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Corporate Social Responsibility and The Formation of Community-Owned Livelihood Capacity: A Case Study of Post-Flood Communities in Aceh Tamiang

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ABSTRACT
Disasters can disrupt livelihood systems and test communities' capacity to sustain and adapt their livelihood strategies. Although corporate social responsibility (CSR) initiatives are increasingly used to strengthen pre-disaster capacity and resilience, how they transform into mobilizable, community-owned capacity during shocks remains poorly understood. This study aimed to analyze the process through which CSR interventions transform into community-owned adaptive capacity and how such capacity functions when communities experience shocks. The study employed a qualitative approach using a single embedded case study design of the CSR intervention implemented by PT Pertamina EP Rantau Field in Aceh Tamiang, with the 2025 flood serving as the critical event. Data were collected through semi-structured interviews, focus group discussions (FGDs), participatory observation, and document analysis, and were analyzed using reflexive thematic analysis. The findings showed that capacity was not formed through a linear transfer process but through stages of practice, internalization, reproduction, institutionalization, and mobilization during shocks. CSR interventions became community capacity when facilitated knowledge, skills, assets, organizations, and networks were practiced, reproduced, and embedded within community life. During the flood, this capacity was mobilized to restore livelihoods and respond to the needs of vulnerable groups. However, community ownership did not imply complete independence from external actors; rather, it reflected agency within interdependence, where communities organized and mobilized internal resources while simultaneously accessing and integrating external support. This study demonstrated that CSR can function as a shock absorber when its interventions generate lasting capacity that continues to operate and can be mobilized by communities during periods of disruption.

INTRODUCTION

Natural disasters are shocks that not only cause physical damage but also disrupt community livelihood systems. Lost or damaged productive assets, interrupted economic activities, limited access to markets and basic services, and weakened social networks can

constrain communities' ability to sustain their livelihoods. These impacts become more complex when disasters affect communities that already experience economic, social, or ecological vulnerabilities. Therefore, post-disaster recovery should extend beyond restoring pre-disaster conditions by strengthening livelihood resilience, defined as the ability to respond to and recover from stresses or shocks while adapting to change and maintaining long-term livelihood sustainability (Nyamwanza, 2012).

(Sina et al., 2019) noted that livelihood resilience depends on well-being, access to resources, and social-physical conditions rather than solely on household economic capacity. (Nwokoro et al., 2026) similarly linked household resilience to shocks with income diversification, learning processes, social organization, and the ability to sustain livelihood continuity. Recovery from shocks is therefore not merely a matter of survival but also involves learning, adjusting strategies, and developing conditions that enable communities to face future challenges. (Cooper-Johnson et al., 2025) further demonstrated that livelihood recovery is shaped by pre-existing vulnerabilities, access to livelihood assets, institutional support, and external interventions.

One form of external intervention is private-sector involvement in disaster risk management, including capacity development, the provision of expertise and technology, recovery planning, and partnerships with governments (Kaur & Singh, 2024) . However, the contribution of pre-disaster private-sector involvement to livelihood resilience remains unclear when communities experience actual shocks. A critical review by (Awah & Ogundeji, 2026) showed that private-sector participation in disaster risk reduction remains relatively limited, fragmented, and predominantly reactive. This condition highlights a gap between expectations of the private sector as a strategic actor and its actual contribution to disaster resilience. Kaur and Singh (2024) therefore emphasized the need to integrate disaster preparedness into CSR activities and strengthen public–private partnerships. (McLennan, 2020a) also highlighted the transition from reactive responses toward disaster resilience as an important agenda for understanding private-sector involvement. Another study by (Yasir et al., 2023) demonstrated Pertamina's CSR contribution through the Kampung Gambut Berdikari Program in mitigating peatland fires and supporting ecotourism development. The study indicated that CSR can contribute to both disaster mitigation and community well-being. However, how capacities facilitated through such interventions are utilized, sustained, and adapted during livelihood shocks remains insufficiently explored.

This issue highlights the concept of adaptive capacity, which from a livelihood perspective refers to communities' ability to respond to pressures and shocks while adjusting their livelihood strategies to changing conditions (Nyamwanza, 2012). This perspective emphasizes that the possession of knowledge, skills, or assets does not automatically generate adaptive capacity. At the community level, community capacity expands this understanding by describing the characteristics, resources, and relational patterns that can be collectively mobilized to address challenges (Goodman et al., 1998a). (Moreno et al., 2017) further argued that capacity building is an iterative process developed through interactions among individuals, communities, and institutions. However, capacity developed through external interventions is not necessarily embedded within communities. Therefore, the concept of community ownership becomes important. (Flynn, 1995) positioned community ownership as communities' control over the decisions, processes, and resources shaping an intervention

rather than merely their participation in implementation. This perspective enables the application of community-owned adaptive capacity as a conceptual lens to understand how capacities initially facilitated through CSR transform into capacities that communities can utilize, reproduce, adjust, and mobilize when facing changes and shocks.

