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## Environmental Communication of Corporate Social Responsibility (CSR) in Fire Disaster Mitigation on Peatlands

*Comunicação Ambiental de Responsabilidade Social Corporativa (RSC) na Mitigação de Desastres de Incêndios em Turfeiras*

Yasir Yasir<sup>1</sup> , Nurjanah Nurjanah<sup>1</sup> , Samsir Samsir<sup>2</sup> 

<sup>1</sup>University of Riau, Faculty of Social and Political Science, Department of Communication Science, Pekanbaru City, Riau, Indonesia

<sup>2</sup>University of Riau, Faculty of Economics and Business, Department of Management, Pekanbaru City, Riau, Indonesia

E-mails: [yasir@lecturer.unri.ac.id](mailto:yasir@lecturer.unri.ac.id); [nurjanah@lecturer.unri.ac.id](mailto:nurjanah@lecturer.unri.ac.id); [samsir@lecturer.unri.ac.id](mailto:samsir@lecturer.unri.ac.id)

**Corresponding author:** Yasir Yasir; [yasir@lecturer.unri.ac.id](mailto:yasir@lecturer.unri.ac.id)

### Abstract

Mitigation of forest and land fires is very important to implement in peatlands. This paper aims to explain the role of Pertamina's CSR communication in mitigating peatland fires around the company's operational areas. This research used qualitative methods with case studies. The results showed that Pertamina's CSR communication contributed to increasing awareness of fire disaster mitigation and changing people's behavior in utilizing peatlands through the "Kampung Gambut Berdikari" program. In addition, the community was also trained and provided with fire extinguishers to prevent fires on peatlands. CSR implementers establish friendly relations and foster the Tunas Makmur farmer group and the Fire Concern Community (Masyarakat Peduli Api/MPA) group to prevent fires. CSR communication is able to increase the awareness of the surrounding community in managing the peat environment. CSR together with the community develops peat arboretum ecotourism and pineapple plantations for environmental education and improving people's welfare. This peat arboretum ecotourism is not only a medium of communication to spread educational messages to the farmer community, but also to school students, youth and visitors. In the future, CSR program actors can implement environmental communication as a form of disaster mitigation to prevent forest and peatland fires.

**Keywords:** Disaster communication; Sustainable development; Ecotourism

### Resumo

A mitigação de incêndios florestais e terrestres é muito importante para implementar nas turfeiras. Este artigo tem como objetivo explicar o papel da comunicação de Responsabilidade Social Corporativa (RSC) da Pertamina na mitigação de incêndios em turfeiras ao redor das áreas operacionais da empresa. Esta pesquisa utilizou métodos qualitativos com estudos de caso. Os resultados mostraram que a comunicação de RSC da Pertamina contribuiu para aumentar a conscientização sobre a mitigação de desastres de incêndio e mudar o comportamento das pessoas na utilização de turfeiras por meio do programa "Kampung Gambut Berdikari". Além disso, a comunidade também foi treinada e munida de extintores de incêndio para prevenir incêndios em turfeiras. Os implementadores de RSC estabelecem relações amigáveis e promovem o grupo de agricultores Tunas Makmur e o grupo Fire Concern Community (Masyarakat Peduli Api/MPA) para prevenir incêndios. A comunicação de RSC é capaz de aumentar a conscientização da comunidade ao redor na gestão do ambiente de turfa. A RSC junto com a comunidade desenvolve o ecoturismo de arboreto de turfa e plantações de abacaxi para educação ambiental e melhoria do bem-estar das pessoas. Este ecoturismo de arboreto de turfa não é apenas um meio de comunicação para espalhar mensagens educativas para a comunidade de agricultores, mas também para alunos de escolas, jovens e visitantes. No futuro, os atores do programa de RSC podem implementar a comunicação ambiental como uma forma de mitigação de desastres para prevenir incêndios florestais e de turfeiras.

**Palavras-chave:** Comunicação de desastre; Desenvolvimento sustentável; Ecoturismo

## 1 Introduction

Environmental problems, such as climate change, land fires, deforestation, and pollution are largely rooted in human behavior (Meijers et al. 2022). Climate change is also caused by human behavior which directly or indirectly affects the constellation of the global atmosphere (Christis & Wang 2021). Climate change affect ecosystems which in turn have an impact on agricultural systems and the people's economy (Santos, Lyra & Rodriguez 2022). This climate change also has an impact on increasing temperatures as a trigger for the spread of land and forest fires in several areas, one of which is Bengkalis, Indonesia. This area is flammable and difficult to extinguish, especially during the dry season. In recent decades, these fires have also become a source of disastrous smog. A lot of smoke appears because the burning land is covered with very thick peat, so the fire lasts a long time and is not easily extinguished. This smoke spreads not only in Indonesia, but also in Southeast Asia. Riau Province is mostly a peat area, so fires are very common in this area. Land fires occur due to very complex problems, such as: the soil surface that dries easily, land clearing by farmers by burning, landowners from outside, workers from outside the area, and conversion of forests or rubber plantations to oil palm plantations.

