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# Communicating for Resilience: Risk Communication and Community-Based Disaster Preparedness through The Corporate Social Responsibility Program of Pt Pertamina Patra Niaga Fuel Terminal Poso

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**ABSTRACT:** Disaster preparedness requires not only access to risk information but also effective communication, community participation, and multi-stakeholder collaboration. This study aims to analyze risk communication practices in the Corporate Social Responsibility (CSR) program Disaster Response School implemented by PT Pertamina Patra Niaga Fuel Terminal Poso in Moengko Village, Poso Regency, Central Sulawesi. The study employs a qualitative descriptive approach, with data obtained through in-depth interviews with six informants representing the company, village government, Disaster Preparedness Team, disaster management agency, school, and community, as well as program documentation. The results indicate that risk communication is conducted through face-to-face awareness sessions, visual media, interactive training, and evacuation simulations. This approach provides participants with the opportunity to understand safety procedures and practice basic preparedness skills. Community involvement in determining evacuation routes and safety needs also highlights the importance of two-way communication that bridges technical knowledge with local experience. Collaboration among the company, government, school, and community supports program implementation, while the local philosophy of Sintuwu Maroso, which emphasizes unity and togetherness, serves as a relevant cultural context for collective preparedness. However, several challenges remain, including equitable participation, training continuity, coordination of information updates, and the maintenance of safety facilities and institutional capacity as CSR support is reduced or comes to an end. This study underscores the importance of sustainable, participatory, and risk communication adapted to the local context in supporting community-based disaster preparedness. The findings primarily represent the experiences and perceptions of the informants, rather than a measurement of long-term impacts on behavioral change or disaster risk reduction.

**KEYWORDS:** Risk communication; Community-based disaster preparedness; Corporate social responsibility; Community participation; Sintuwu Maroso.

## I. INTRODUCTION

Indonesia faces various disaster threats that demand preparedness not only from the government and disaster management agencies but also from communities living in at-risk areas. The disaster management framework in Indonesia, as regulated by Law Number 24 of 2007 concerning Disaster Management, positions disaster management as an effort encompassing pre-disaster, emergency response, and post-disaster phases. In this context, community preparedness is a crucial aspect because the initial response to an event often occurs in the environment where people carry out their daily activities. Therefore, disaster risk reduction efforts must be accompanied by the development of knowledge, skills, and community capacity to recognize risks and take appropriate actions.

One aspect that plays a role in building this preparedness is risk communication. Risk communication is not only concerned with conveying information about disaster threats but also with how the information is delivered, understood, discussed, and utilized by the community in facing potential hazards. Available information does not necessarily result in preparedness if it is not understood or cannot be applied in real situations. Thus, risk communication must be viewed as a process involving the message sender, the message receiver, the social context, and the interactions among the parties involved. This perspective positions the

community not merely as information recipients, but as parties with experience, local knowledge, and the capacity to participate in disaster risk reduction efforts.

In this context, private sector involvement through Corporate Social Responsibility (CSR) programs can serve as one avenue to support community capacity building. CSR programs in the disaster sector can not only provide facilities and training activities but also open spaces for interaction between the company, local government, disaster management agencies, educational institutions, and the community. However, the mere existence of a program and the execution of educational activities do not automatically indicate how risk messages are received or how preparedness can be sustained in the long term. Therefore, studies on disaster CSR programs need to pay attention to the ongoing communication process, stakeholder engagement, and the social and institutional challenges that affect the sustainability of preparedness efforts.

This article examines the CSR program Disaster Response School implemented by PT Pertamina Patra Niaga Fuel Terminal Poso in Moengko Village, Poso Regency, Central Sulawesi. This program provides a relevant context to explore the relationship between risk communication, disaster education, and community-based preparedness. Based on the program description and stakeholder accounts gathered in this study, the activities discussed include disaster socialization, education in school environments, practice using Fire extinguishers (Alat Pemadam Api Ringan, or APAR in Indonesian), and the introduction of safety and evacuation actions. The inclusion of SMPN 4 Poso (State Junior High School 4 Poso) also expands the context of risk communication from the community environment to the school setting. Thus, this case allows for an examination of how safety messages are delivered through different activities and how the involved parties understand their benefits and limitations.

