Risk Reduction

Participation is an indicator in gender analysis that ensures that women are directly involved in disaster risk reduction. In this indicator, women are placed as policy subjects or actively participate in policy implementation. Women can potentially take a vital role in disaster risk reduction that can be carried out at every stage, such as pre-disaster, emergency response, and disaster recovery [18][20]. Women's empowerment activities are needed by actively involving women in reducing disaster risk to strengthen women's capacity to respond to disasters.

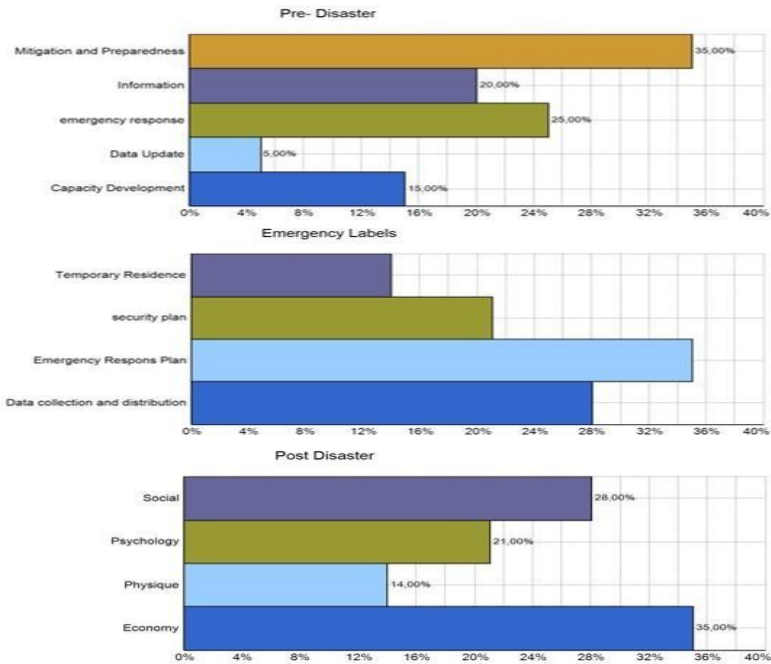
Referring to the Regulation of the Head of the National Disaster Management Agency Number 13 of 2014 concerning Gender Mainstreaming in the Field of Disaster Risk Reduction, the BPBD of Pacitan Regency has provided opportunities for women to participate in disaster risk reduction both in pre-disaster, during and post-disaster situations. Women's participation in the pre-disaster period was carried out through the following activities: First, women's participation in threat consultations and data collection and information delivery; Second, women's participation in the process of reviewing and updating data; Third, women's participation in capacity building programs; Fourth, women's participation in mitigation and preparedness; Fifth, women's participation in preparing emergency response plans.

Women are also encouraged to actively participate during emergency response situations in Pacitan Regency, such as: First, women join in preparing emergency response plans; Second, women participate in meeting basic needs, especially in data collection to distribution; Third, women's participation in providing shelter and temporary shelter; and Fourth, women's involvement in strengthening security in the event of a disaster. In addition, women are encouraged to participate in post-disaster situations, such as in recovery efforts and physical, social, and economic improvement in the consultation and dialogue process. The participation of women mentioned above indicates that the BPBD of the Pacitan Regency does not only actively participate in implementing policies but also actively participates in the preparation of disaster policies. Hence, it contains several gender issues.

Although the Pacitan Regency BPBD has encouraged women to participate actively, in its implementation, several improvement notes have been found, such as: First, in the pre disaster phase, Pacitan Regency BPBD has provided participation in the form of First, involving women in the process of reviewing and updating annual risk data; Second, affecting women's participation in capacity building; Third, involving women in receiving and delivering early warning information; Fourth, involve women actively in mitigation and preparedness. In addition to the pre-disaster stage, women's participation was also involved in the emergency response stage, such as: First, involving women in preparing emergency response plans; and Second, active participation in identifying needs, analyzing, designing, implementing, and monitoring education services in disaster situations. Finally, in the post disaster stage, women are encouraged to participate actively in post-disaster events, such as the active participation of women in planning, implementing, and monitoring rehabilitation and reconstruction. However, the efforts made by BPBD Pacitan Regency still have a record of



improvement in involving women's participation. The details can be seen in the analysis image that has been processed using the NVIVO 12 Plus software (Fig. 4).