This forest conversion can indeed provide economic benefits in the short term, but this has a large environmental risk and has an impact on major economic losses, such as health problems, flight disruptions, and the economy is hampered due to the smoke of peat fires. In addition, fires are also the cause of the loss of biodiversity, both animals and plants and land subsidence which causes flooding (Uda, Hein & Sumarga 2017). Currently, environmental damage is global, so environmental protection is the main concern of civilization in general (Kitić et al. 2015). Peat and the biodiversity within it is important to maintain. In this case, peatlands as a landscape can be categorized in geoheritage as part of the natural heritage that must be preserved and can have cultural, ecological, tourist and economic values (Nascimento & Castro 2022). These natural resources are very important to be protected for the welfare of society. Even though the use of natural resources as a source of the community's economy and as an inheritance was initially contradictory, a balance is needed between the use and protection of natural resources (Strydom, Mangope & Henama 2019).

In this case, the balance between utilization and conservation becomes important to campaign. Therefore, environmental communication needs to be developed to increase public awareness and ability to manage the environment in a better way. Environmental communication

through community-based conservation and restoration programs must continue to be developed by both government and non-government agencies, or even be carried out in an integrated manner between various existing stakeholders. One way to properly manage the environment is to maximize Corporate Social Responsibility (CSR) communication activities. Corporate communication through CSR can campaign for the importance of preserving the environment (Bickford et al. 2017; Dubravská et al. 2020). In this case, there are at least two aspects of CSR: corporate climate responsibility and sustainable use of natural resources. Climate responsibility requires corporate awareness of its role in the climate mitigation process. The concept of environmental CSR is inherently related to sustainability (Christis & Wang 2021). Therefore, CSR programs should be sustainable and not only aim to gain a positive corporate image for a moment. In addition, CSR programs must also contribute to efforts to change internal and external public awareness and behavior towards the natural environment (Dutta & Imeri 2016). So CSR activities must campaign for environmental issues such as: climate change, deforestation, forest fires, pollution, and global warming.

The researcher assumes that CSR communication is important to use to mitigate disasters and resolve environmental crises. In this case, corporate communication is also assumed to play an important role in tourism development because of the strong organizational and financial support from the company. As Indonesia's state-owned oil company, Pertamina operates and drills for oil in several areas in Riau. For the Dumai and Sungai Pakning areas, Pertamina Refinery Unit II carries out CSR activities to empower the Farmers and Fishermen community. Communication between the Community Development Officer and the community is very well established by developing several programs adapted to the local community. The program that has received the most attention is overcoming environmental problems, namely forest fires, in addition to the problem of damage to mangrove forests. However, the focus of this paper is understanding Pertamina's CSR role in mitigating fires on peatlands.

Managing environmental performance is an important task for companies. Therefore, a deeper understanding is needed to properly utilize environmental resources and authentic corporate social responsibility (CSR) initiatives to achieve a company's environmental performance (Nassani et al. 2022). CSR has been recognized as influential in spurring pro-environmental behavior in individuals (Shao, Mahmood & Han 2021). This CSR perspective is a recent development, because the concept has long been associated with various philanthropic-oriented activities.

This perspective is a form of individual or company concern to protect the environment. The involvement of internal stakeholders, such as employees of a company, is critical to efforts to increase its environmental footprint.

Several studies reveal that the success of a company in realizing its vision is related to how well and professionally the corporation communicates with existing stakeholders. The corporate communication is a function of strategic management that plays an important role in the development and maintenance of a company's image (Johan & Noor 2013; Morsing & Spence 2019). Companies generally in communicating CSR activities more often use an informing strategy rather than an interaction strategy and include internal public activities more than the external public. The study also found that the public was more engaged with non-corporate social responsibility messages than with CSR messages, which may reflect public cynicism towards CSR communications (Cho, Furey & Mohr 2017).

This CSR communication can make the company more coordinated for both internal and external communication (Pollach et al. 2012). Companies can use social media platforms for CSR communication by engaging stakeholders in engaging and sustainable virtual dialogues. However, CSR communication studies like this focus more on the influence of CSR on financial performance (Testarmata, Fortuna & Ciaburri 2018). Basically, corporate communication includes all forms of activities carried out by a company to achieve the company's vision. The communications include public relations, crisis communications, media relations, investor relations, employee relations, marketing, branding, as well as advertising.

In modern companies, communication occurs interdependently between individuals, groups, communities, companies and countries. So corporate communication is connected with all stakeholders by using various communication channels. Recently, corporations generally rely more on CSR activities and publication channels through interactive social media. Social media greatly facilitates interaction with stakeholders because of communication trends that are commonly used by the community. (Testarmata, Fortuna & Ciaburri 2018). In essence, CSR communication is one part of corporate communication to communicate effectively and profitably in building corporate values. This corporate communication can also inform the values of caring for the environment. So, its existence is not only to gain an image and increase the corporate's credibility (Johan & Noor 2013; Dutta & Imeri 2016).

Other studies explain that the implementation of management principles has a relationship with CSR success

(Kirat 2015; Dutta & Imeri 2016; Morsing & Spence 2019). In addition, every CSR activity must also be integrated with the company's mission that is oriented towards sustainable development (Pollach et al. 2012; Siano et al. 2016). In this case, CSR theory explains the form of the triple bottom line that essentially the output of the CSR program must involve the economic, social and environmental fields. First, CSR is responsible for the economy in terms of contributing to the sustainability of the bigger economic system. Second, CSR is socially responsible, meaning that it must pay attention to the company's impact on the lives of local communities. Third, CSR is responsible for the environment, meaning that it must emphasize the contribution of the company's existence to environmental sustainability (Testarmata, Fortuna & Ciaburri 2018).

