

Can local data change public policy? participatory mapping and evidence-based advocacy in disaster-prone Indonesian communities

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Article Info

Article history:

Received Apr 21, 2026

Revised May 24, 2026

Accepted Jun 30, 2026

Keywords:

community engagement;
disaster governance;
evidence-based advocacy;
participatory mapping;
Supiturang Village.

ABSTRACT

Background: Disaster-prone Supiturang Village in Pronojiwo, home to 4,050 residents within the Mount Semeru hazard context, required a mechanism for translating local risk experience into evidence usable in disaster governance. **Objective:** This community engagement program engaged 40 intended residents, village actors, volunteers, youth, women's-group representatives, and neighbourhood representatives to develop participatory risk maps and advocacy-oriented recommendations. **Method:** Using a planning-implementation-monitoring/evaluation design, this program combined baseline surveys, short interviews, attendance sheets, observation checklists, mapping products, product rubrics, FGD notes, and partner-commitment forms to document quantitative and qualitative evidence. **Results:** Planning documentation specified three coordination meetings, five stakeholder groups, 40 baseline responses, five instruments, and two reflection-forum agendas. The implementation framework comprised one orientation session, three workshops, two mentoring clinics across six weeks, four group maps, one consolidated map, and one recommendation matrix. **Implication:** Monitoring and evaluation targeted 75% attendance, 70% acceptable outputs, a capacity benchmark from index 100 to at least 120, two validation forums, and one follow-up plan. **Novelty:** Its novelty lies in integrating participatory spatial evidence, measurable engagement thresholds, mentoring, collective validation, and institutional follow-up without presenting planned indicators as demonstrated policy effects.

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1. INTRODUCTION

Disaster-prone communities in Indonesia often live with abundant local risk knowledge but limited capacity to translate that knowledge into policy-recognised evidence. This problem is acute in Supiturang Village, Pronojiwo Subdistrict, Lumajang Regency, East Java, a village situated within the Mount Semeru risk landscape and connected to the Besuk Kobokan hazard corridor. Secondary administrative data record 4,050 residents and 1,381 households in Supiturang, while Pronojiwo Subdistrict consists of 6 villages and 36,285 residents [1]. Disaster-risk evidence also shows that the 2021 Semeru eruption affected 10 villages across 3 subdistricts, with 64 deaths, 10,395 displaced residents across 410 evacuation points, and 2,970 damaged houses [2]. PVMBG risk recommendations further identify exclusion zones of 13 kilometres, 500 metres from riverbanks, and potential lahar reach up to 17 kilometres [3]. These figures indicate that this

community engagement program addressed not an abstract vulnerability, but a documented problem of how local disaster experience becomes usable evidence for planning and advocacy.

Previous studies show that participatory disaster work becomes stronger when community knowledge is treated as evidence rather than anecdote. Akbar et al. demonstrate that participatory village maps can strengthen public participation in spatial decision-making; Denwood et al. argue that participatory mapping requires clearer methodological frameworks; and Fagerholm et al. provide an analytical basis for transforming participatory mapping data into planning and management knowledge. In disaster-risk literature, Alexander stresses the need for evidence-based practice, while Hermans et al. show that early warning systems become more context-sensitive when local and scientific knowledge are integrated. Indonesian community-engagement studies also demonstrate the value of locally grounded intervention, including Jamilah's (2026) [4] work on Semeru-area preparedness and other applied community programs on digital literacy [5], environmental campaigns [6], smart farming [7], financial literacy [8], and linguistic sustainability [9]. However, many community programs remain limited by one-off training formats, weak baseline documentation, absence of pre-post measurement, insufficient output assessment, and limited policy translation. This program addressed that gap by connecting participatory mapping with measurable evaluation and advocacy-oriented outputs.