Aceh Tamiang provides an important empirical context for examining this issue. The district has experienced recurring flood exposure. Data from the Aceh Tamiang Regency Hydrometeorological Disaster Data Centre showed that the 2025 flood, a hydrometeorological disaster associated with Cyclone Senyar from late November to early December 2025, affected 287,168 people or 72,813 households, damaged 75,088 housing units, and affected 8,242 hectares of farmland. Economic facilities were also damaged, including 15 markets and 156 shophouses (PUSDATIN BPBD Aceh Tamiang, 2026). The disaster severely damaged settlements and infrastructure, disrupting transportation access, aid distribution, health services, clean water supply, and community socioeconomic activities. The major flood event in late 2025 created an opportunity to examine whether pre-disaster capacities and resources could be activated when livelihood systems were disrupted.

This context is reflected in PT Pertamina EP (PEP) Rantau Field's CSR interventions, which had been implemented before the 2025 flood. Through various community development programs, PEP Rantau Field developed community livelihood capacity, institutional capacity, and disaster risk reduction initiatives. For example, capacity strengthening for people with disabilities was conducted through the Task Force for Disability Disaster Preparedness, Response, and Empowerment (SATGAS DIGDAYA), including disaster training, the development of inclusive disaster standard operating procedures (SOPs), simulations, and strengthened networks with disaster management actors. In the economic sector, PEP Rantau Field provided alternative livelihood opportunities for people with disabilities through Inklusi Coffee and Doorsmeer & Bengkel Difabel. The company also supported agricultural development by strengthening horticulture and melon farming groups. In addition, PEP Rantau Field contributed to social development by improving community health quality through enhanced basic services at Integrated Health Service Posts (Posyandu) and supporting inclusive education initiatives in the formal education sector. This case represents an intervention implemented before a shock and subsequently provides an empirical basis for examining how capacity functioned during the 2025 flood.

The novelty of this study lies in its focus on the process through which CSR interventions become community-owned adaptive capacity, examined through the case of PT Pertamina EP Rantau Field's CSR intervention in Aceh Tamiang and the 2025 flood event. Unlike previous studies that generally examine CSR as a post-disaster response or as a broader contribution to community development, this study focuses on pre-disaster capacity formation that enables communities to respond and recover when shocks occur. Furthermore, this study introduces the concept of "community-owned adaptive capacity" to explain how externally facilitated capacity becomes embedded within community practices, institutions, and networks. The study also contributes to the literature by identifying five mechanisms—intervention, practice, internalization, reproduction and institutionalization, and mobilization under shock—through which external interventions develop into community-owned capacity. By providing empirical

evidence from a specific case, this study offers insights that are contextually grounded and theoretically relevant.

This study therefore views CSR not merely as a post-disaster response but as an intervention that operates before shocks occur, during recovery processes, and in the development of capacity for future challenges. This focus connects two processes that are often examined separately in CSR and disaster studies: capacity formation before disasters and capacity utilization when disasters occur. Based on this perspective, the study addresses the following question: How does an intervention become community-owned capacity, and how does that capacity function when a shock occurs? Accordingly, this study examines how CSR interventions become community-rooted capacities and how these capacities function when shocks disrupt livelihood systems.

METHOD

This study employed a qualitative approach using a single embedded case study design to examine how a Corporate Social Responsibility (CSR) intervention functioned as a shock absorber for the livelihood systems of flood-affected communities. The case focused on PT Pertamina EP Rantau Field's CSR intervention in Aceh Tamiang, with the 2025 flood serving as the critical event for tracing how pre-disaster capacity was mobilized, negotiated, and adapted during disruption. This design enabled the study to examine changes before and after the flood while tracing the interrelationship between capacity formation, mobilization during shocks, and post-disruption reproduction and institutionalization (Yin, 2018).

Data were collected through semi-structured interviews, focus group discussions (FGDs), participatory observation, and document analysis (Hancock & Algozzine, 2006). Informants were selected through purposive and snowball sampling to identify actors with direct experience in capacity building before the flood, capacity mobilization during disruption, and livelihood recovery afterward. Guided by (Braun & Clarke, 2023) reflexive thematic analysis approach, the data were coded and analyzed to identify relational patterns between capacities and their contexts. The analysis was conducted iteratively across three temporal phases: (1) pre-flood capacity formation, (2) capacity mobilization and adaptation during the shock, and (3) post-flood capacity reproduction, regeneration, and institutionalization. Particular attention was given to situations where capacity was not successfully mobilized or where benefits were distributed unevenly, preventing the assumption that CSR interventions automatically generate community resilience. Throughout the data collection and analysis processes, the researchers reflected on their role as practitioner-researchers within the CSR context and considered how institutional relationships influenced knowledge production (Braun & Clarke, 2023; Smith & Luke, 2021).