In this regard, CSR communication plays an important role in creating social action and changing people's view of life towards the environment. Stakeholders are likely to pressure companies to make CSR have a real contribution to the public (Morsing & Spence 2019). Corporates must emphasize the importance of campaigning for environmental awareness to the public as the corporate's main value. CSR communication actions that emphasize concern for the environment can not only overcome environmental damage but their activities can also improve the welfare of the local community (Kitić et al. 2015).

Environmental problems in the community can be controlled if the company is able to understand the real needs of the community. So far, people's distrust of CSR has occurred because companies only prioritize corporate interests, such as being oriented towards corporate image, utilizing the public for media content, so they do not solve the root causes of problems in society (Yasir, Nurjanah & Yohana 2021). Environmental communication through CSR should not only be for the benefit of investors who have the environmental agenda, but should also be aimed at and involve all stakeholders such as environmental groups, social media activists, influencers, and political actors. (Fredriksson & Olsson 2014). Related to this CSR, stakeholder theory requires that there are at least four important elements, namely: normativity, sustainability, people, and cooperation (Freeman & Phillips 2021).

Recently, the community has realized the importance of social, humanitarian, and environmental issues so that they have an impact on the wishes of stakeholders regarding CSR activities (Testarmata, Fortuna & Ciaburri 2018). The public's desire for CSR increasingly has to be obeyed. This is actually in line with efforts to include aspects of concern for the business environment. Performance indicators of companies that care about the environment are often a very important measure for the company's image. Therefore,

corporate environmental communication is the main thing to gain recognition from stakeholders (Faisal, Napitupulu & Chariri 2019).

CSR has a commitment if its business has a positive impact on changes in people's lives and the environment. CSR communication has ethical value if it is able to maintain and promote business life. Several studies have shown that CSR communication has an important contribution to social change, but most of these studies have not focused on the importance of disaster mitigation, preserving and solving environmental problems. (Kirat 2015; Dutta & Imeri 2016). The contribution of environmental communication by companies has been developed through technology-based CSR research rather than the manufacturing sector to make awareness of climate change. Managers are environmentally responsible by learning and applying current and beneficial technologies to create competitive advantage. The sustainability of corporate CSR communication must pay attention to stakeholder theory and voluntary disclosure theory (Ramya, Shereen & Baral 2020).

Corporate environmental communication has a more commercial and political nature, but this form of responsibility to the community is important especially for those who are at risk of environmental damage (Fredriksson & Olsson 2014). CSR communication can be done through involvement in the community, being active on websites, social media, and news releases, all of which become a means of communication to be addressed to stakeholders and serve as a reporting tool. However, some of the things presented in the media are often not in accordance with the actual reality. Communication of risks related to environmental disasters requires a good understanding of the needs of the community, the environment, and stakeholder points of view (DeLorme et al. 2018).

Related to this, environmental communication is the application of communication approaches, principles, strategies and techniques for environmental management and protection (Flor 2004; Flor & Cangara 2018). In addition, environmental communication is defined as the process of exchanging meanings that occur in, from, for, and about the natural environment that surrounds humans (Jurin, Roush & Danter 2010). In essence, environmental communication is a planned and strategic process to support effective policy making and increase public participation for environmental sustainability. Environmental communication scholars map out the communication strategy models used, namely focusing on message transmission and focusing on the dynamics of interaction between various stakeholders in environmental communication (Ho et al. 2022).

In addition, this environmental communication can be useful as a means that is constitutive and pragmatic.

Constitutively, communication can design, organize, and reflect problems related to the environment as the main discussion of human understanding. While pragmatically, communication is useful as an effort to campaign, educate, awaken, convince, direct, and help humans in overcoming environmental problems (Cox 2010). In this way, environmental communication is the process of creating meaning through interaction in managing the environment in the best possible way.

Several studies show the importance of environmental communication in community-based forest management, especially in social interaction and environmental concern (Yanti et al. 2018; Vlibeigi, Sarhangi & Karevani 2021; Yasir et al. 2022). In addition, environmental communication plays a role in making decisions related to environmental issues and solving them through collaboration between community and company involvement, such as developing tourism potential (Yasir 2020). However, this research mostly takes a community approach, not from the perspective of corporate communication and CSR activities. Based on this, environmental communication must seek dialogue and involvement of various stakeholders, so as to increase public environmental awareness in creating a quality environment (Dubravská et al. 2020). Nowadays, environmental messages are so easy to convey and create with interactive media such as social media. Persuasive environmental communication using this visual metaphor even has a great effect in stimulating one's eco-friendly behavior (Meijers, Remmelswaal & Wonneberger 2019). In this paper the author departs from the assumption that proper communication has an important role in creating good human and environmental qualities.

The environmental campaign by Pertamina's CSR based on fire disaster mitigation on peatlands is the focus because researcher feel that this is still rarely studied. Even though environmental communication through the company as a message mediator has contributed to mitigating disasters and preserving the environment. In this sense, the preservation of environmental resources is the main prerequisite for CSR activities to achieve environmental performance (Nassani et al. 2022). Nature conservation and community-based tourism development can be an alternative for sustainable development. Community Based Tourism (CBT) as an approach in tourism management is important because this model prioritizes local communities as a form of redistribution of wealth, power and tourism resources (Giampiccoli & Glassom 2020).

Currently, peatland fires and haze in the Riau region are rare due to the frequent rainy season. However, disaster mitigation efforts, peatland conservation as a natural heritage, and good land use must still be campaigned as

part of sustainable development. This fire disaster mitigation effort requires creative communication in collaboration with stakeholders, especially the involvement of local communities as the main actors. Therefore, companies must have a stake in mitigating and resolving peat forest fires by involving local communities. This paper focuses on environmental communication carried out by Pertamina's CSR in an effort to help mitigate and control forest and peatland fires in the company's operational areas.