This community-based intervention aimed to examine whether locally produced disaster data could strengthen evidence-based advocacy in a disaster-prone Indonesian village. Rather than positioning residents as passive beneficiaries of preparedness education, this program engaged them as producers, validators, and interpreters of risk evidence. The operational objectives were fourfold: to document baseline disaster-data literacy and mapping familiarity; to facilitate community-based identification of risk points, vulnerable assets, evacuation concerns, and priority needs; to convert group mapping outputs into a consolidated village risk map and policy recommendation matrix; and to assess whether participants and partners considered these outputs useful for village-level disaster communication. The empirical questions focused on measurable indicators: participant attendance rate, pre-post knowledge or skill score, number of risk points identified, number of completed group maps, number of mentoring sessions, level of community validation agreement, partner usefulness rating, and existence of a follow-up institutional plan. These indicators ensured that this program was evaluated as a structured intervention rather than a descriptive account of community activity.

The main contribution of this community engagement program lies in its integration of practical facilitation, participatory evidence production, simple quantitative monitoring, community reflection, and institutional continuity. Its argument is that local data can support public-policy dialogue only when it is systematically collected, collectively validated, visually organised, and translated into a policy-facing format. For community development practice, this approach shifts disaster engagement from awareness-raising alone toward evidence mediation between residents and local governance actors. For disaster-risk communication, it treats maps, attendance data, pre-post scores, observation records, FGD notes, and policy briefs as a connected corpus of community evidence. This program did not assume that participatory mapping automatically changed policy; instead, it assessed whether community-generated spatial data and advocacy documents created a credible basis for policy discussion.

2. METHOD

This community engagement program employed a participatory planning-implementation-monitoring and evaluation design in Supiturang Village, Pronojiwo Subdistrict, Lumajang Regency, East Java. Supiturang Village Government served as the primary community partner, supported by local disaster volunteers, neighbourhood representatives, youth groups, and women's groups. The participant framework targeted 40 residents aged 17 years or older who possessed local knowledge of hazard corridors, evacuation practices, or community risk communication. A participatory design was selected because disaster experience is spatially distributed and cannot be adequately represented through facilitator-led instruction alone. The program therefore positioned residents as contributors to risk identification, evidence validation, and advocacy formulation.

Planning began with coordination meetings with the village partner to identify institutional priorities, feasible schedules, and locally appropriate recruitment channels. Participants were recruited through partner nomination and open community mobilisation, with priority given to residents from hamlets or neighbourhoods connected to river corridors, evacuation routes, and previous disaster-response activities. The needs assessment combined a baseline questionnaire, short semi-structured interviews, and initial observations of local risk communication practices. The baseline instrument measured disaster-data literacy, familiarity with participatory mapping, confidence in identifying risk points, and perceived readiness to communicate evidence to authorities. Planning evidence informed the adjustment of training materials, mapping legends, session timing, mentoring arrangements, and evaluation instruments.

Table 1. Program stages, activities, indicators, and evidence

Stage	Activity	Actors	Planned Quantity	Indicator	Evidence
Planning	Partner coordination	Team and local partner	3 meetings	Agreement reached	Minutes
Planning	Needs assessment	Participants and facilitators	40 responses	Needs mapped	Survey sheet
Planning	Instrument preparation	Program team	5 instruments	Instruments validated	Instrument files
Implementation	Training / workshop	Participants and facilitators	3 sessions	Attendance and practice output	Attendance and documentation
Implementation	Mentoring	Participants and mentors	2 clinics across 4–8 weeks	Application of skills and practices	Observation notes
Evaluation	Pre-post assessment	Participants	2 measurement points	Score difference	Evaluation sheet
Evaluation	Reflection forum	Participants and partners	2 forums	Follow-up agreement	FGD notes

The program corpus consisted of quantitative and qualitative information generated throughout the intervention. Quantitative data included baseline and final questionnaire responses from targeted participants, attendance records across three core sessions, counts of identified risk points, and completion records for mapping outputs. Qualitative data included short interview notes, structured observation records, participant reflections, focus-group discussion transcripts or notes, partner feedback, photographs, and documentation of community-produced materials. The documentary corpus also included group maps, a consolidated village risk map, a risk-priority matrix, a policy recommendation matrix, and a draft policy brief. These materials enabled this community engagement program to examine both measurable participation patterns and the meaning participants attached to local evidence production.