RESULTS AND DISCUSSION

From External Intervention to Embedded Community Capacity

The finding reveal that community capacity does not arise automatically from CSR intervention; rather it is transformed from external intervention into embedded community capacity nce the associated knowledge, training, mentoring, facilities, technology, and institutional support are practised, learned, reproduced, and mobilised during a shock. Since 2021, this process has been developed by PEP Rantau Field through HARMONI INKLUSIF,

covering on livelihood diversification, farmer empowerment, Sekolah Lapang, strengthening disability institutions, alternative livelihood, education, posyandu, and inclusive shelter. Satgas DIGDAYA serves as a community-driven node within the disaster, economic, food, health, education, environmental, and inclusive institutional aspects integrated by HARMONI INKLUSIF.

This capacity formation process did not begin from a community condition completely lacking in capacity. Instead, CSR combined external resources with the knowledge, experience, and existing local actors. For example, in livelihood diversification through the Smart Agriculture Melonesia and Youth Farmer Hortikultura programmes, PEP Rantau Field formed young for farmer regeneration, mentored by senior local farmers. Melon cultivation knowledge in Smart Agriculture Melonesia was not only transferred but also practised and learned collectively, a process strengthened through the Sekolah Lapang. PEP Rantau Field intervened by stablishing new young farmer groups and facilitating the Sekolah Lapang, succeeding in sustaining melon cultivation knowledge that allowed polybag growing media to be reused for 20–23 planting cycles. As a result, farming, that had been dormant due to insufficient senior farmers' capital and declining physical condition was revived and expanded by the new farmer group.

Sekolah Lapang act as a mechanism that link knowledge with practice while also opening space for the reproduction of local knowledge through intergenerational relations. This aligns with Avian Pratama & Alfaricha (2026)who demonstrate that farmer regeneration requires knowledge sharing, mentoring, intergenerational learning, and leadership, despite persisting structural constraints such as land access and knowledge gaps. In terms of this study, strengthening market access through the development of educational-agritourism alongside farmer’s groups makes melon marketing more promising while also broadening the community's perception of farming. The community's positive response indicates that educational-agritourism not only supports marketing but also addresses the limited recreational space in Aceh Tamiang by providing educational experience. Educational-agritourism thus broadens the meaning of farming from a mere economic activity into a space for production, learning, and recreation, while also strengthening the appeal of farmer regeneration.

Through Youth Farmer Hortikultura, PEP Rantau Field has promoted livelihood diversification by growing chili peppers and vegetables on 1.3 hectares of land to reduce dependence on oil palm. The intervention includes enhancing cultivation techniques, production infrastuctures, business operations, and market networks to increase the productivity and sustainability of young farmers' agribusiness. In practice, the group has developed into a adaptive learning space built on shared knowledge and joint problem-solving in response to pests and pathogens. Social capital is likewise reflected in the existence of Youth Farmer Hortikultura: interviews indicate that horticultural development serves not only as a productive livelihood alternative for the younger generation, but also as a space for cultivating knowledge, cooperation, and self-reliance among group members. This produce offers the surrounding community an alternative, more affordable food source, particularly benefiting vulnerable groups amid rising food prices. Youth Farmer Hortikultura can thus be regarded as a form of social capital strengthening, as it enables young people to contribute not only to rising

income and productivity, but also to broader social value through expanded community food access.

Both interventions show that CSR broadens communities' options for how livelihoods can be sustained and developed. From a livelihood resilience perspective, having more than one livelihood option matter, since disruption to a single income source does not automatically mean the loss of an entire household's or group's economic base. A similar pattern is seen in livelihood development among people with disabilities. Interventions through Doorsmeer, Bengkel Difabel, and Inklusi Coffee provide economic means while enabling community members to build skills, work experience, social networks, and alternative income. Through Rumah Kreatif Tamiang, programmes have engaged people with disabilities across various business units, building economic capacity not as individual assistance but through collectively managed productive activity.

Through another perspective, the establishment and enhancement of SATGAS DIGDAYA illustrate a similar trajectory within the disaster field. People with disabilities are not merely recipients of protection but also active actors with knowledge regarding their own community's needs. Their involvement was built through forming the SATGAS DIGDAYA group, developing an inclusive disaster SOP, education, evacuation simulations, and flood response, transforming individual capacity into collective, institutional capacity. FGD findings indicate that this shift also took place at the level of self-perception and social standing. In the early stages, some SATGAS DIGDAYA members identified themselves as perpetually needing help, even facing stigmatization as a burden on the community during disasters. Through organising and capacity building within Satgas DIGDAYA, this perception gradually shifted. Beyond feeling more capable of mitigation and self-rescue, they began to see themselves as responsible for sharing disaster information, helping those closest to them, and supporting more vulnerable groups. The intervention therefore did not stop at capacity building, but create a process of agency changes, which enables the ability to act on one's own behalf while also taking on a role in collective safety.