Beyond the message delivery process, this study also considers community participation, multi-stakeholder collaboration, and the local value of Sintuwu Maroso. This local value is a relevant aspect to examine within the social life of the Poso community, specifically to understand how the concept of togetherness is interpreted and linked to collective action in facing risks. Nevertheless, the relationship between cultural values and preparedness cannot be assumed to occur automatically. This relationship must be examined through the experiences and perspectives of the informants, including how cooperation is realized, who is involved, and what obstacles remain. Accounts regarding the difficulty of aligning training schedules with residents' livelihoods and the need for safety facility maintenance also highlight the importance of discussing sustainability as a matter of communication, coordination, and institutional support, rather than just the continuation of program activities.

Based on this context, the main issue examined in this study is how risk communication is implemented and interpreted in the Disaster Response School CSR program, and how community participation, multi-stakeholder collaboration, and local values relate to efforts to build community-based disaster preparedness. This study is directed toward understanding the communication process and the experiences of the involved parties, while also identifying the challenges that arise in maintaining community engagement and the sustainability of preparedness efforts.

Theoretically, this study is analyzed through the lens of Participatory Risk Communication. This perspective emphasizes that effective risk communication is not one-way or instructional, but rather dialogic, where the organization and the community exchange information to achieve mutual understanding, build trust, and enhance the community's self-efficacy in facing disasters. This study aims to analyze the risk communication practices in the Disaster Response School CSR program of PT Pertamina Patra Niaga Fuel Terminal Poso, with a focus on message delivery, disaster education implementation, and program interpretation by stakeholders. This study also analyzes the role of community participation, multi-stakeholder collaboration, and the local value of Sintuwu Maroso, including challenges related to program sustainability. By focusing on the communication process and the experiences of the parties involved, this study is expected to provide a contextual understanding of risk communication implementation in disaster CSR programs and the dynamics that influence community-based preparedness.

## II. RESEARCH METHOD

This study was conducted over a 15-day period, from September 7 to September 21, 2026, using a qualitative descriptive approach to analyze risk communication practices in the Disaster Response School CSR program implemented by PT Pertamina Patra Niaga Fuel Terminal Poso in Moengko Village, Poso Regency, Central Sulawesi.

Informants were purposively selected based on their involvement and knowledge of the program. The six informants included the Fuel Terminal Poso Manager, the Head of the Moengko Village Disaster Preparedness Team, the Head of Moengko Village, a staff member of the Poso Regency Regional Disaster Management Agency (Badan Penanggulangan Bencana, or BPBD in Indonesian), the Principal of SMPN 4 Poso, and a community representative.

Primary data were obtained through in-depth interviews conducted both in person and online. Secondary data in the form of the 2025 Disaster Response School Program Accountability Report (LPJ) were used to complement and corroborate the interview data.

The data were analyzed using thematic analysis by identifying patterns and themes related to risk communication practices, community participation, multi-stakeholder collaboration, the local value of Sintuwu Maroso, and program sustainability challenges. The findings were interpreted by comparing the perspectives of the informants and the program documentation.

## III. RESULTS AND DISCUSSION

### *A. Risk Message Delivery and the Use of Communication Channels*

The Disaster Response School program by PT Pertamina Patra Niaga Fuel Terminal Poso utilizes several communication methods to convey disaster preparedness information to the community and the school environment. Based on the interviews, messages were delivered through face-to-face awareness sessions, discussions, visual media, training, fire extinguisher (APAR) practice, and evacuation simulations. This approach demonstrates that risk communication is not only conducted through information delivery but also through practices that allow participants to directly recognize safety procedures.

The Fuel Terminal Manager of PT Pertamina Patra Niaga Fuel Terminal Poso, Tri Handoyo, explained: "Education is delivered through face-to-face awareness sessions and focus group discussions (FGDs) at the village hall and school environments; visual communication media such as the distribution of posters, evacuation guide booklets, and the installation of evacuation route/assembly point signs; and interactive training based on hands-on experience involving fire extinguisher demonstrations and emergency response route simulations with residents and students." (translated by the authors).

This statement indicates the use of diverse communication channels, ranging from interpersonal communication to visual media and direct practice. This combination is relevant in risk communication because information regarding hazards needs to be delivered in a way that can be understood and utilized by the community when facing an emergency. Evacuation signs, for instance, can help remind residents of the direction of evacuation, while simulations provide an opportunity to practice previously explained procedures.

