



An Analysis of Factors That Influence the Success of Flood Risk Management in Selected River Basins (FMSRB) Program in Banten Province and Maluku Province

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Abstract

FMSRB Program, under CPIU Directorate General of Regional Development Ministry of Home Affairs has successfully built 2,907 units of infrastructure, consisting of: (1) 152 units of retaining walls; (2) 24 units of reservoirs; (3) 265 units of drainages; (4) 56 units of rainfall harvesting system; (5) 46 units of retention wells; (6) 2,351 units of biopori; and (7) 13 units evacuation routes. The construction of infrastructure is in collaboration with the establishment of 4 KMSB forums in the regency, 140 KMSBs, and 140 waste banks in the community level. The success of program is primarily determined by 4 factors, including the success in the human resources management, collaboration among stakeholders, collaboration of structural and non-structural approaches, as well as the partnership development. Quantitatively, it is discovered that 55.70% of impact value indicates a very significant influence on flood control, whereas 36.80% states influential. For the construction of reservoir 57.50% of respondents state that it is high influence, whereas 33% state influential. In terms of rainfall harvesting system, 54.70% of respondents state highly influential, while 31.10% state influential. In Biopori, 60.40% of respondents state highly influential, whereas only 28.30% state influential. For retention well, 52.80% of respondents state very influential and only 38.70% states influential. In the meantime, the status of constructed infrastructure assets indicates that 65.10% are very good and 17.90% are good. Furthermore, the human resources management contributes β 0.141 with the influence of p-0,038 to the sustainability empowerment mediation. Collaboration among stakeholder is very good (59.40%) and good (25.50%). About gender and empowerment-based collaboration model, 65% of respondents fully agree and confirm, whereas only 35% agree. Meanwhile, collaboration among stakeholders is very helpful according to 65% of respondents and only 35% state helpful. As for structural and non-structural approaches collaboration, 82% of respondents state very helpful, and only 18% state helpful. For partnership, 59% of respondents fully agree with the partnership developed by FMSRB Program that uses the collaboration principle, and 41% agree. For sustainable program, advanced facilitation from the stakeholders to KMSB Forum,

KMSB and Waste Bank is necessary. They will oversee utilization, maintenance, and development of the infrastructure for controlling flood.

Keywords: *FMSRB; Human Resources Management; Collaboration among Stakeholders; Structural and Non-Structural Approaches Collaboration and Partnership*

Introduction

In 2013, flood occurred in 3 Cis (Ciujung, Cidanau and Cidurian) River Basin in Banten Province and Ambon-Seram River Basin in Maluku Province, raising concerns among many parties. The overflow of Ciujung River at Banten Province impacted 19,674 households, 50,527 refugees, and has interrupted the traffic along Jakarta-Merak toll road that connects Java island to Sumatera island. Whereas in Ambon-Seram River Basin Ambon City Maluku Province, the flood has destroyed 59 houses, caused 10 deaths, 5 missing persons, and 7,212 people neglected. (PAM, 2018). It is noted that both river basins (3 Cis and Ambon-Seram) have a similar flood potential and a rising trend.

The government is anticipating flood through FMSRB Program, using ADB Loan No. 3440-INO. The program is implemented from 2017-2024 with the aim of making 3 Cis and Ambon-Seram River Basins as a pilot for community empowerment-based flood mitigation management, stakeholders collaboration and integrative. The activities will combine the structural (physical development) and non-structural approaches.

FMSRB Program has 4 priority outputs. *First*, the improvement of flood management planning quality. *Second*, the improvement of land management and the upgrade of flood retaining building. *Third*, capacity building for community-based flood risk management; *Fourth*, the improvement of policy and capacity from central government to regional government.

There are 4 (four) government institutions at central that are part of FMSRB program manager. *First*, Ministry of National Development Planning/National Development Planning Agency. *Second*, Ministry of Public Works and Housing. *Third*, Ministry of Agriculture. *Fourth*, Ministry of Home Affairs. Meanwhile, the government institutions at the regional level involving Badan Perencanaan Pembangunan Daerah (BAPPEDA)/ *Regional Development Planning Agency*, Dinas Pekerjaan Umum dan Penataan Ruang (PUPR)/*Public Works and Spatial Plan Agency*, Badan Penanggulangan Bencana Daerah (BPBD)/*Regional Disaster Management Agency*, Forestry Agency (Maluku Province), Environmental and Waste Agency (Ambon City), and Agriculture Agency (Serang Regency, Pandeglang Regency, and Lebak Regency Banten Province).