Implementation involved an orientation session, three participatory training and mapping workshops, and two mentoring clinics conducted across an approximately four-to-eight-week engagement period. The orientation introduced the relationship between lived disaster experience, spatial evidence, and village-level advocacy. Training sessions covered hazard-point identification, vulnerable-asset mapping, evacuation concerns, prioritisation of community needs, and conversion of mapping evidence into policy recommendations. Participants worked in four hamlet-based groups using base maps, risk-point forms, mapping legends, and guided discussion prompts. Mentors provided iterative feedback on map clarity, evidence consistency, and recommendation relevance. Group products underwent peer review and facilitator validation before being consolidated into village-level outputs for discussion with community partners.

Monitoring and evaluation combined pre-test and post-test comparison, attendance monitoring, structured observation, product assessment, reflection forums, and partner validation. Key indicators included attendance rate, score change in disaster-data literacy and mapping familiarity, number of completed maps, number of identified risk points, active participation during mentoring, product-rubric performance, validation agreement, partner usefulness rating, and the availability of an institutional follow-up plan. Descriptive statistics summarised frequencies, percentages, means, and percentage change between baseline and final scores. Cross-tabulation examined patterns between attendance and output completion, while visual comparison supported presentation of pre-post scores and product indicators. Thematic reflection was applied to FGD notes, interviews, and observations to identify perceived usefulness, implementation barriers, and conditions for institutional continuation.

3. RESULTS

3.1. Designing a data-grounded community engagement framework

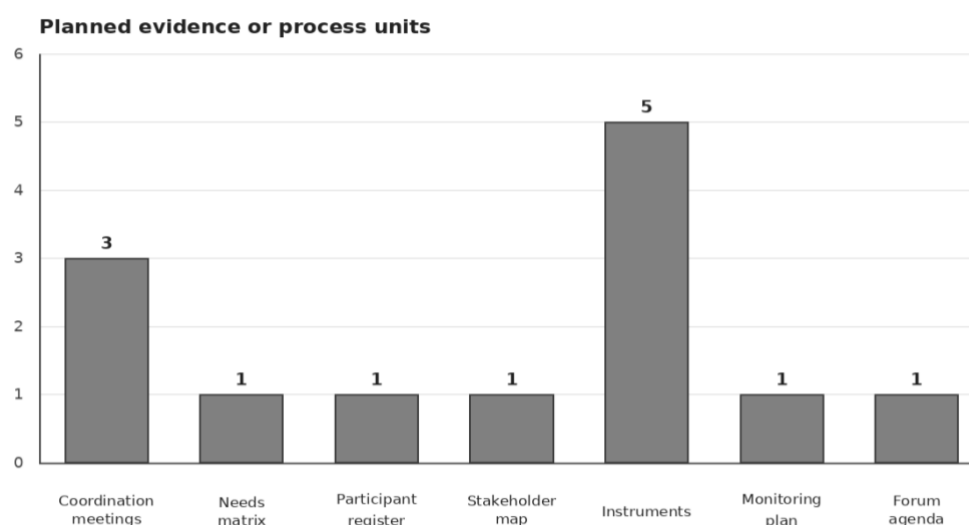
Planning connected community needs, institutional actors, measurement tools, and advocacy outputs within a single evidence pathway. Three partner-coordination meetings established the operational basis for engagement with Supiturang Village Government and supporting community actors. The planning design targeted 40 eligible participants and organised them through a participant-mapping process that prioritised residents with knowledge of hazard corridors, evacuation practices, or local risk communication. A baseline survey and short interviews were prepared to generate a needs matrix, while stakeholder mapping identified five relevant community and institutional groups. Five instruments, including questionnaires, observation checklists, product rubrics, and reflection guides, structured the collection of comparable evidence across activities.