Accounts from the Moengko community figure, Munadir Saad, show that program information also circulates through local communication networks: "We got the information from the neighborhood head's announcements, residents' chats when gathering at the village hall, and messages shared in the residents' WhatsApp group." (translated by the authors). This account illustrates that risk communication does not only occur through formal activities facilitated by the company but also utilizes social channels that the community uses daily. Announcements through neighborhood heads, conversations among residents, and WhatsApp groups have the potential to expand the reach of information. Thus, local communication networks become an essential element in conveying disaster information to the community.

**Figure 1 Awareness building through socialization and focus group discussions**

Besides communication channels, the choice of delivery methods also affects the participants' experience. The Principal of SMPN 4 Poso, Siti Mardiah Garusu, explained: "The students were very enthusiastic and excited during the activities. The engaging and varied delivery of the material made the children actively ask questions, confidently volunteer to participate in fire-extinguishing exercises, and follow evacuation commands in an orderly manner when the simulation siren was sounded." (translated by the authors).

This statement indicates that methods involving participants directly can encourage attention and engagement during the activities. The combination of face-to-face communication, visual media, and simulations shows an effort to deliver risk messages through several complementary channels. This approach provides participants with the opportunity to receive information while also recognizing safety procedures through direct practice. However, this study has not measured message retention or changes in participants' abilities systematically. Therefore, the effectiveness of this communication channel combination needs to be

understood based on the experiences and perceptions of the informants, while still considering the need for further evaluation (Bradley et al., 2014).

**Figure 2 Awareness sessions and demonstration of fire extinguisher use for students of SMPN 4 Poso**

***B. Risk Message Interpretation and Two-Way Communication***

Effective risk communication is not only concerned with conveying information from the organizers to the community but also with providing the community the opportunity to express their experiences, needs, and local knowledge. The interview results show that there is space for the community to be involved in determining the technical needs of the program, especially regarding evacuation routes and assembly point locations. The Head of the Moengko Village Disaster Preparedness Team, Bambang Suradi, explained: "It is very open. For example, when determining the location of the assembly point and the installation of evacuation signs in the neighborhood and school environments, Pertamina fully listened to our input regarding which roads are the widest, safest, and do not endanger school children and the elderly." (translated by the authors). The community's involvement in providing input on evacuation routes and assembly points indicates the practice of dialogic and participatory communication. Residents' knowledge regarding environmental conditions is used to consider local safety needs. This pattern aligns with studies emphasizing the importance of community engagement in risk communication and disaster preparedness (Novak et al., 2019; Ryan et al., 2020). Nevertheless, this finding is more appropriately understood as an indication of participatory communication practices rather than proof of the full implementation of a specific organizational communication model.

This involvement is also evident in the learning process through practice. Munadir Saad conveyed the benefits he felt after participating in the activities: "Yes, we are now much more prepared and don't panic easily. For example, now in the kitchen, we understand how to check the hose and gas cylinder regulator safely, and we are no longer confused about where to run if there is a danger sign." (translated by the authors). This statement provides an overview of how safety messages are interpreted in relation to daily activities, specifically household fire prevention and understanding evacuation routes. Risk messages become more relevant when linked to situations close to the community's experience. Furthermore, the statement indicates a perceived shift in how community members view their own roles, from potential victims to active participants in preparedness and response efforts.

**Figure 3 Residents of Moengko Practicing Fire Extinguisher Use.**

From the school's perspective, Siti Mardiah Garusu also explained: "The simulation method provides direct experience for the students. They do not just memorize safety theory in their notebooks, but practically practice safe running routes, head-covering positions, and safe gathering points." (translated by the authors). This account reinforces the importance of direct experience in

helping participants connect information with the actions they need to take. From a risk communication perspective, messages not only need to be conveyed clearly but also need to be understood in the context of their use. Simulations provide a space to recognize procedures and practice them, although the level of skill mastery still needs to be assessed through more systematic evaluation.

Overall, the interviews indicate that the interpretation of risk messages in this program is formed through a combination of information, practical experience, and local knowledge. The opportunity for the community to provide input is a crucial aspect because it helps connect technical knowledge with field needs. The community's involvement in determining evacuation routes suggests elements of two-way symmetrical communication, as the company listened to residents' input and adapted aspects of the program to local needs. This practice is also consistent with participatory communication, which recognizes community members as active contributors to the development of context-sensitive safety strategies. This also aligns with the principles of Participatory Communication, which positions the community not as passive recipients of information, but as co-creators in formulating safety strategies that are contextual and relevant to field conditions.