## 2 Methodology and Data

This research used a qualitative method with a case study approach. The case study approach requires researchers to conduct in-depth exploration of the phenomenon under study in a particular context (Alpi & Evans 2019; Rashid et al. 2019). Case study research seeks to explore phenomena and then proceed in developing theory or evaluating a program (Baxter & Jack 2015). In this regard, qualitative methods are useful in developing environmental and risk communication programs (DeLorme et al. 2018). This study emphasizes the mitigation and resolution of peatland fire problems carried out by Pertamina's CSR. Pertamina as Indonesia's state oil company holds the oil industry from upstream to downstream. Pertamina has different programs according to the characteristics of its operating areas. Pertamina Refinery Unit II Sungai Pakning CSR focuses on dealing with environmental problems of fires on peatlands and damage to mangrove forests.

This study only examined the case of how the company mitigates and manages fires on peatlands in Sungai Pakning. Sungai Pakning area, Bengkalis Regency and Riau-Indonesia Province as the location of this research, has very wide and thick peatlands. The forests and peatlands in this area are highly flammable and very difficult to extinguish. Therefore, researcher feel it is important to study it because it can help in overcoming the risk of fire in peatlands in the future. This research was conducted in the range of 2020-2022. Sungai Pakning is the location where the company operates which is in the ring or main circle where this oil company operates. Research informants are the implementers of CSR program activities called Community Development Officers (CDO), then there are members of the Tunas Makmur Farmer Group, Community Concerned Fire (Masyarakat Peduli Api/MPA), lecturers, and employees of the Environmental Service. All of these informants were determined purposively by adjusting to the data needs of this study.

In this case, the researcher collected both primary and secondary data. Researchers collected data through interviews with CDOs, several community leaders, farmers

and also village officials. The number of informants is eight people. There were three informants from CDO Pertamina, namely Miftah Farid, Asri Dewi, and Wahyu as practitioners of the CSR program. In this case, Asri Dewi is the main facilitator who is responsible for every MPA activity in fire disaster mitigation. Meanwhile, there are four informants from community leaders, namely Samsul as the head of the farmer group and Sadikin as the chairman of the MPA. Then there is also an official from the Environmental Service, namely Agus Susanto. To strengthen the interview data, the researcher also made direct observations in the field and collected documents through documentation techniques. Data collection by means of documentation is done by checking archives, photos, checking posts on social media, news releases, Pertamina's internal regulations, and collecting policies or regulations produced by the central government and local governments. This data was then analyzed using an interactive model. To check the validity of the data, the researcher used two techniques, namely triangulation by checking various sources and secondly using an extension of the research time.

## 3 Results

### 3.1 CSR Communication in Peat Fire Disaster Mitigation

Pertamina is one of the Indonesian state companies, which is engaged in mining and oil distribution. The company is committed to always prioritizing the balance and preservation of nature, the environment and society in every activity. Pertamina's CSR activities cover several fields, namely: education, health, environment, infrastructure, community empowerment, disaster management, and other special assistance. Based on this, Pertamina's CSR is focused on four main issues, namely: Pertamina Smart, Pertamina Healthy, Pertamina Green, Pertamina Berdikari (Pertamina 2022).

This CSR program is carried out by Pertamina as a form of obligation in accordance with Law Number 40 of 2007 concerning Limited Liability Companies as stipulated in chapter V article 74. This is supported by Government Regulation Number 47 of 2012 concerning Social and Environmental Responsibility. This regulation regulates how CSR activities should be carried out, reports on their activities, and sanctions if the company does not do so.

In this case Pertamina Refinery Unit (RU) II Sungai Pakning carries out CSR activities by assigning CDOs using steps starting from: social mapping, making work program plans to strategic plans. The implementation of

CSR activities based on these initial steps produces an output, namely making the Berdikari Peat Village program. Pertamina's CSR has made various programs to create an Independent Peat Village with the aim of overcoming problems faced by local communities, namely land and forest fires. This CSR program decided that it was necessary to provide equipment assistance for firefighters, provide training on how to extinguish fires, mitigate fire disasters, and use training for proper land management. Several programs are focused on helping farming communities cultivate, process pineapple products and how to market them. CSR activities have a function to generate better social behavior (Morsing & Spence 2019).

Then, to increase awareness of local communities and the general public, Pertamina's CSR helps farming communities develop and manage peat tourism based on peat arboretums. The development of peat arboretum tourism is then supported by developing a curriculum by involving nearby schools with the term "School of peat love". Students at this school are invited to visit, enjoy and even camp at the arboretum tourist sites. Program selection, approach and communication are as young as possible based on mapping and problem analysis. The CDO's step in determining the target audience for this program refers to the approach to communities affected by the fire disaster. This community is easy to foster because members of Tunas Makmur farmer share the same destiny, living in a fire-prone area, in Kampung Jawa, Sungai Pakning, Bukit Batu District. Regarding this matter, Pertamina RU II CDO Coordinator Sungai Pakning said:

*We did this program in several steps. First, we carried out a mapping involving directly in the community, even involving stakeholders such as local governments, universities and other communities. Initially we also surveyed the field and held FGD activities. The FGD participants discussed many things related to this fire issue. Then there are decisions and programs that must be carried out... The problem is the peat that is prone to fire and the small farmers who live around it. We make this farmer group the main target of the program. The first year, we gave reinforcement to this group. We often visit this group, to get people to accept us. The second year, we provided training to develop land cultivation by planting pineapples and managing peat arboretum tourism. We help with seeds and equipment. Likewise with firefighter training and firefighting equipment on peatlands. (Miftah Farid, Interview, 1 August 2020).*

The company's CDO maintains good relations with farmer groups as key stakeholders. This relationship is done to maintain the internal cohesiveness of farmer groups. In

addition, they are also connected with other external publics. These various social networks are carried out as an effort to improve community skills to control fires, manage land and preserve the environment and even increase people's income.