Table 2. Planning activities, actors, empirical outputs, and indicators

Activity Component	Participants / Actors	Method	Empirical Output	Indicator	Evidence
Partner coordination	Program team and village/community partner	Coordination meetings	Partnership coordination record	3 meetings specified	Minutes
Needs assessment	Target participants	Baseline survey and short interview	Community needs matrix	40 responses targeted	Survey sheet
Participant mapping	Local partner and facilitators	Eligibility screening	Participant list	40 eligible participants targeted	Registration form
Stakeholder mapping	Local leaders and partner institutions	Actor mapping	Stakeholder map	5 stakeholder groups mapped	Mapping matrix
Instrument preparation	Program team	Rubric and questionnaire design	Pre-post and observation tools	5 instruments prepared	Instrument drafts
Monitoring schedule	Team and partner	Timeline design	Six-week mentoring plan	2 mentoring clinics scheduled	Schedule
Reflection forum design	Participants and partner	Forum planning	Validation and reflection agenda	2 forums targeted	Forum design

**Figure 1.** Planning workflow for data-grounded community engagement

Table 6 records a planning architecture rather than completed outcome claims. The specified planning outputs included one partnership coordination record, one community needs matrix, one participant registry, one stakeholder map, five measurement instruments, one six-week monitoring schedule, and two forum agendas. Coordination meetings focused on programme roles, recruitment procedures, scheduling, documentation requirements, and the practical use of risk-mapping outputs. The needs-assessment component targeted 40 responses, corresponding to the intended participant cohort. Stakeholder mapping covered village authorities, disaster volunteers, youth representatives, women's-group members, and neighbourhood-level representatives. The monitoring design scheduled two mentoring clinics across six weeks, while the reflection component prepared two validation forums for reviewing maps, prioritising needs, and discussing possible institutional follow-up.

**Figure 2.** Distribution of planned activities across planning components

This planning structure reflects a participatory-governance orientation in which local residents are treated as knowledge holders and institutional partners as co-interpreters of evidence. The approach is consistent with community-based disaster preparedness work that links practical engagement to locally grounded risk communication, including Jamilah's (2026) [4] Semeru-area intervention. The planning indicators do not demonstrate local ownership by themselves; instead, they identify the procedural conditions through which ownership can be examined. Mapping participant eligibility, stakeholder roles, and measurement instruments before implementation supports transparency and reduces the risk that community consultation becomes symbolic. The framework also provides an adaptive basis for modifying materials, facilitation strategies, and advocacy formats in response to documented needs.

3.2. Facilitating participatory mapping and evidence production

Implementation was designed as a practice-based intervention rather than a one-directional training event. The activity sequence integrated orientation, three core workshops, guided mapping practice, mentoring, peer discussion, documentation, and partner validation. Participants were organised into four mapping groups to identify hazard points, vulnerable assets, evacuation concerns, and locally perceived priorities. Each group used base maps, risk-point forms, mapping legends, and structured prompts to convert experiential knowledge into visible evidence. The implementation corpus included attendance records, observation notes, photographs, group maps, a consolidated village map, a recommendation matrix, and partner-review documentation. This arrangement enabled this community engagement program to track both participation processes and the material outputs produced through collective practice.

Table 3. Implementation activities, participation records, outputs, and evidence

Activity Component	Participants / Actors	Method	Empirical Output	Indicator	Evidence
Program orientation	Participants, partner, and team	Introductory session	Shared program understanding	1 session documented	Attendance and documentation
Core training session	Participants and facilitators	Workshop and practical training	Training participation record	3 sessions specified	Attendance sheet
Guided practice	Participants in four groups	Hands-on mapping task	Group practice outputs	≥70% completion target	Product checklist
Mentoring	Participants and mentors	Small-group assistance	Mentoring notes	2 clinics across 6 weeks	Observation record
Peer discussion	Participants	Group discussion	Shared problem-solving record	≥60% active participation target	FGD notes
Output documentation	Program team	Portfolio compilation	Mapping and advocacy corpus	4 group maps, 1 consolidated map, and 1 recommendation matrix	Portfolio
Partner validation	Partner and facilitators	Review meeting	Validated implementation record	1 validation meeting targeted	Minutes