### *C. Communicator Credibility, Collaboration, and Local Context*

The implementation of risk communication in the Disaster Response School program involves the company, the Moengko Village Government, the Poso Regency BPBD, the Disaster Preparedness Team, the school, and the community. The involvement of various parties shows that preparedness communication does not rely on a single communicator but requires role division and coordination among parties with different knowledge, authority, and proximity to the community.

A staff member of the Poso Regency BPBD, Darma Metusala, explained his institution's role as follows: "The Poso Regency BPBD acts as a technical resource person, disaster training instructor, and director of emergency simulation scenarios." (translated by the authors).

This role highlights the importance of technical institutional support in conveying information regarding disasters. BPBD's involvement can help connect the CSR program with the disaster management knowledge and procedures possessed by the local government. Meanwhile, the company plays a role in supporting program implementation, while the village government and the Disaster Preparedness Team help connect the activities with the conditions and needs of the community.

Coordination among actors is also supported by direct communication and digital channels. Bambang Suradi stated: "Communication runs very smoothly and intensively. The Pertamina CSR team is always open, routinely coordinating directly with me and the team administrators, both through group chats and face-to-face meetings before technical activities are carried out." (translated by the authors).

This statement shows that communication among implementers takes place through more than one channel. Face-to-face meetings can be used to discuss technical needs, while communication through groups helps information exchange between activities. Nevertheless, the existence of communication channels does not automatically guarantee that every information update is received evenly by all team members and residents.

The local social context also emerged in the interviews. The Head of Moengko Village, Ibone Dg Messa, conveyed: "Inter-organizational communication with Pertamina Fuel Terminal Poso, BPBD, PMI, SMPN 4 Poso school, and the volunteer team is very good, open, and cooperative. A minor evaluation that is our concern is the challenge in aligning the demanding schedules of the participating agencies and the importance of accelerating the distribution of information updates from the volunteer team to all neighborhood and community heads (RT and RW)." (translated by the authors).

This statement reveals two sides of collaboration. On one hand, openness and cooperation support program coordination. On the other hand, the dense agendas of inter-agencies and the need to accelerate information distribution remain challenges. Thus, collaboration needs to be understood not only from the number of parties involved but also from their ability to maintain communication continuity and align actions.

The local value of Sintuwu Maroso, which relates to the spirit of togetherness, is also relevant for understanding community cooperation. Munadir Saad described the division of roles among residents as follows: "The residents work closely together. The men help install evacuation signs, the women help hold the hands of elderly neighbors and children during the simulation, and the youth also help direct the way." (translated by the authors). This account shows forms of cooperation visible in the activities, including the installation of signs and assistance to groups that might need support during evacuation. These practices can be read as a manifestation of togetherness that aligns with the value of Sintuwu Maroso. However, this interview is not sufficient to conclude that this cultural value directly causes high participation. The local value is more appropriately understood as a social context that potentially supports collective work, while its role and influence need to be interpreted based on the informants' experiences.

Thus, risk communication in this program takes place within the relationship between technical knowledge, institutional coordination, and the community's social networks. Collaboration provides support for activity implementation, but its effectiveness still depends on communication continuity, clear role division, and the ability to adapt activities to the needs of the residents.

### *D. Communication Barriers and the Sustainability of Disaster Preparedness*

Although the interviews show positive responses to the activities, several challenges were still found in participation and program sustainability. These challenges include residents' time constraints, uneven participant attendance, the need for information updates, and limited resources to maintain safety facilities and conduct further training.

Bambang Suradi explained that community participation remains uneven: "Nevertheless, the level of community attendance is not yet fully equitable because some heads of households are constrained by work hours, and some elderly groups still consider that disaster preparedness training can be left to younger residents alone." (translated by the authors). This statement shows that participation is influenced not only by interest in the activities but also by time availability and perceptions regarding who is responsible for preparedness. The assumption that training is the responsibility of the youth can limit the involvement of other groups, whereas preparedness requires understanding and appropriate roles for various community groups. More flexible scheduling and a communication approach that explains the importance of the involvement of all groups can be considerations for future program development.