These changes marked the beginning of broader access to information, social networks, and opportunities in disaster management. In other words, the main change emerged was that they gained a stronger position to determine, negotiate, and carry out their own roles within the disaster risk reduction and protection system. Their position strengthened because they gained space, knowledge, networks, and legitimacy to participate. On the other hand, this space remains within a framework of relationships involving CSR, the village government, BPBD, and other disaster response actors. A study by Gisevius et al. (2025) in Semarang provides empirical support closely aligned with this finding. They show that adaptive capacity comes not only from resources located within the community, but from the position of local actors within networks that enable them to mobilise external resources and knowledge.

Communities' livelihood patterns were also built through interventions in socials, particularly through the human capital reinforcement, an important foundation for the sustainability of community livelihoods. This intervention was implemented through improving the quality of primary health care services at Posyandu Kenari and developing inclusion-based formal education at SLBN Pembina Aceh Tamiang.

In terms of health, the improvement of Posyandu Kenari was aimed not only at improving community access to basic health services, but also at building community capacity to maintain

health throughout the life cycle. Through improved service quality, meeting nutritional needs, monitoring growth and development, and strengthening the role of cadres and the community, these intervention contribute to better health conditions. From a livelihood perspective, health is an vital asset, because good health enhances an individuals' ability to engage productively in social and economic activities. Conversely, limited access to health services can increase household vulnerability through rising medical costs, reduced productivity, and impaired ability to earn an income.

Meanwhile, in the education sector, PEP Rantau Field has consistently promoted inclusive education at SLBN Pembina Aceh Tamiang since 2024. This intervention is aimed at strengthening the capacity and opportunities of students with disabilities to develop according to their potential, needs, and characteristics. From a livelihood perspective, education is not only the fulfilment of a basic right, but also an investment in human capital to built self-reliant and sustainable livelihood. Through inclusive education, students develop knowledge, skills, self-confidence, adaptibility, and readiness to participate in social and economic life. This capacity-building is essential to reduce vulnerabilities arising from limited access to education, skills, and opportunities for participation. Inclusive education also creates an equitable learning environment through Kelas Berdaya, adaptive hands-on classes themed around disaster preparedness, culture, the environment, and general topics. Each theme is equipped with a living laboratory to apply knowledge through real experience. This intervention therefore has the potential to reduce vulnerability and broaden the livelihood options of students with disabilities more extensively in the long term.

These findings indicates that CSR intervention operates through a process of embedding, whereby knowledge and skills are no longer confined to the relationship between the company and beneficiaries, but begin to embedded in group practices, inter-actor relations, and local institutional structures. This is consistent with Goodman et al. (1998b) view that community capacity is not merely a matter of resources possessed, but also encompasses characteristics and patterns of relationship that can be mobilised to address community issues.

From Community Practice to Ownership: Institutionalisation and Mobilisation under Shock

The transformation from intervention to capacity becomes clearer when communities begin turning intervention into community practice. At this point, communities move beyond merely receiving a programme, actively running, adapting, and developing the practices introduced through CSR. Evans et al. (2026), through their Community Disaster Resilience Capability Framework, frame capacity as something built and maintained through place-based, community-led processes rather than a static community attribute.

Smart Agriculture Melonesia provides offers a telling illustrations. The programme did more than introduce melon cultivation techniques — it brought experienced and young farmers together through the Sekolah Lapang, transforming the intervention from a simple technology transfer into a mechanism for intergenerational knowledge transfer and reproduction. Melon cultivation knowledge, once tied to the experience of specific farmers, began to be practised by the next generation.

This finding shows that ownership arises not from simply receiving a programme, but through repeated practice that enables the community to master that knowledge — a pattern

also seen in the formation of farmer groups. Rather than functioning merely as an administrative vessel for the programme, the group becomes a space for sharing knowledge, organising production, and building relationships among actors, with social organisation thus serving as the medium through which individual capacity converts into collective capacity. This is supported by Saputra et al. (2026), who show that the existence of an organisational structure does not automatically produce collective performance; new capacity becomes effective only once converted into organisational routines, information mechanisms, and sustained collaborative action.