As Central Project Implementation Unit (CPIU) Ministry of Home Affairs cq Sub-Directorate for Agriculture and Food-Directorate for Synchronization of Regional Government Affairs 1 – Directorate General of Regional Development responsible for improving flood risk management capacity. This includes human resources management, cross-stakeholders collaboration, collaboration of structural and non-structural approaches, and partnership facilitation using gender-based empowerment approach. The responsibility is reasonable for the following four main objectives: (1) Supporting the sustainable development by synchronizing development needs and flood risk; (2) Reducing casualties due to flooding; (3) Optimizing the land use in the river basin efficiently and effectively to reduce the social impact due to flood; and (4) Conserving the environment by maintaining the river and ecosystem to support the people's livelihood in the river basin.

To achieve success, the program addresses obstacles and challenges, however, these are overcome in order to reach the goal and target of infrastructure development, as well as the establishment

of the community institutions such as *Kelompok Masyarakat Siaga Bencana (KMSB)* or Disaster Preparedness Community Group (DPCG), KMSB/DPCG Forum and Waste Bank by maintaining a commitment to manage the human resources, stakeholder collaboration and approach, and empowerment-based partnership. Its implementation begins with planning, utilization and maintenance, monitoring and evaluation to development stages. The process is adjusted to the principle of exit strategy management, assets management and time management.

Methodology

The process of collecting data for this study uses the survey method along with qualitative and quantitative analysis (Pasolong, 2012). The questionnaire is distributed in May-June 2024 to the respondents and stakeholders of the program as a sample of population at central level (Ministries), Provinces (Banten and Maluku) Regencies/City (Serang, Pandeglang, Lebak and Ambon) and village/kelurahan.

Data is continuously collected using a formative evaluation approach to assess the performance of FMSRB Program. The data involves qualitative data from the observation results, interview, and feedback from the stakeholders, and statistic data. The research with a qualitative descriptive approach based on post-positivism philosophy is used to research natural object, wherein the researcher acts as a key instrument, and the research result emphasizes the meaning of generalization (Sugiyono, 2009).

In the qualitative research, the sample or participants are selected using non-probability technique (Sarwono, 2006), that is a method of collecting sample or informan which is not based on the statistical formula, but rather on the researcher's subjective consideration of the reach and depth of the problem.

The study on flood management program such as FMSRB uses a formative evaluation model that is used during the implementation of program to provide input for improving and optimizing the program. The evaluation aims to ensure that the program is implemented as planned and effectively and efficient meet the goal. It is understood that the evaluation (Hadi, 1986), is a process to collect the information on an object, evaluate the object, and compares it with criteria, standard and indicator.

The formative evaluation is not just used to provide feedback during the implementation of the program, but also serves as a structured methodological approach for reviewing and understanding various program or project aspects in various sectors, including in the research and policy development.

The formative evaluation focuses on monitoring, supervision and feedback (doing adjustment and improvement as required, change the management strategy, if necessary, based on the evaluation findings). The question is if the program will be effective and efficient; whether the target has been met, how the stakeholders' participation such as government, non-government organization and local society are participating; as well as how the program will be sustainable. The formative evaluation is important to ensure that FMSRB Program is not just implemented as planned, but also able to adapt with change and challenges arise throughout the implementation.

Result and Discussion

The formative evaluation result for May-June 2024 indicates that FMSRB structural activity achievement (the infrastructure development) under CPIU DG of Regional Development, Ministry of Home Affairs is 2,907 units consisting of: (1) 152 units of retaining walls; (2) 24 units of reservoirs; (3) 265 units of drainages; (4) 56 units of rainfall harvesting system; (5) 46 units of retention wells; (6) 2,351 units of biopori; and (7) 13 units evacuation routes. The realization of infrastructure development is

conducted participatory by preparing Community Action Plan (CAP) and CAP expose by involving all Regencies/City stakeholders.