**Fig. 4.** Active Participation of Women in Disaster Risk Reduction (Source: Data Analyzed Using NVIVO 12 Plus, 2022)

Based on Fig. 4., it can be seen that the Pacitan Regency BPBD still has a record of increasing women's participation in disaster risk reduction such as: First, in the pre-disaster stage, Pacitan Regency BPBD has not paid attention to women's active involvement in updating data, this is important because the data not being updated has an impact on the unlisted number of female residents in the disaster red zone area; Second, in the disaster emergency response stage, women's participation in temporary shelters is less concerned; Third, in the post-disaster stage, the government does not involve women in physical implementation.

### 3.4 Alternative Models for Strengthening Women Capacity in Disaster Reduction

An essential process in applying a gender approach is to conduct a gender analysis with indicators of access, participation, control, and benefits. This approach is used by policymakers, including in Pacitan Regency, to formulate policies that have gender issues, including procedures to strengthen women's capacities for disasters. Gender analysis is used to generate information in the form of identification of gender issues from the

implementation of programs that have been running, such as to assess whether the programs that have been implemented reduce gender inequality between men and women. Gender analysis is a basis for determining future policies or action plans. The model that can be used to identify as well as provide future policies and action plans is to use the Gender Analysis Pathway (GAP) model. This model can be an alternative for the Pacitan Regency government in strengthening women's capacity in disaster risk reduction. This model provides information in the form of implementation of previous policies, identification of gender issues in previous approaches that have been implemented, and formulating of future policies or action plans. For more details, the GAP model can be seen in Fig. 5.

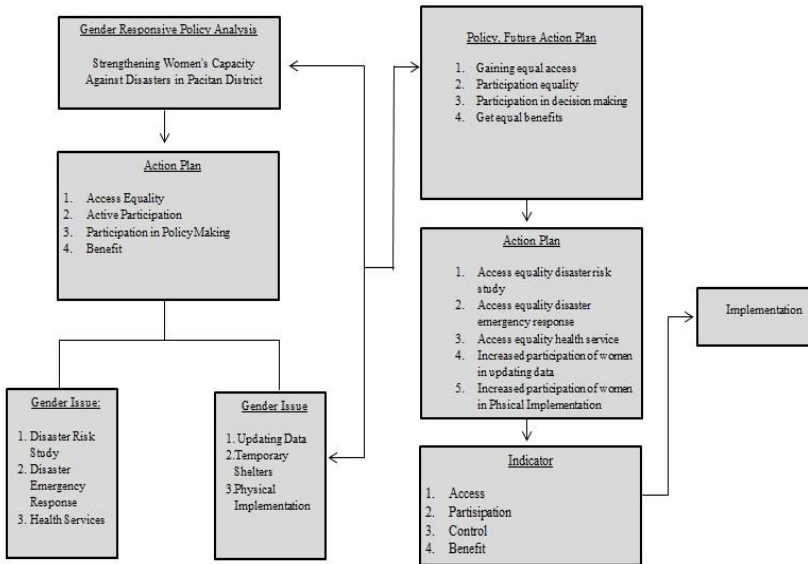


Fig. 5. Gender Analysis Pathway Model (Source: Processed by Researchers, 2022)

#### 4 Conclusion

Based on the results of the discussion that has been described, it can be seen that efforts to strengthen the capacity of women in disaster risk reduction by BPBD Pacitan Regency have been implemented but still have a record of improvement in its application, such as: First in the pre-disaster stage, BPBD Pacitan Regency paid less attention to the implementation of disaster risk assessment. This is important because disaster risk studies play a role in recording the number of female residents in vulnerable areas, paying attention to women's risks, and identifying the level of knowledge of women in disasters. Second, at the stage of disaster emergency response, women still pay less attention to the provision of clean water and sanitation needs. Third, in the post-disaster scene, BPBD Pacitan Regency pays less attention to health services after natural disasters. Further participation: First, in the pre-disaster stage, Pacitan Regency BPBD has not

paid attention to women's active involvement in updating data; this is important because the data not being updated has an impact on the unlisted number of female residents in the disaster red zone areas; Second, in the disaster emergency response stage, women's participation in temporary shelters is less concerned; Third, in the post-disaster stage, the government does not involve women in physical implementation.

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