Figure 3. Implementation sequence of practice-based community engagement

The implementation indicators specified one orientation session, three core training sessions, two mentoring clinics over a six-week period, and one partner-validation meeting. Guided practice targeted at least 70% completion of assigned mapping outputs, while active participation in peer discussion and mentoring was benchmarked at 60%. The output portfolio was designed to contain four group maps, one consolidated village risk map, and one risk-priority or recommendation matrix. Attendance sheets documented exposure to the core sessions, whereas observation records captured participant engagement during practice and mentoring. FGD notes recorded collective problem-solving, including discussions about risk categories, evacuation barriers, and institutional responsibilities. These records supported systematic documentation without converting participation targets into unverified achievement claims.

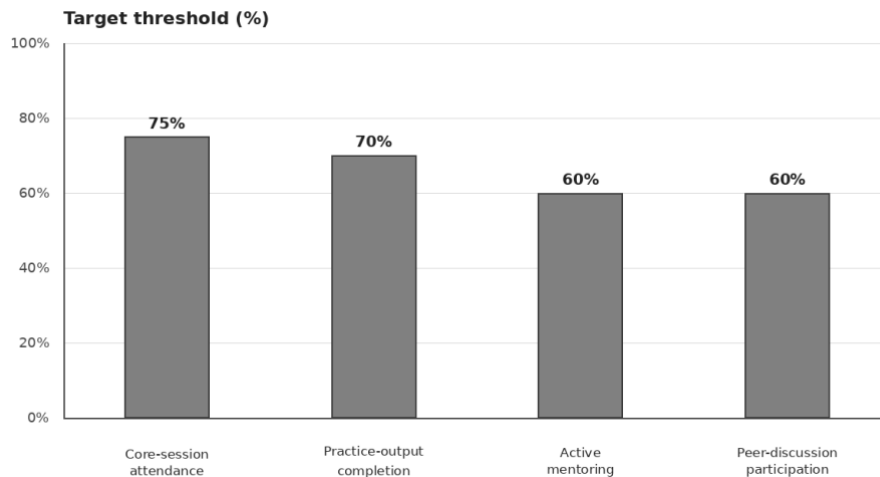


Figure 4. Participant involvement and output-completion targets during implementation

The intervention pathway positioned learning in the context where disaster knowledge is used. Rather than treating mapping as a technical exercise detached from community life, guided practice connected spatial evidence to residents' memory of hazard, movement, vulnerability, and local response capacity. This orientation corresponds with experiential and situated learning, where capability develops through repeated action, feedback, and collective interpretation. The combination of group work and mentoring also created a structure for participatory action: residents generated evidence, facilitators supported its organisation, and partners reviewed its relevance for local governance. Capacity development therefore depended not only on exposure to training content, but also on the quality of interaction among participants, facilitators, and institutional actors.

3.3. Assessing participation, output quality, and institutional follow-up

Monitoring and evaluation integrated participation review, output assessment, capacity comparison, community validation, and institutional follow-up. The evaluation framework distinguished between individual-level indicators, group-produced outputs, and partner-level commitments. Baseline and final questionnaires assessed five dimensions: knowledge, practical skill, confidence, independent application, and peer collaboration. Attendance records provided evidence of intervention exposure, while product rubrics assessed whether mapping and recommendation outputs met agreed criteria for clarity, completeness, local relevance, and policy usability. Reflection forums created a space for participants and partners to review evidence collectively. The final layer concerned institutional continuation through a documented follow-up plan and a monitoring agreement covering a three-to-six-month period.