In many community resettlements, the infrastructure assets have had a favorable influence on flooding and inundation control. The result of Owin et al study (2023), on a likert scale, 55,70% of respondents state the program has significant impact on flood control, while 36.80% states it is influential. 57,50% of respondents state that the construction of reservoir has significant impact and 33% of respondents states it is influential. For rainfall harvesting system, 54,70% of respondents state very influential and 31,10% of respondents state influential. Biopori, 60,40% of respondents state very influential and only 28,30% state influential. Retention well, 52,80% of respondents state very influential and only 38,70% state influential. On the other hand, 65,10% of constructed infrastructure assets are very good, 17,90% are good, and only 0,90% is poor.

The analysis was conducted to assess the impact of drainage on water inundation at 259 points in Ambon City (64 points), Serang Regency (37 points), Pandeglang Regency (52 points), and Lebak Regency (106 points). The analysis indicates that 3 points (>0.50 meters), 3 points (-0.30 - 0.50 meters), 4 points (-0.20 - <0.30 meters), 50 points (-0.10 - <0.20 meters), and, 43 points (-0.10 meters). The flood causes the water inundation in several resettlements has significantly decreased (Survey by CS.06 ID-CBFRM FMSRB in 2023).

Meanwhile, non-structural activities include: (1) 140 disaster-oriented Village Community Institution also known as KMSB/DPCG¹; (2) 140 waste management- oriented Village Community Institution also known as Waste Bank²; (3) 4 KMSB/DPCG Forums at Regency/City level³; (4) 4 Flood Risk Management Plan (FRMP) documents at Regency/City level; (5) 2 drainage masterplans in Serang Regency and Ambon City; (6) 4 Head of Regency/Mayors' Regulations for FRMP in 4 Regencies/City; and (7) 2 Building Code documents for each Serang Regency and Ambon City.

The non-structural approach has had an impact on managerial, planning, and policy aspects to reduce flood risk and impact. Non-structural aspects such as KMSB, KMSB Forum and waste bank are very important as they offer sustainable and adaptive solutions to manage flood risk, and can be integrated with structural approach to create a comprehensive and effective flood management strategy.

It is understood that the facilitation of KMSB/DPCG and KMSB/DPCG Forum for sustainable existence is dealing with challenges as no stimulant is provided for group's productive business. The facilitation of KMSB/DPCG and KMSB/DPCG Forum is solely an education, awareness, participation, and self-sufficiency approaches. KMSB/DPCG and KMSB/DPCG Forum also deal with the infrastructure assets management using self-supporting capital. Solution taken including partnership facilitation with village/kelurahan authority and or other relevant stakeholder, such as State-Owned Enterprises and Regional Government.

There are 4 leading factors that significantly influence the success of FMSRB program, among others: (1) Human Resources Management; (2) Collaboration among stakeholder; (3) Structural and non-structural approaches collaboration; (4) Partnership. These four aspects are an integrated unity that complement one another, and have to be conducted in a systematic, constructive, and integrative manner.

Human Resources Management. A key of human resources management aspect is "the right people in the right place at the right time" (Anatan & Ellitan, 2007). In FMSRB program management, a

¹ Status of 140 KMSB/DPCG = 49 (35%) Independent status and 91 (65%) Developing status

² Status of the Waste Bank = 47 (34%) partner status and 93 (66%) partner process status

³ Status of the KMSB/DPCG Forum = 3 KMSB/DPCG Forums have been legalized through the Decree of the Regent/Mayor, namely in Ambon City, Lebak Regency and Pandeglang Regency; while in Serang Regency it is still in progress.

human being as stakeholder is required to play an active role in planning, implementation, utilization and maintenance, monitoring and development for program management sustainability including the program assets. Human resources management is a major instrument in program assets management, both structural and non-structural, and has positive impact to the sustainability of assets management. It is consistent to the result of Omega Gratia Anita Karisoh, Riane Johnly Pio and Sandra Ingried Asaloei (2017) study, that human resources management practices has 70,2% influence on sustainability.

Human Resources Management in CPIU Regional Development is work team management consisting of State Civil Service Staffs and consultant team or technical assistance, located in both central (Jakarta) and region (Banten and Maluku Provinces). Community Facilitator Team (CFT) have been recruited in 140 villages. The recruitment of technical assistance team and CFT are determined through a Decree.