An even stronger finding concerns the courage to take risks after the flood, once fields lay covered under a thick layer of mud sediment; — a process evident in the Smart Agriculture Melonesia and Youth Farmer Hortikultura programmes, which built young farmers' capacity in chili and vegetable cultivation. Unlike interventions whose results are mainly seen in improved knowledge or skills, in this case that capacity could be observed when the community faced a real shock in the form of a major flood. Both the melon farmers and the chili and vegetable farmers developed through the Smart Agriculture Melonesia and Youth Farmer Hortikultura groups were recorded as having restored their land within three months after the flood. During the previous planting cycle, these farmers had faced crop failure and flood-related land damage. Interviews reveal that their willingness to take this risk stemmed from feeling supported by PEP Rantau Field, which stood alongside them in managing farmland and mitigate for future disasters. This finding shows that the capacity built through CSR intervention prior to the flood, proves particularly valuable when it can be used to shorten the gap between the occurrence of a disaster and the resumption of livelihood activities.

A similar process appears in strengthening disability institutions through Satgas DIGDAYA. Ownership developed through members' involvement in needs assessment, education, trauma healing, aid distribution, and recovery during the 2024–2025 floods, then further strengthened through training in PRB, disaster-related vocational skills, basic farming, emergency food processing, SOP development, and evacuation simulations. Developing an inclusive disaster SOP, strengthening the organisation, and building networks with various stakeholders meant that knowledge no longer depended on individuals, but became embedded in institutional structures and mechanisms. This aligns with Villeneuve et al. (2026) work on disability leadership within DIDRR as a space for learning, information exchange, solidarity, and advocacy — extending it further by showing that leadership also forms through direct involvement in disaster assessment and response. Institutionalisation thus becomes a key mechanism enabling community practice to develop into community-owned capacity capable of enduring and being reproduced when individuals or contexts change.

A similar shift from intervention practice to institutionalised, community-owned capacity is seen in Posyandu Kenari and inclusive education At Posyandu Kenari, the intervention focuses on strengthening cadre capacity, community involvement, and developing sustainable service mechanisms. Gradual, routine interaction has given rise to social ownership, whereby cadres and the community help identify needs, organise resources, and sustain services, even when access to basic services is disrupted.

At SLBN Pembina Aceh Tamiang, inclusive education that began with external support has grown into learning practices and capacity-building embedded in the school itself. Through Kelas Berdaya, the living laboratory, educator capacity building, and disaster and life skills

learning, the school now builds its own adaptive learning capability for student rather than simply receiving a programme. Involving teachers, students, families, and stakeholders has strengthened social networks and built shared understanding around responsive, inclusive education. These interventions show that livelihood sustainability depends not only on assets or external aid, but on the extent to which development practice becomes institutionalized and generates local ownership.

Community-owned capacity in this study therefore emerges not when a company hands over an asset or programme to a community, but when that resource begins to be reproduced through community practice. This is consistent with Moktan et al. (2026), systematic review, which proposes a shift from external-led projects toward community-centred resilience building. The findings confirm that a company's intervention may serve as an initial resource, but its sustainability depends on whether it becomes embedded in local practices, knowledge, organisations, and networks. Farmer groups, local mentors, Sekolah Lapang, disability groups, and institutions such as DIGDAYA serve as arenas where knowledge, skills, and experience are converted into collective capacity— a process that keeps this capacity usable as conditions shift, including when the community faces flooding again. In other words, CSR's strategic value as a shock absorber thus lies not in eliminating shocks, but in strengthening community capacity beforehand, so it can be sustained, mobilised, and support livelihood maintenance and recovery during floods.

Table 1. Transformation of CSR Intervention into Community-Owned Adaptive Capacity

Intervention	Capacity Built	Manifestation During Shock
Smart Agriculture Melonesia	Knowledge, farmer regeneration, farmer groups, Sekolah Lapang	Cultivation knowledge reproduced across generations Quick return to cultivating land after the flood
Youth Farmer Hortikultura	Skills, experience in agricultural practices, confidence in managing productive assets.	Quick return to cultivating land after the flood Having alternative livelihood options.
Satgas DIGDAYA	Networking, institutional capacity, disaster knowledge and disaster response.	Mobilisation for evacuation, aid distribution, and response
Doorsmeer & Bengkel Difabel dan Inklusi Coffee	Skills, alternative livelihood, inclusive economic networks.	Having access to and a basis for alternative livelihoods to face economic disruption.
Posyandu Kenari	Cadre capacity, public health knowledge, basic service governance, social networks.	Responsive cadre response in delivering aid and basic services to vulnerable groups.
Pendidikan Inklusif	Knowledge, practical skills, *life skills*, independence, self-confidence, social participation.	Knowledgeable in disaster, social networks, and institutional capacity that form the foundation of educational resilience.

From Livelihood Intervention to Adaptive Livelihood Capacity

A similar transformation occurs in the livelihood dimension : CSR intervention not only generates new income sources but gradually builds adaptive livelihood capacity, the ability to sustain or adjust livelihood strategies as conditions change. This aligns with Prayitno et al. (2025), who show that human, natural, physical, and social capital contribute to adaptive capacity, whereas financial alone falls short of explaining communities' capacity to cope with shock. This indicates that adaptive capacity depends not only on the assets a community holds, but on its ability to use and combine them. In this study, developing farming, productive enterprises, Doorsmeer and Bengkel Inklusi, and Inklusi Coffee added economic assets while building knowledge, skills, experience, networks, organisation, and alternative economic activities for use when conditions change.