Forest and peatland fires so far often only rely on weather and rainy seasons. There is no communication and coordination of fire disaster mitigation to anticipate if a land fire occurs. However, since the Government of Indonesia issued Instruction Number 11 of 2015 and improved it with Instruction number 3 of 2020 which regulates procedures and coordination between institutions in tackling forest and land fires. This makes land fires a common problem. So that Pertamina is also involved through a CSR program in helping to resolve peatland fires in Bukit Batu District, Bandar Laksmana District and Siak Kecil District, Bengkalis Regency. Training and coaching activities for fighting fires are routinely carried out, and sometimes competitions are held between the Fire Care Community (Masyarakat Peduli Api/MPA) groups between villages. The MPA itself was formed by the government in every village that was prone to land fire disasters.

Pertamina's CSR through CDO plays a role in aiding, coaching, training for MPA groups in every fire-prone village in this area. They are trained to use extinguishers and must be skilled in extinguishing fires. These MPA groups are often facilitated to meet and connect so they are accustomed to coordinating so that they are always responsive to fires that occur. They are expected to be able to help each other between groups in the event of a land or forest fire. In this case, the Bukit Batu District Government explained:

*This training activity in handling forest and land fires is very important. This activity is very helpful for the government in handling fires. We from the District Government appreciate this activity. MPA is one of the spearheads in every village that can be directly involved in dealing with forest and land fires. The competition between MPAs was judged by the committee on team cohesiveness, speed in handling incidents, using extinguishing equipment and dexterity in extinguishing fires. (Maruto & Alfisnardo 2022).*

This training and competition for groups of MPA is routinely carried out by Pertamina. This activity is part of Pertamina's commitment to support environmental sustainability of peatlands. This training activity was carried out by Pertamina RU II Sungai Pakning in collaboration with various agencies such as the police, military, Bengkalis fire department, and Manggala Agni



(Forest and Land Fire Control Brigade of the Ministry of Environment and Forestry) Riau Province (see Figure 1). Communication between corporate, farmer groups and MPA groups plays a role in fire control. This collection of MPAs from several villages is known as the Fire Care Community Communication Forum. CSR communication by coordinating and mitigating fires succeeded in developing the innovation of Hydrant wells without fire engines.



**Figure 1** Firefighting training and competition between MPA groups.

The MPA group only makes instant wells when they are going to extinguish a fire by sticking a stick of wood into peat soil that has water reserves. The MPA communication forum was facilitated by five pumping machines and Hydrant well equipment by Pertamina. Farmer groups and MPA groups as actors by involving a wider network of members certainly reach a wider audience. Group communication channels with meeting activities between MPA groups supported by using social media make this network easy to anticipate land fires. Social media such as WhatsApp groups are useful for sending and receiving quickly and even being able to strengthen social bonds between them.

In addition, Pertamina's CSR is working with the Fire Care Community (MPA) to prevent peatland fires from turning pineapple plantations into firebreaks (see Figure 2). Initially, this pineapple plantation was only about 5 hectares but now the area has reached 30 hectares. Meanwhile, farmer groups living on peatlands are the most vulnerable to being targeted by the main audience. Even the coordinator of the MPA group came from this area, namely Mr. Sodikin. The CSR program is focused on Kampung Jawa Sungai Pakning, Bukit Batu Distric. This area often experiences fires, and even experienced severe fires in 2013 to 2016. Since 2017, Pertamina through its CSR program has been trying to empower community groups in Kampung Jawa through the "Kampung Gambut Berdikari" program.



**Figure 2** The farmers and his pineapple plantation.

Kampung Jawa as an area that was initially prone to fires and abandoned has now turned into a pineapple plantation with high economic value and partly into a conservation area for peat arboretum-based tourism. The head of the farmer group revealed:

*This area, between 2011 and 2015, there were frequent fires. Since 2016, we have started planting pineapples on burnt land. Then, Pertamina helped us in pineapple gardening. They trained us by bringing in trainers from Bandung. The trainers provide management training, pineapple cultivation, maintenance techniques, and processed products. They also train MPA groups in fire suppression, prevention and assistance with equipment such as hoses and water pumping machines. (Interview, Samsul, July 27, 2020).*

CDO Pertamina also fostered the Tunas Makmur farmer group to manage unburned peatlands into the Peat Arboretum area. This peat arboretum is intended as a vehicle or communication medium for learning for local communities, students, students and even visitors in conserving the peat environment. The "Kampung gambut Berdikari" program is not just public relations, but is aimed at increasing public awareness in managing the peat environment. Communication has a very important role in evoking awareness and motivating the public to conserve and use nature responsibly.