The consultant and CFT are recruited based on human resources planning. The selection process includes administration and competency aspects (interview) to assess knowledge, skills and personality. Furthermore, they work together as a team with clearly defined roles, tasks and responsibilities. The process complies to Dessler's perspective in Ulfatin and Triwiyanto (2016) that humans are the most important element in any and all organizations, the success of organization in achieving goal and various targets, as well as their capabilities in dealing with both external and internal challenges, are determined by their capabilities in managing human resources in accordance with an applicable rule.

The human resources management aspect is confirmed by Owin et al. (2023) through the result of reliability test with Cronbach's Alpha analysis to 5 variables (Human Resources Management, collaboration, partnership, empowerment, sustainability). Human resources management is very reliable or very consistent because all scores are above 0,60 (> 0.60) even near to 1. The result emphasizes that convergent validation is satisfying because each loadings factor indicator varies from 0.753 to 0.954. It indicates that the variable validity has above the level of standard (Anderson & Gerbing, 1988).

The study by Owin et al. (2023) found that the relationship between human resources management and empowerment mediation has a significant impact on sustainability (β 0.141, p -0.038). The mediating analysis using PLS-SEM shows that human resources management with empowerment mediation has a contribution of β 0.141 and an influence of p -0.038. This implies that for the sustainability of program management and assets management require collaboration between human resources management and an empowerment approach. The score for the human resources management variable is 0.967, indicating a very high level of reliability. This means that the variable can be measured excellently and can be trusted as part of the study model.

Collaboration can be defined as a relationship between organizations in which they participate and agree to achieve mutual goals. This involves sharing information, resources, benefits, and responsibilities, as well as making joint decisions to solve problems. According to Emily R. Lai in Pearson (2011), collaboration is when participants engage together in a coordinated effort to solve a problem. Collaborative interactions are characterized by shared goals, a balanced structure, and a high degree of negotiation, interactivity, and interdependence. This definition emphasizes that collaboration involves joint efforts to address issues, with interaction marked by mutual goal, a symmetrise structure, and a high level of negotiation, interactivity, and interdependence.

Scott London (2020) defines collaboration "As its Latin roots *com* and *laborate* suggest, collaboration reduced to its simplest definitions means to work together. Collaborations holds widespread appeal to people from every position on the political spectrum, not because it offers everything to everyone (as some of the literature advocating collaboration seems to suggest), but because it deals with a process, as distinct from a program, agenda, or outcome.

Collaboration prompts us to look at the very process by which we arrive at political choice, whatever those choice happen to be. The collaboration is not limited to a specific time or period, as long as there is a connection with other parties, then the collaboration is still required. The collaboration involves multiple parties such as individual, working group, and organization. In collaboration, it is very essential to understand public institution's performance. Therefore, the collaborative study more focuses on public sector organization level.

Collaboration among Stakeholders. As a part of approach in FMSRB Program, the collaboration among stakeholders has positive impact on assets management sustainability. At a macro level, there are four collaborative relationships (Wanna, 2008): (1) Collaboration within government by involving various parties; (2) Collaboration among government by involving the institution from various jurisdiction; (3) Collaboration among government and goods and services supplier of the external third party; and (4) Collaboration among government and community. Collaboration in flood management helps to overcome problem complexities and challenges related to the flood risk and mitigation. Owin et al. (2023) indicates that the collaboration among FMSRB stakeholders is very good (59.40%), good (25.50%), and poor (1.90%).

Stakeholder collaboration in FMSRB Program is gender and empowerment-based. It has specific characteristic in which participation and contribution from the stakeholders are not only dominated by male, but also optimized for female. The result of study indicates that 65% of respondents very agree and confirm gender and empowerment-based collaboration model, whereas only 35% of respondents agree. The result of study can be presented in Figure 1 as below.