Another challenge relates to facility maintenance and team capacity after program support diminishes. Ibone Dg Messa explained: "Nevertheless, the village's budget constraints make our current support still focused on administrative aspects and territorial coordination, and cannot yet independently fund the procurement of safety equipment." (translated by the authors). This statement confirms that preparedness sustainability requires not only community knowledge and willingness but also institutional support and resources. Facilities such as fire extinguishers require maintenance, while team members' skills need to be updated so they can still be used when needed. Therefore, sustainability cannot be assessed merely from the formation of a team or the execution of training, but also from the readiness to manage activities and facilities after external support decreases.

A similar view was conveyed by Munadir Saad when mentioning the need for program improvement: "If possible, the training should be conducted more regularly so that residents don't easily forget, the schedule shouldn't be during people's work hours or when they go to sea, and add fire extinguishers in the alleys that are a bit far." (translated by the authors). This statement shows that residents not only provide an assessment of the activities that have been carried out but also convey concrete needs. Regular training relates to the maintenance of memory and skills, while schedule adjustments relate to participation access. The suggestion to add fire extinguishers indicates that the need for safety facilities remains a concern for the community.

From the sustainability perspective, Tri Handoyo explained the strategy prepared by Pertamina: "Pertamina is preparing an exit strategy through three main pillars. First, Institutional Legality - Encouraging the issuance of an official Decree (SK) for the formation of the Moengko Village Disaster Preparedness Team by the Moengko Village Government so that it is recognized in the regional disaster management system; Second, Competence Transfer & SOP - Training core cadres (Training of Trainers) so they can educate new residents independently and equip the team with written evacuation SOPs; Third, Provision of Safety Equipment and Sustainable Partnerships: Handing over supporting facilities (such as fire extinguishers, first aid kits, and megaphones) while directly connecting the team to the coordination network of the Poso Regency BPBD for long-term capacity development and maintenance." (translated by the authors).

This statement shows that sustainability has been considered through institutional strengthening, knowledge transfer, and relationships with technical institutions. However, the planned strategy needs to be distinguished from proven sustainability. Its effectiveness still depends on follow-up implementation, maintenance budget availability, training continuity, and the continued activity of the communication network after the CSR mentoring ends.

These findings indicate that preparedness sustainability is both a communication and an institutional issue. Information and skills need to be updated, passed on to other residents, and supported by functional facilities. Thus, risk communication will be more sustainable if it becomes part of the community's routine activities and institutional coordination, rather than only taking place when the program is being implemented.

Overall, the interview results show that the Disaster Response School program provides space for delivering risk messages through various channels, direct practices, and the involvement of several stakeholders. Informants also expressed the benefits they felt, particularly regarding the understanding of evacuation routes, basic safety practices, and resident cooperation. However, participation limitations, the need for facility maintenance, and the lack of guaranteed continuity in training show that strengthening preparedness requires communication that is repetitive, inclusive, and connected to long-term institutional support.

## CONCLUSIONS

This study shows that risk communication in the Disaster Response School CSR program of PT Pertamina Patra Niaga Fuel Terminal Poso is carried out through face-to-face awareness sessions, visual media, discussions, training, and disaster simulations. The use of these various channels provides space for the community and students to recognize safety information and practice basic preparedness procedures. The interviews also show that informants feel the benefits of the program, especially in understanding evacuation routes, basic safety, and coordination during the activities.

Community participation and collaboration between Pertamina, the village government, BPBD, the Disaster Preparedness Team, the school, and the residents are essential elements in program implementation. The community's involvement in providing input on evacuation routes and environmental needs highlights the importance of two-way communication that connects technical knowledge with local experience. The value of Sintuwu Maroso is relevant as a social context that aligns with the spirit of togetherness and collective work, although its direct influence on participation cannot be confirmed from this study's data. Furthermore, this study also found a shift in the community's self-interpretation from being passive as potential victims to becoming active subjects or potential rescuers.

On the other hand, preparedness sustainability still faces challenges, including time constraints and equitable resident participation, the need for regular training, safety facility maintenance, and limited budget and coordination support. Therefore, program sustainability cannot rely solely on activity implementation and facility handover, but requires institutional strengthening, skill renewal, communication continuity, and resource support after CSR mentoring decreases or ends.

Overall, this study emphasizes the importance of positioning risk communication as a sustainable, participatory process that is appropriate to the local context in community-based disaster preparedness programs. However, the findings of this study primarily reflect the experiences and perceptions of the informants as well as program documentation. Future research could assess community understanding, the application of skills in real situations, and the sustainability of preparedness through observation or periodic evaluation.

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