Pertamina's CSR through the program of Kampung Gambut Berdikari seeks to restore the peat environment by empowering farming communities. However, this CSR program is still only used as a means of reporting to stakeholders and maintaining the company's image. In this case CSR is still oriented towards media coverage and seems exaggerated. However, the CSR program has been able to increase environmental awareness and improve the economic welfare of the community and even educate



the public through arboretum tours. Therefore, CSR communication is able to contribute to changing the mindset and behavior of people who initially ignored combustible land, now people are starting to care about their garden land. Pertamina's CSR environmental communication method empowers groups and links with several other groups in its operational areas to be effective in dealing with land fires.

### 3.2 Community Based Environmental Communication

The existence of local communities living in peatland areas on the one hand is the target of CSR programs, on the other hand they are the main actors of change in overcoming environmental damage. The CDOs' intensive communication with an interpersonal approach has always been a mainstay for every group, especially farmer groups. The development of peat arboretum tourism and pineapple plantations as an effort to combat fires occurred due to an intensive communication approach. Mitigation of fire disasters is carried out by empowering and fostering communities. Even the development of the peat arboretum as a conservation area for the purpose of educational tourism destinations is carried out on a farmer community basis. In this case, Pertamina's CSR applies the perspective of community-based tourism (CBT) in solving problems and campaigning for awareness of the peat environment. This CBT approach is tourism that is managed based on the needs of the environmental, cultural and economic values of the local community which prioritizes the principle of sustainability (Giampiccoli & Glassom 2020).

CSR environmental communication to deal with fires starts with the CDO's step in getting to know each member of the Tunas Makmur Farmer group. These farmer groups are empowered, given training and then linked with other stakeholders to address environmental problems. This farmer group is very compact because they are members of the "Tunas Makmur Cooperative". This is what attracts Pertamina's CSR to provide guidance so that this group is able to utilize peatlands and manage peat arboretums as tourist destinations. One CDO member said:

*This peat arboretum was originally directed to protect peatlands because of their biodiversity. This tourist attraction was built with the aim of educating visitors. We involve the community of farmers and village youth. The target audience for school children from elementary to high school, with the slogan "Sekolah Cinta Gambut" (School Love Peat). We hope that students from these various schools will use this arboretum as a learning tool. So this ecotourism manager is a group of farmers under our guidance. (Interview, Wahyu, August 3, 2020).*

The environmental communication based on farmer groups through the management of peat arboretums and pineapple farming management has received the attention of the wider community. Farmers as the target group of the program are used as communicators or actors, communication media, messages or content in reaching the wider community in disseminating environmental messages. In this case, communicating about environmental risks requires understanding and addressing stakeholder needs, perspectives, and the use of appropriate communication media (DeLorme et al. 2018). The target group can be used as actors in the development of environmental communication, as a means for decision making, and as a message to reach a wider public.

The community of farmer managing arboretums that have biodiversity are not only an attraction for tourists to visit but also can be a means of educating the public (see Figure 3 and 4). From Pertamina's CSR activities, the mindset of the community has changed. The community initially saw peatlands as a carrier of fire disasters, now they see it as a blessing. Peat areas that are bushy, neglected, and easily burnt are now starting to improve the community's economy by selling pineapples, processing them into processed products such as syrup, lunkhead, crackers, and so on. In addition, the development of peat arboretum ecotourism in addition to providing financial

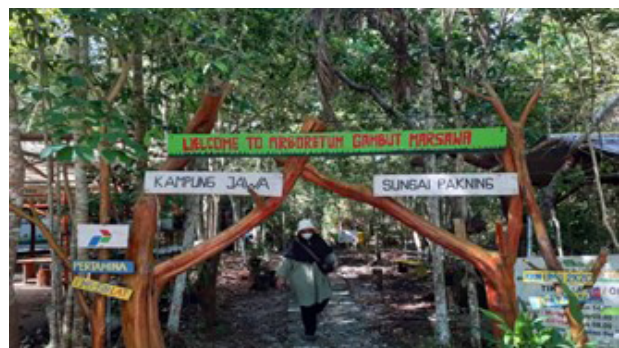


Figure 3 The entrance of Peat arboretum tourism.



Figure 4 Some students play in the peat arboretum.

income can also be a source of pride for the community for the importance of managing the ecological sustainability of peat (Strydom, Mangope & Henama 2019).

The peat arboretum is managed by Mr. Sadikin, the leader of the Sungai Pakning MPA team as well as the coordinator of the inter-MPA forum. This arboretum has a collection of about 41 species of plants, with varying numbers. The plants that are conserved are the typical flora of peat. The development of this educational tour is part of efforts to prevent and mitigate the forest and peatland fires in Sungai Pakning.