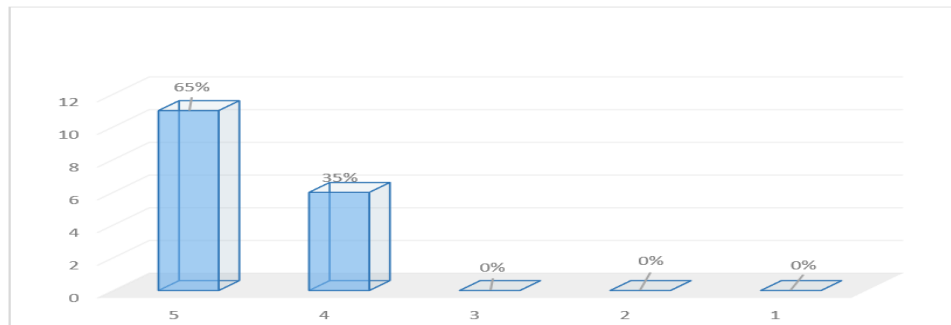


Figure 1: Gender and empowerment-based stakeholder collaboration in FMSRB Program (B1.EF.2024)

Empowerment working principles include optimizing community participation, capacity building (knowledge, skills, and attitude), education, transformation, maximizing contribution, self-reliance, being based on local wisdom, collaboration, and prioritizing justice (Owin, 2004). Empowerment is a concrete step towards self-sufficiency and self-reliance to manage its own environment in sustainable development (Ikbah Herdiansyah, 2019). This is consistent with Bachtiar Effendi's perspective (2002) that the success of development is achieved through the active role of the community in various activities, as well as in making initiatives and decisions, and improving resources in a planned and sustainable manner, as per the principles of empowerment."

Results from the study shows that 65% of respondents consider stakeholder collaboration in the FMSRB Program to be very beneficial, while only 35% consider it beneficial. The benefits of stakeholder collaboration are illustrated in Figure 2 below.

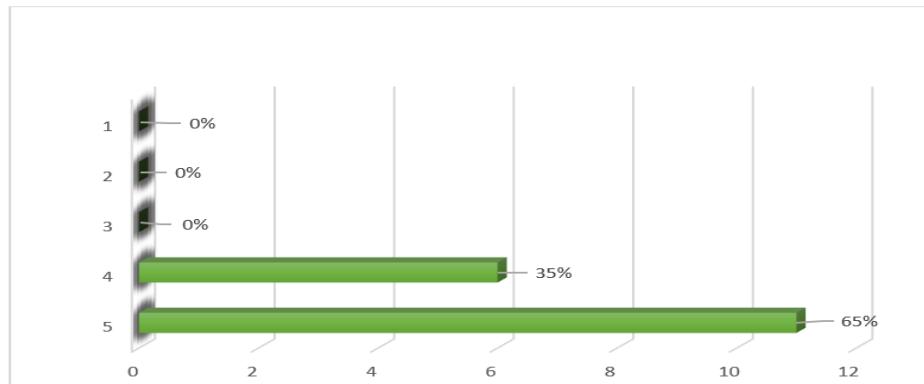


Figure 2: Stakeholder collaboration benefit in FMSRB Program (B4.EF.2024)

Collaboration of structural and non-structural approaches. The collaboration in the FMSRB Program involves gender and empowerment-based stakeholder collaboration, as well as the collaboration of structural and non-structural approaches. This collaboration significantly impacts the success of the FMSRB program, enabling more holistic, effective, and sustainable flood management. The concept of collaboration between structural and non-structural approaches is intended to enhance river productivity. River productivity, in terms of process efficiency, aims to maximize the results of the resources used (Anoraga, 2009).

The main reasons for structural and non-structural collaboration: (1) structural and non-structural approaches are combined to give more extensive coverage in reducing flood risk. (2) Increase people preparedness and flood resilience; (3) Support the achievement of sustainable development goal; (4) non-structural approach spends less cost than major infrastructures and ongoing maintenance; (5) Help prevent environmental damage caused by unfriendly environmental infrastructure; (6) non-structural approaches can be adapted to climate change, including changing rainfall patterns and flood risks; (7) structural approaches such as reservoirs can be combined with non-structural approaches like land management in upstream to reduce water run-off. This can also improve economic functions and productive businesses, such as fish cultivation; (8) Community participation is essential for long-term sustainability. (9) A non-structural approach that focuses on environmental conservation helps maintain the quality of the ecosystem, which is important for long-term flood mitigation. (10) Non-structural approaches such as early warning systems and evacuation plans provide flexibility in responding to floods, whereas structural approaches provide physical control of water flow. (11) Non-structural approaches support faster and more efficient post-flood recovery. (12) Non-structural approaches support long-term sustainability by focusing on prevention and mitigation.

The result of study shows that structural approach in FMSRB Program is very beneficial. 82% of respondents choose very beneficial, and the remaining 18% choose beneficial. The benefit of structural approach can be seen in figure 3 below.