Livelihood diversification is central of this process. This is consistent with Darma et al. (2025): developing multiple economic activities provide more than one livelihood option, so disrupting one source need not halt an entire household's or group's economic activity. However, this study also shows diversification cannot automatically be equated with livelihood resilience. Observations and interviews within the disability programme, for instance, reveal that Doorsmeer and Bengkel Inklusi and Inklusi Coffee generate not just income, but also work experience, business skills, customer relationships, market access and partnerships, and productive capability reusable when economic conditions are disrupted. Therefore, the programme’s benefit more accurately read as the formation of livelihood preparedness, namely capacity that remains after the intervention and can be used when disruption strikes. This is supported by Sarker (2026)), who finds livelihood resilience more likely when interventions link diversification with infrastructure, information, financing, markets, social protection, and institutional support. Adaptive capacity emerges, then, when these options can be accessed and mobilised under shock.

In the agricultural context, a similar mechanism is seen through farmer regeneration and ekolah Lapang. Knowledge built through this learning process extends beyond improving single-season productivity, fostering the ability to read conditions, experiment with new techniques, and adjust production. Therefore, in this study, Sekolah Lapang functions not only as a means of knowledge transfer, but also as a space for building adaptive learning. Meanwhile, the strengthening of the Posyandu and inclusive shelter shows that livelihood resilience cannot be separated from communities' ability to sustain basic needs and protect vulnerable groups. Livelihood in this sense encompassing not just income, but access to food, health, education, protection, and social security.

Socially, Posyandu Kenari reflects social capital through cadres and the community involvement in delivering basic health services. Interaction carried out routinely builds networks, trust, and mechanisms of mutual support at the community level. This social capital facilitates the quick and collaborative identification and response to information regarding health and the needs of vulnerable groups. Posyandu thus also builds community capacity to recognise needs, organise resources, and take joint action when facing change or crisis conditions.

Social capital's strength also appears in inclusive education at SLBN Pembina Aceh Tamiang. Relationships among students, teachers, families, and stakeholders build a social network supporting learning and capacity development for students with disabilities. Through

Kelas Berdaya, students learn to interact, cooperate, communicate, and solve problems together. This network becomes important in the disaster context, since students' resilience depends not only on individual capability, but also on a social environment offering support, information, and mentoring.

CSR thus transforms not only physical assets, but communities' capacity to use and develop on them. The success of an intervention therefore cannot be judged solely by facilities in place, training participants, or business units, but by the extent to which the knowledge, skills, networks, and resources built remains reusable and mobilised as conditions change. Adaptive livelihood capacity thus becomes a bridge between livelihood assets and livelihood resilience: assets provide resources, while practice, learning, and organisation turn them into the ability to act when a shock occurs.

Community Ownership Is Relational, Not Autonomous

Although the various findings points to growing community capacity, this study found no evidence that community ownership implies communities become entirely self-reliant or independence from external actors. On the contrary, community ownership in this case is relational in nature. Its reflected in the sustained relationships between community groups and the company, the village government, BPBD, relevant agencies, and other actors. Communities capacities to make decisions and carry out their own activities are increased, but this capacity continues to develop through relationships with institutions outside the community. This aligns with Horn et al. (2026), who show that community-led disaster resilience still requires government’s support, public services, and external organisations, while McLennan (2020b) finds that the shared of roles and power-sharing between communities and government produce more effective risk management than separate action.

This finding shows that community ownership need not mean fully taking over development responsibility. Relience on external actors doesn’t necessarily signal weak ownership; what matters more is the community's shifting position within that relationship. A relationship that began with CSR as provider and the community as recipient may evolve into partnership as the community gains greater ability to determine, run, and develop its own activities — eventually negotiating with CSR, government, and other actors as a development actor in its own right. The community can then act as a development actor capable of negotiating with CSR, government, and other actors. This perspective is consistent with Pittaway et al. (2025), who show that community capacity hindered when formal institutions fail to recognised the community's knowledge and contribution, maintaining hierarchical relations instead.

In this study, the effort to transform groups from CSR beneficiaries into regional development partners, and to embed the programme into the RKPDes, shows that ownership concerns not just who carries out a programme, but also shift in function and power relations. The company progressively moves from main implementer toward facilitator, while the community gains greater space to determine how the knowledge, assets, and institutions built are being used. This also distinguishes this study's findings from the external-led pattern Moktan et al. (2026) criticize, in which supposedly community-based programs remain controlled by external actors and tend to stall once project support ends.