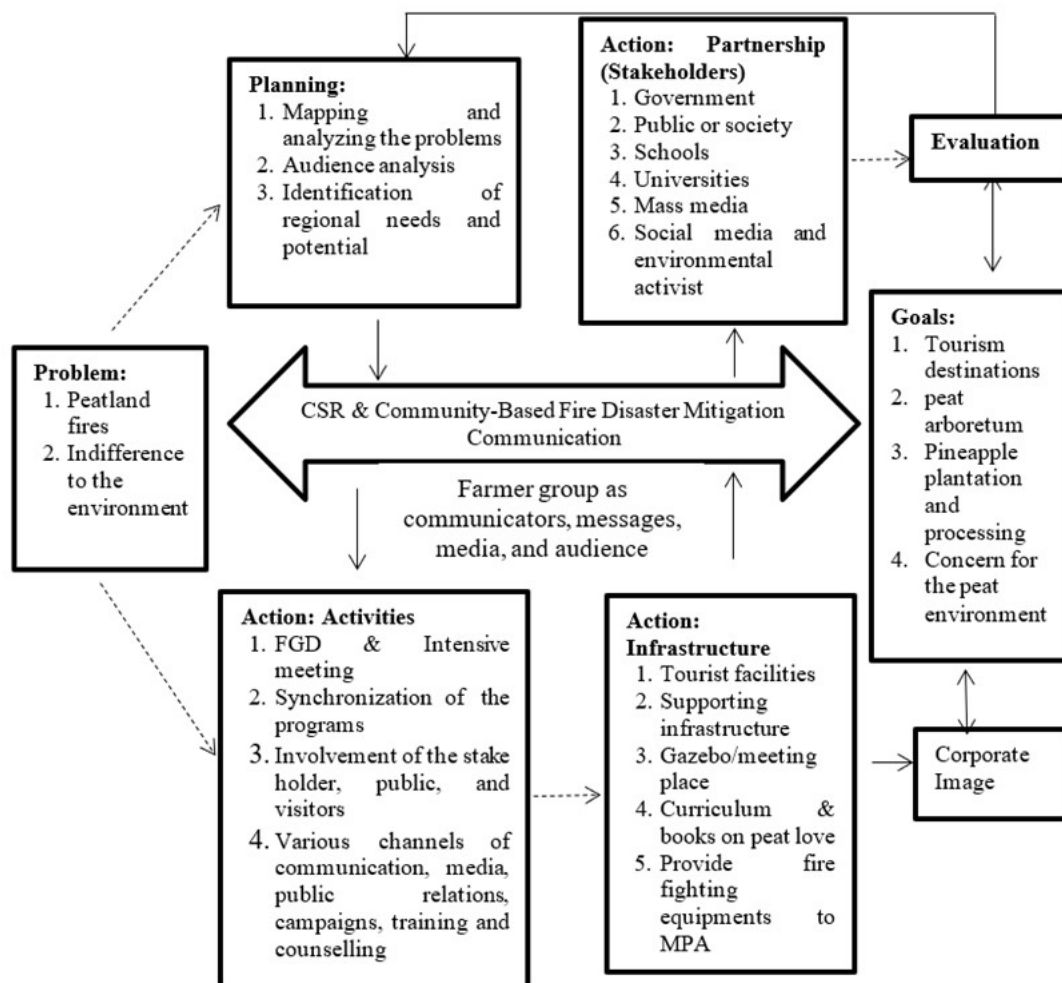
The development of peat arboretum ecotourism is able to increase public awareness and participation in peatland conservation. Peatlands that are used properly can not only prevent fires but also improve the community's economy. Therefore, a sustainable development strategy should not be oriented only to an economic approach but must prioritize environmental sustainability and community culture. The CSR approach has adjusted the potential, wisdom, norms, values and culture of the local community. On the other hand, Pertamina's CSR communication in overcoming the peat problem seems somewhat exaggerated by the media. His activities are widely covered by the mass media, because of his release and ability to combine a public relations approach. The success in fostering the Tunas Makmur Farmer Group is widely broadcast or reported and disseminated on social media. So that Pertamina's CSR program has received awards from various national institutions and events.

As the main target audience, Tunas Makmur Farmer Group has strong social cohesion. This group consists of 47 people, 18 of whom are housewives. Most of the members still have family ties. Most of them are of Javanese descent who came in the 1950-1960s period who want to live on the outskirts of Sungai Pakning City, close to forests and peatlands. Similarity in ethnicity and still being related makes CSR communication easier in empowering this group. This farmer group has a habit of working together and likes to gather for deliberation in every activity, including solving various problems. This habit affects the internal social cohesion of farmer groups. The similarity in characteristics, geography and facing the same problems make this group the target of Pertamina's CSR through the Berdikari Peat Village program. The similarity of characteristics, geography and similarity of problems have made this group the target of Pertamina's CSR through the Kampung Gambut Berdikari program. These characteristics form the main basis for planning, action and evaluation of subsequent CSR program activities such as formulating objectives, creating messages, and selecting media (see Figure 5).

The community of farmer group is the target audience of the CSR program, on the other hand they are also used as communicators, messages, material content or public relations content, and communication media to influence the wider community through the Kampung Berdikari Gambut program. The communication and public relations campaigns Of Pertamina through news releases, publicity, direct reports, and postings on social media have given the company a positive image. As a result, the environmental communication model based on disaster mitigation is quite effective in changing the perspective and behavior of the community according to the desired goal. Therefore, the CSR communication of Pertamina strengthens community resilience in dealing with peat forest fires and land management (Yasir 2020). This community has even become a role model for other groups and is often invited to several farmer group development trainings to share experiences.

The findings of this study prove that CSR environmental communication contributes to increasing awareness of fire disaster mitigation and increasing the involvement of farmer groups and surrounding communities. Intensive CSR communication with farming communities through interpersonal communication channels can find the root of the fire problem and the solution. Conservation of natural resources involving the community by adapting their habitat in protected areas is an important approach in environmental management (Bires & Raj 2019). In addition, environmental communication is continued by strengthening group communication, both internal to the farming community and between MPA groups. Strengthening the capacity of farmer groups and MPAs, providing tools or infrastructure assistance and connecting with other stakeholders is the right step. Strengthening the capacity of local communities in environmental management is an important basis for improving social interaction policies (Vlibeigi, Sarhangi & Karevani 2020). This community-based CSR communication, if integrated with the use of several communication channels, even makes this community the main actor, content, messenger in this environmental communication, it will be more effective (Pollach et al. 2012; DeLorme et al. 2018). Currently, CSR communication uses various channels and approaches for the dissemination of internet-based messages not only because it targets a wide audience, but also because the cost is cheaper.