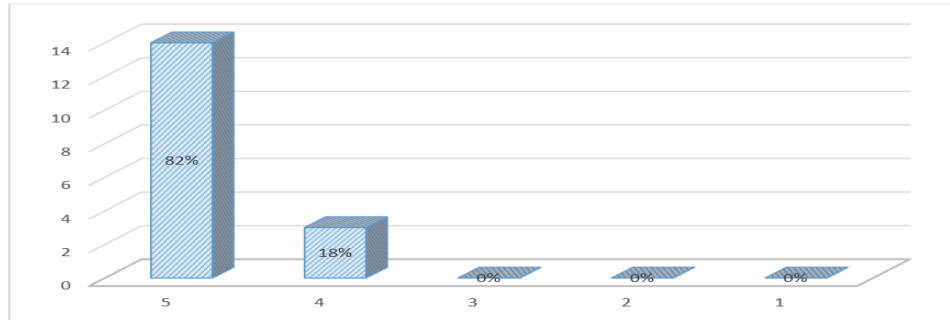


Figure 3: Structural benefit of FMSRB Program (C2.EF.2024)

Non-structural approach in FMSRB Program shows that 76% of respondents choose very beneficial and 24% of respondents choose beneficial. The benefit of non-structural approach can be seen in the following figure 4.

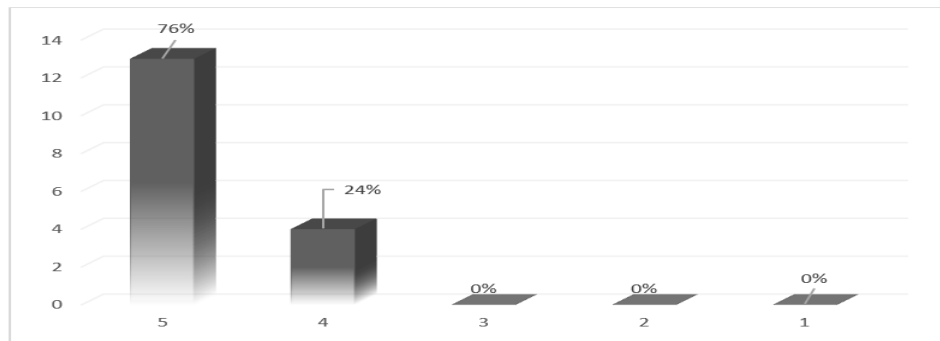


Figure 4: Non-structural benefit of FMSRB Program (D2.EF.2024)

Partnership. It refers to two or more parties who work together based on an agreement and mutual needs to enhance their capacity and capability in a specific sector or goal, aiming to achieve positive results (Ambar, 2004). It is a mutually beneficial collaboration that places both parties in equal positions (Mohammad, 2000).

In the context of an organization or project, partnership involves different entities collaborating and supporting each other, aiming to use their skills, resources, and experience to achieve mutual success. Partnership in flood risk management is a holistic, efficient, and sustainable approach for dealing with the threat of floods. By combining diverse skills and resources, the negative impact of floods can be reduced. The study by Owin et al. (2023) shows that partnership in the form of communication between working partners tends to be effectively built. The study found that the effectiveness of the partnership is as follows: very effective (49.10%), effective (24.50%), and not effective (0.90%). The partnership contributes 0.371% to empowerment, and value of $p < 0.002$ indicates a significant relationship between the partnership and empowerment at a significance level of 0.05. The implication is that sustainable program management requires an empowerment-based partnership model."

The result of study also shows that 59% of respondents highly agree with the partnership developed by FMSRB program using collaborative principles, while 41% agree. The logical consequences, is that the sustainable flood management must require the partnership model based on collaborative principles.