This perspective also helps avoid romanticising full community self-reliance. Amid complex disasters, community capacity has limits and still requires access to resources, services, information, and institutional support. Community-led resilience research likewise shows that self-reliance falters under structural pressure and increasingly strained local resources; external support should be more appropriately directed at strengthen rather than replacing local capacity. Community-owned capacity here is thus best understood as a community's capacity to act, negotiate, organise, and mobilise resources within a relational network. In short, community ownership is not autonomy from external actors, but agency within interdependence.

How Does an Intervention Become Community-Owned Capacity?

The overall findings show that, CSR intervention transforms into community-owned adaptive capacity does through as a linear transfer of capacity from company to community, but through a process formed by practice, learning, knowledge reproduction, organising, and the institutionalisation of relationships among parties. Five mechanisms were identified: intervention, practice, internalisation, reproduction and institutionalisation, and mobilisation under shock; are interconnected processes rather than separate stages, consistent with Evans et al. (2026), who frame community resilience as something built, strengthened, and maintained through local action and reflection, not simply transferred through intervention.

CSR intervention serves as starting point, providing knowledge, technology, resources, facilitation, and institutional access, but this becomes community capacity only once translated into practice, tested through experience, and adjusted to the local context. Shared practice turns individual into collective capacity through groups, roles, networks, and organisation — consistent with Zhao et al. (2024), who show social capital bolsters to disaster resilience through social learning, collective action, information communication, and preparedness. However, social networks do not automatically produce adaptive capacity; their value lies in functioning as a channel for learning, coordinating, information, and collective action

Reproduction and institutionalisation strengthen capacity as knowledge and ability embed within cadre formation, organisation, procedures, and social practice, sustaining them across changing actors and contexts. Community ownership reflects a strengthening community position in determining, organising, and developing capacity — without assuming full autonomy from external actors. This aligns with Moktan et al. (2026), for whom community-centered resilience requires balancing community autonomy with external support, while McLennan (2020b) stresses coproduction through shared authority and complementary roles. Community-owned capacity is therefore understood as agency within interdependence, where the communities access, direct, and negotiate resources through relationships with external actors.

The adaptive nature of capacity also does not emerge at the moment of shock; capacity is built beforehand, while the shock serving as the test and trigger for mobilization. When a flood occurs, the effectiveness of the response depends on the ability to activate and combine pre-existing knowledge, assets, organisation, information, and networks alongside available external support. Mobilisation under shock therefore becomes an important mechanism converting stored capacity into collective action. From this perspective, relational adaptive capacity refers to the ability to connect and combine various internal and external resources according to the needs of the situation. Consistent with McLennan (2020b) and Zhao et al.

(2024), on complementarity and bonding, bridging, and linking social capital enable communities to respond to disruption collectively. What absorbs shock, then, is not a single asset or individual capacity, but a relational configuration of various capacities and resources that can be mobilised collectively.

This indicates that experienceing a shock can generate learning, expose weaknesses in organisation and networks, and drive the reconfiguration of resources, roles, and relationships(Evans et al., 2026). Adaptation and recovery are therefore not endpoint, but part of an ongoing cycle linking capacity formation, mobilisation, adaptation, and reconfiguration. This perspective also confirms that adaptive capacity isn’t autonomous to a community, but shaped by the community's position within the institutional structures and networks that determine access and the ability to negotiate resources(Adamson et al., 2025). In this context, CSR becomes community-owned capacity once external resources are translated into practice, internalised as ability, reproduced through social relations, institutionalised within organisations and rules, and can be mobilised when a shock occurs. The conceptual contribution of this study thus lies in explaining how CSR intervention transforms into community capacity that can be owned, reproduced, and relationally mobilised in the face of a shock.