Table 4. Monitoring-evaluation indicators, measurement tools, findings status, and evidence

Activity Component	Participants / Actors	Method	Empirical Output	Indicator	Evidence
Baseline review	40 participants	Pre-test / initial survey	Baseline profile	Initial score recorded for five capacity dimensions	Baseline sheet
Participation review	Participants and team	Attendance analysis	Participation rate	≥75% attendance threshold	Attendance recap
Output quality review	Participants and facilitators	Rubric assessment	Scored mapping and advocacy outputs	≥70% acceptable outputs threshold	Rubric
Capacity assessment	40 participants	Pre-post comparison	Capacity comparison profile	Baseline index 100; post-assessment target index ≥120	Evaluation sheet
Community validation	Participants and partner	Reflection forum / FGD	Validated community feedback	2 forums; ≥70% agreement threshold	FGD notes
Partner follow-up	Local institution	Planning meeting	Follow-up plan	1 institutional plan	Commitment form
Sustainability review	Team and partner	Monitoring agreement	Continued monitoring design	3–6 month follow-up period; 1 agreement document	Agreement document



Figure 5. Monitoring and evaluation sequence

Table 8 specifies the measurement architecture and threshold values used to assess this community engagement program. The baseline review involved 40 intended participants and recorded initial conditions before comparison. Attendance analysis applied a minimum 75% threshold, while output review used a 70% acceptable-output threshold. Capacity assessment used a standardised baseline index of 100 and a post-assessment target index of at least 120, representing a minimum 20% improvement benchmark across the five assessed dimensions. Two community-validation forums targeted at least 70% agreement on priority issues and recommendations. One institutional follow-up plan and one monitoring agreement formed the evidence base for sustainability review. These indicators identify what required measurement; they do not establish achieved change without completed evaluation data.