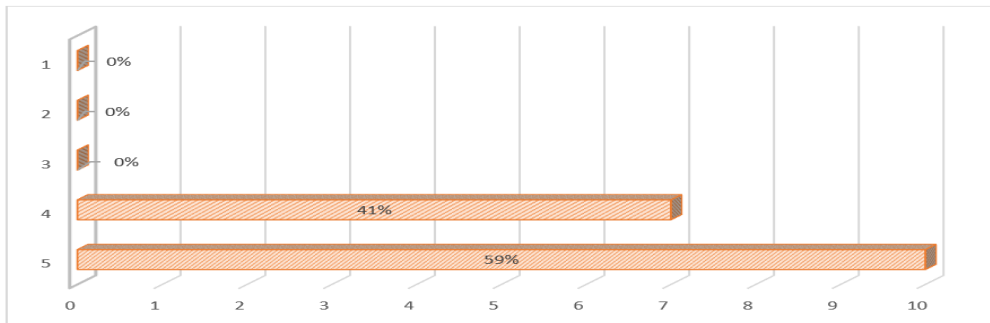


Figure 5: Partnership with collaborative principles (B3.EF.2024)

The study by Owin et al. (2023) discovers consistent results after conducting reliability tests to calculate convergent validity (Hair et al., 2013), Composite Reliability (CR), and Average Variance Extracted (AVE). The CR result for the Partnership variable is 0.942, and the AVE is 0.768, indicating a very high level of reliability and a very good level of validity for the partnership variable. Additionally, the study revealed that the relationship and influence of partnerships on empowerment is (β 0.371, p -0.002), showing a significant relationship between partnership and empowerment at a significance level of 0.05. This implies that sustainable program management requires an empowerment-based partnership model. Furthermore, the study discovered that the relationship and influence of partnerships with the mediation of the empowerment approach to sustainability is (β 0.205, p -0.012). This indicates a significant relationship between partnership and empowerment with sustainability. The contribution to sustainability is β 0.205, while the significance of the influence and relationship is p -0.012.

Conclusion and Implication

FMSRB Program under CPIU Directorate General of Regional Development, Ministry of Home Affairs has successfully built 2,907 infrastructures across 140 flood and landslide prone villages/kelurahan, consisting of 21 villages/kelurahan in Ambon City, 48 villages in Serang Regency, 10 villages in Pandeglang Regency, and 61 villages in Lebak Regency. In addition to the construction of infrastructure, the program has also established 4 KMSB Forums, 140 KMSBs, and 140 waste banks.

The success of FMSRB Program is influenced by collective commitment from all stakeholders. There are four major aspects: (1) Human resources management; (2) Collaboration among stakeholder; (3) Structural and non-structural approaches collaboration; and (4) Partnership implementation and development. These four aspects are considered as united and support one another.

Human resources management prioritizes team management within the program. Management process starts with preparation and planning, followed by the recruitment of consultant teams and facilitators according to human resource planning rules. This is followed by coaching to develop knowledge and skills related to the program, and monitoring and evaluating performance.

Collaboration among stakeholders in FMSRB Program is based on gender and empowerment. The collaboration focuses on flood management that may help to overcome problem complexities and challenges related to flood risk and mitigation.

Structural and non-structural approaches collaboration is intended to create more holistic, effective, and sustainable flood management. This collaboration is essential and significantly influences the success of flood management in FMSRB Program. The aim is to enhance river productivity through this collaboration.

The partnership in flood risk management in the FMSRB program is a holistic, efficient, and sustainable approach between parties in addressing the threat of flooding. By combining diverse expertise and resources, the adverse effects of flooding can be reduced.

For long-term sustainability, the KMSB Forum, KMSB, and Waste Bank need to form partnerships with institutions that share the same mission and vision, both within the village and with external parties.

The implication involves improving the quality of facilitation to KMSB Forum, KMSB and Waste Bank through a collaboration and partnership model, with several reasons, including: 1. Increasing community awareness and capacity 2. Developing and implementing an early warning system 3. Involvement in planning and decision making 4. Increasing community resilience 5. Strengthening social networks and community support 6. Monitoring and evaluation 7. Collaboration with the government and other institutions 8. Role in post-flood recovery 9. Encouraging active community participation.

It is equally important for development observers in each regency or city to pay attention to the efforts made to continue sustainable assistance. The facilitation should focus on: 1. Improving the quality of human resources management to increase awareness and motivation for sustainable flood mitigation. 2. Enhancing the quality of gender-based coordination and empowerment for effective flood mitigation. 3. Developing empowerment-based structural and non-structural approaches, ensuring that built infrastructure is well-managed by all stakeholders, particularly the community through the KMSB Forum, KMSB, and Waste Bank. 4. Improving the quality of partnership cooperation for sustainable purposes. 5. Maintaining the existence of KMSB Forum, KMSB, and Waste Bank to ensure sustainable flood management and control.