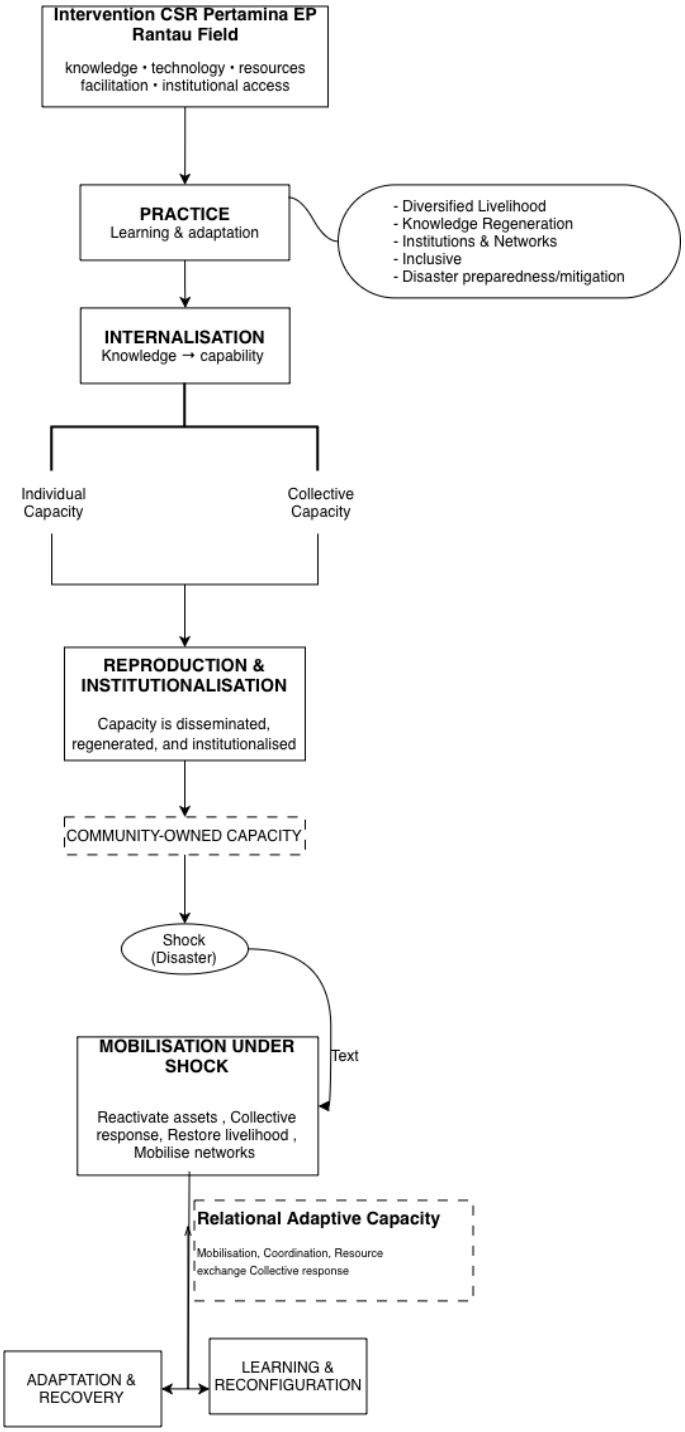

Figure 1. Framework of CSR Transformation into Community-Owned Adaptive Capacity

CONCLUSION

This study found that CSR interventions became community-owned adaptive capacity through a gradual social process rather than a linear transfer of capacity. The findings indicated that the resources, knowledge, technology, and support facilitated by PT Pertamina EP Rantau Field were transformed into community capacity when they were translated into practice, internalized through learning, reproduced through relationships and organizations, and institutionalized through procedures and networks. This process was reflected in farmer regeneration and learning through Smart Agriculture Melonesia, livelihood diversification

through Youth Farmer Hortikultura, Inklusi Coffee, and inclusive doorsmeer and workshop initiatives, as well as the strengthening of SATGAS DIGDAYA and social, health, and basic education capacities through Posyandu Kenari and inclusive education programs. Community ownership, therefore, was not formed merely through community participation in or receipt of a program but through the ability of communities to operate, develop, and reproduce the facilitated capacities. This finding reinforced the perspective that resilience capacity is a dynamic process that must be built, maintained, and continuously developed through community practices.

Capacity developed before a disaster becomes meaningful when it can be mobilized as a shock unfolds. The 2025 Aceh Tamiang flood demonstrated that adaptive capacity does not suddenly emerge in response to disasters but results from capacities developed through prior experiences, learning processes, organizations, and networks. The ability of farmers to resume cultivation on flood-affected land and the involvement of SATGAS DIGDAYA in response activities and aid distribution demonstrated that existing knowledge, skills, organizations, and networks could be activated as conditions changed. Therefore, shocks functioned as tests that activated available capacities, while experiences of responding to these events generated further learning and new configurations of capacity. This finding expanded the understanding of adaptive capacity by demonstrating that possessing assets or skills alone is insufficient; capacity becomes adaptive only when resources can be integrated and mobilized to respond effectively during disruptions.

Community ownership in this study was understood as relational rather than autonomous. Community-owned adaptive capacity referred to the ability of communities to organize and direct local resources while simultaneously accessing, combining, and negotiating external support (agency within interdependence). Strengthening capacity did not mean that communities became entirely independent from CSR actors, government institutions, BPBD, or other stakeholders; rather, it indicated that communities gained a stronger role in determining how their capacities were utilized and developed. This finding suggested that CSR can function as a shock absorber when interventions extend beyond short-term capacity building and generate capacities that can be practiced, reproduced, institutionalized, and mobilized when shocks occur. Therefore, the effectiveness of CSR should not be assessed solely through program outputs but also through communities' ability to sustain and activate developed capacities during periods of disruption. This framework also provides opportunities to examine capacity limitations, inequalities in resource access, and the conditions under which capacities fail to be mobilized.

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