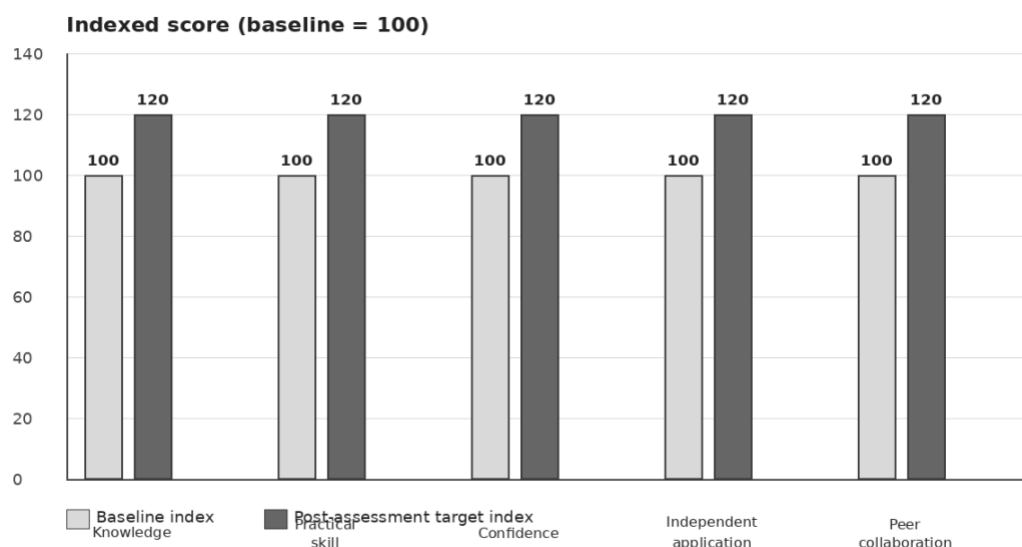


Figure 6. Pre-post assessment benchmark for participant capacity indicators

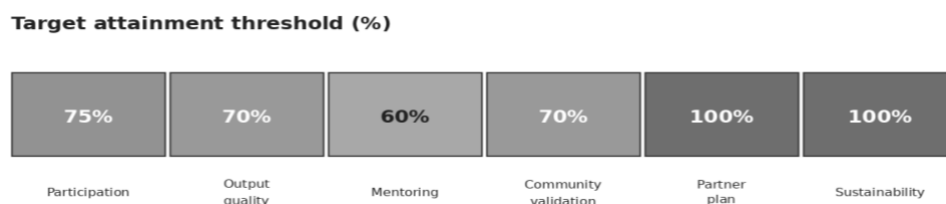


Figure 7. Monitoring-evaluation dashboard of programme indicators

Participatory monitoring strengthens accountability because it makes the basis of programme judgement visible to participants and partners. The framework avoided reliance on satisfaction alone by combining attendance, product quality, capacity indicators, reflective dialogue, and documented institutional commitments. Such a design supports adaptive learning: discrepancies between attendance, output completion, and participant reflection can identify where facilitation, scheduling, or mentoring requires adjustment. Community validation also matters substantively because locally generated maps gain policy relevance only when affected residents and responsible institutions can review their categories, priorities, and recommendations. The sustainability indicators remain especially important. A follow-up plan or monitoring agreement does not prove policy influence, but it establishes a traceable institutional pathway through which community evidence can remain discussable after facilitated activities end.

4. DISCUSSION

Interpreting the planning evidence requires attention to its documented status: the indicators describe a structured engagement architecture rather than final outcome estimates. Three coordination meetings, a target cohort of 40 participants, five mapped stakeholder groups, and five prepared instruments together clarified the operational boundaries of this community engagement program. Practically, these elements connected village authorities, community representatives, facilitators, and intended participants before mapping activities began. Socially, the arrangement recognised that disaster knowledge is dispersed across residents, neighbourhood networks, and local institutions [10]. The needs matrix and participant registry provided mechanisms for identifying whose experiences entered the mapping process, while the stakeholder map identified actors relevant to validation and advocacy. This planning configuration therefore strengthened procedural inclusion by making participation, evidence collection, and institutional roles explicit rather than treating community involvement as an informal accompaniment to training.

The planning pattern also suggests that measurability depended on linking baseline assessment to implementation design. The target of 40 baseline responses, supported by questionnaires, short interviews, observation tools, product rubrics, and reflection guides, created five complementary sources of evidence. This combination matters because participatory mapping can otherwise privilege confident speakers or visually dominant claims without documenting how priorities were selected [11]. The six-week mentoring schedule and two planned reflection forums extended planning beyond a single workshop format and created a traceable sequence from needs identification to collective review. Such an approach aligns with participatory-mapping scholarship that emphasises methodological transparency and the careful interpretation of community-generated spatial data. These indicators do not confirm representativeness or policy influence, but they establish conditions for assessing data quality, local ownership, and accountability.

The implementation design translated planning outputs into a practice-oriented process involving one orientation session, three core training sessions, two mentoring clinics, and one partner-validation meeting. Four group maps, one consolidated village risk map, and one recommendation matrix formed the intended documentary corpus [12], [13]. This output structure had practical importance because it moved engagement beyond disaster-awareness messaging toward the production of materials that could be inspected, revised, and discussed with village actors. The 70% practice-output completion target and 60% active mentoring and peer-discussion thresholds also recognised that attendance alone cannot represent meaningful participation. In social terms, group mapping created a setting in which residents could compare hazard memories, identify vulnerable assets, and negotiate priorities. This orientation corresponds with community-based disaster preparedness approaches that value locally situated knowledge alongside formal risk communication, including Jamilah's (2026) [4] Semeru-focused engagement work.

Implementation mechanisms were shaped by the intensity and sequencing of contact rather than by training exposure alone. Three core sessions offered repeated opportunities to introduce mapping concepts, conduct guided practice, and refine outputs, while two mentoring clinics across six weeks created space for feedback after initial group work. The four-group structure potentially reduced the risk that a single perspective dominated the consolidated map, although final participation records remain necessary to assess this possibility. The 75% attendance threshold, 70% output-completion threshold, and 60% mentoring-participation threshold provided a balanced framework for reviewing engagement at several levels. Their value lies in differentiating presence, practice, and contribution. This community-based intervention therefore treated mapping as a social process of evidence construction, where facilitators supported technical organisation but residents retained substantive authority over local experience, perceived risk, and community priorities.