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**Formative Evaluation for Fmsrb Program Management in Sorga 1 Directorate General for
Regional Development Ministry of Home Affairs**

RESPONDENT & EVALUATOR DATA

RESPONDENT

Name	:	
Gender	:	<input type="checkbox"/> Male <input type="checkbox"/> Female
Status	:	<input type="checkbox"/> Married /Divorce <input type="checkbox"/> Single
Job status	:	1. PNS 2. Farmer 3. mention
Job title	:	
Institution	:	
Address	:	
HP	:	
Email	:	

EVALUATOR (Filled by evaluator member)

Name	:	
HP	:	
Email	:	
Implementation of survey		
Method*	:	FGD/Face to face/Interview/Assignment
Day, date, month	:	Day: , Date: / / 2024
Time (Hour)	:	
Number of participants (if FGD)	:	

**cross the unnecessary ones*

DATA and INFORMATION						
A	General Concept of FMSRB Program	Score				
A1	The FMSRB program is a comprehensive, integrated flood management project aiming to minimize flood damage and risk.	1	2	3	4	5
A2	<i>FMSRB Program benefit</i>	1	2	3	4	5
A3	<i>FMSRB Program obstacle</i>	1	2	3	4	5
A4	<i>The improvement proposed related to FMSRB or similar programs</i>					
B	Stakeholders collaboration	Score				
B1	Gender and empowerment-based stakeholders collaboration in FMSRB Program	1	2	3	4	5
B2	Stakeholders collaboration starts from central to community	1	2	3	4	5
B3	Stakeholders collaboration using partnership principles	1	2	3	4	5
B4	<i>Benefit of stakeholders collaboration model in FMSRB Program</i>	1	2	3	4	5
B5	<i>Obstacle found in stakeholders collaboration model in FMSRB Program</i>	1	2	3	4	5
B6	<i>The improvement proposed related to stakeholders collaboration</i>					
C	FMSRB structural program option	Score				
C1	Realization of structural programs such as reservoirs, retaining wall, drainage, rainfall harvesting, biopori, infiltration wells, and evacuation routes in accordance with flood control needs.	1	2	3	4	5
C2	<i>FMSRB Program benefit</i>	1	2	3	4	5
C3	<i>Obstacles of structural program found in FMSRB Program</i>	1	2	3	4	5
C4	<i>The improvement proposed related to structural program</i>					
D	FMSRB non-structural program options	Score				
D1	Realization of non-structural programs such as KMSB Forum, KMSB and waste bank in accordance with community participation in flood management	1	2	3	4	5
D2	<i>FMSRB Program benefit</i>	1	2	3	4	5
D3	<i>Obstacles of non-structural program found in FMSRB Program</i>	1	2	3	4	5
D4	<i>The improvement proposed related to non-structural program</i>					
E	Compensation of land donation (land donation for construction of reservoir)	Score				

E1	Community participation through land grants (right to use) for the construction of reservoir and similar facilities	1	2	3	4	5
E2	Village/kelurahan authorities participation through land grants (right to use) for the construction of reservoir and similar facilities	1	2	3	4	5
E3	Social conflict regarding land provision from community	1	2	3	4	5
E4	Community demands for donated land compensation (right to use)	1	2	3	4	5
E5	<i>The improvement proposed related to land grants and or right to use of land for reservoir</i>					
F	Stimulan Warga Ter-Dampak (WTD)/Affected people's stimulants	Score				
F1	WTD requires compensation or stimulants, especially for individuals/WTD whose land is affected or used, or those who lose their livelihood at the same time.	1	2	3	4	5
F2	Stimulant in the form of cash	1	2	3	4	5
F3	Stimulant in the form of needed goods	1	2	3	4	5
F4	<i>The improvement proposed related to compensation or stimulant for WTD</i>					
G	Realization of Rencana Pengelolaan Risiko Banjir Daerah (RPRBD)/Regional Flood Risk Management Plan (RFRMP)	Score				
G1	RPRBD benefit	1	2	3	4	5
G2	2024 RPRBD realization	1	2	3	4	5
G3	RPRBD realization issues for regional government	1	2	3	4	5
G4	<i>The proposal for RPRBD realization</i>					

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