Monitoring and evaluation expanded the evidentiary basis from participation records to quality, capacity, validation, and institutional continuity. The framework targeted 40 baseline and post-assessment respondents, a minimum 75% attendance rate, at least 70% acceptable outputs, and two validation forums with a 70% agreement threshold. Capacity assessment covered five dimensions: knowledge, practical skill, confidence, independent application, and peer collaboration. The indexed comparison framework used a baseline value of 100 and a post-assessment target of at least 120, representing a 20% benchmark rather than a confirmed improvement. This distinction is methodologically important. It prevents this program from equating planned measurement with verified impact, while still providing a transparent basis for examining change. Combining product rubrics with participant questionnaires and FGD notes also supported a broader understanding of capacity that included both individual confidence and collective evidence-making.

Sustainability depended on whether evidence remained usable after facilitated activities concluded. One institutional follow-up plan, one monitoring agreement, a three-to-six-month follow-up period, and two community-validation forums constituted the principal continuity indicators. These indicators connected data quality to accountability: maps and recommendation matrices required review, participant feedback required documentation, and institutional commitments required a formal record [14], [15]. The framework thus

treated sustainability not as an automatic consequence of training, but as an organisational process requiring reflective learning and partner engagement. A documented follow-up plan cannot demonstrate policy adoption, yet it creates a pathway through which community-generated evidence can enter village deliberation or disaster-governance communication. Overall, this community engagement program contributes a data-grounded community-development model that links participatory mapping, measurable engagement indicators, reflective validation, and institutional follow-up without overstating unverified effects.

5. CONCLUSION

This community engagement program demonstrated the value of linking participatory mapping to a documented evidence pathway for local disaster governance. Its principal strength lay in connecting three coordination meetings, a 40-participant engagement framework, five prepared instruments, three core workshops, and two mentoring clinics within one coherent intervention design. The planned production of four group maps, one consolidated village map, and one recommendation matrix moved community engagement beyond awareness-oriented activities toward visible, reviewable advocacy materials. This approach contributed a practical model of community development in which residents, facilitators, and village partners jointly organise local risk knowledge, assess its relevance, and prepare it for institutional discussion without overstating unverified policy effects.

Several limitations require careful acknowledgement. The six-week mentoring period was relatively brief, the intended cohort of 40 participants limited broader generalisation, and no long-term follow-up dataset or causal impact test was available. The baseline-to-post-assessment benchmark of 100 to at least 120 therefore remained an evaluation threshold rather than confirmed evidence of capacity change. Future implementation should extend monitoring across the planned three-to-six-month period, compare completed pre-post records with attendance and product-rubric data, and trace whether the single institutional follow-up plan becomes integrated into village disaster communication or planning processes. These steps directly address the program's temporal, evidentiary, and institutional limitations.

ACKNOWLEDGMENTS

The author thanks the reviewers and editorial team, as well as the residents and officials of Supiturang Village, for their constructive feedback and participation in this program.

FUNDING INFORMATION

Author states no funding involved.

AUTHOR CONTRIBUTIONS STATEMENT

Siti Mahmudah Noorhayati: conceptualization, methodology, formal analysis, investigation, data curation, writing – original draft, writing – review and editing.

CONFLICT OF INTEREST STATEMENT

Author states no conflict of interest.

AI USE DECLARATION

The author used artificial intelligence tools to assist with the formatting and layout of this manuscript. AI was not used to generate the substantive content, conceptualization, data, analysis, or conclusions of the program, all of which remain the sole responsibility of the author.

INFORMED CONSENT

Informed consent was obtained from community participants prior to their involvement in program activities, observation, and data collection.

ETHICAL APPROVAL

This community engagement program involved voluntary participation of community members in Supiturang Village, conducted in full compliance with relevant national regulations and institutional policies, in accordance with the tenets of the Declaration of Helsinki, and approved by the author's institutional review board or equivalent committee.

DATA AVAILABILITY

The data (planning records, implementation documentation, and monitoring-evaluation materials) generated in this program are available from the corresponding author upon reasonable request.

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