Pertamina's CSR environmental communication method focuses on empowering farmer groups and MPA Forum groups because they are based on problem analysis and audience analysis that they do. These groups are the main targets in overcoming the problem of forest and peat fires



**Figure 5** Pertamina's CSR environmental communication in mitigating peatland fires.

**Source:** Research data 2022.

by facilitating tools and providing them with training based on the latest innovations. CSR communication can create deep affiliation between the community and the company if the message has a specific message style message content, message style, and praise tactics (Christis & Wang 2021). The existence of climate change requires communication actors and practitioners to adapt environmental management practices to keep up with changes and develop innovations to protect forest and agricultural ecosystems (Appiagyei et al. 2022; Santos, Lyra & Rodriguez 2022).

In this case, CDO has a CSR strategy based on community needs. The CSR manager's step begins with analyzing and mapping the problem. The next step is to establish good relations with the target group and conduct coaching and training. This step is supported by the provision of supporting facilities and infrastructure and even connected with various existing stakeholders. In this case, the participatory model becomes important

by opening up space for stakeholders, environmental groups, corporations and citizens to jointly develop an environmental education agenda (Ho et al. 2022). This CDO communication strategy contributes in mitigating the fires disaster on peatland, enhancing the economy of farming communities, and evoking the environmental awareness. Now the community is able to manage the peat arboretum and pineapple cultivation. Pertamina Public Relations not only uses this farmer group as the target audience for the CSR program, but they are used as the main communicator, communication channel, content or news material, and media in spreading messages of concern for peat. Through this program Pertamina has earned a positive reputation and good image through the awards it has received. CSR communication that integrates with community activities as a disseminator of environmental care messages on social media is able to help relationships with many stakeholders (Cho, Furey & Mohr 2017; Testarmata, Fortuna & Ciaburri

2018). Internet-based communication and conversation or being active on social media can influence the interest of stakeholders to be actively involved in supporting the company's social and environmental performance (Siano *et al.*, 2016). Innovation in the use of social media platforms is useful in communicating CSR activities in building social environmental awareness (Testarmata, Fortuna & Ciaburri 2018).

This is in line with the idea of the importance of implementing CSR communication in helping the sustainable development of ecotourism (Bickford *et al.* 2017). The CSR program in helping to preserve the environment has even been able to develop a peat arboretum tourist destination by involving the local community. This peat arboretum can be a geoheritage component which is an area that has scientific, cultural, tourist, ecological or other values, which are obtained from assessments and which are recognized by the scientific community and local communities (Nascimento & Castro 2022). So that this area has tourism, educational, economic, and ecological functions. This tourism development is in accordance with the direction of the Indonesian government. The Minister of Home Affairs Regulation number 33 of 2009 regulates that any ecotourism development must empower local communities (Pemerintah Indonesian 2009).

Practically, the findings of this study have implications for CSR practitioners that CSR communication can contribute to mitigating forest fires and preserving peatlands as a natural heritage. CSR activities raise awareness and are able to manage peatlands properly so as to reduce forest and peatland fires. The practice of CDO communication in establishing relationships and solving community-based environmental problems can be a reference for solving similar problems. This CSR communication strategy model in mitigating peatland fires can be a solution in overcoming the problems of forest and peat fires in the future. Thus, CSR communication based on environmental messages has contributed to the achievement of sustainable development goals.

## 4 Conclusion

Environmental communication by Pertamina's CSR has a positive contribution in solving problems, controlling and mitigating fire disasters on peatlands. CSR actors through CDO establish good relations with farming community groups and other stakeholders. CSR Pertamina solves the problem of peatlands fires by strengthening farmer group ties, providing training and connecting with other stakeholders such as the government, universities, mass media, and other communities. In addition, Pertamina

not only provided extinguishers, but also connected the Sungai Pakning Fire Concerned Community (MPA) group with MPA groups from other villages by providing training and competitions in using fire extinguishers. Especially for the farming community which is the main target, the community is invited and facilitated to manage peat arboretum tours as an effort to conserve natural heritage and pineapple gardening as an economic support, both of which are channels for mitigating catastrophic fires on peatlands. This community is empowered to develop tourist destinations to campaign for awareness on peat, to process derivatives of processed pineapple products, to market them as a way to solve the problem of fires on peatlands.

CSR communication based on this peat concern campaign focuses on involving the farmer group as its main target audience. This group is not only used as a target audience for fire disaster mitigation, but is used as material or content, media, communication channels, and even main communicators to spread environmental messages. Pertamina's CSR should manage this environmental communication not only to make farming communities a means or news content in achieving a mere company reputation, in other words the impact must be felt by the community and stakeholders as a whole. This community-based Pertamina CSR environmental communication model is interesting for further research. Future research needs to examine environmental communication from the perspective of culture, values, and local wisdom such as through an ethnographic approach.

## 5 References

- Alpi, K.M. & Evans, J.J. 2019, 'Distinguishing case study as a research method from case reports as a publication type', *Journal of the Medical Library Association*, vol. 107, no. 1, pp. 1–5, DOI:10.5195/jmla.2019.615.
- Appiagyei, B.D., Belhoucine-Guezouguli, L., Bessah, E., Morsli, B. & Fernandes, P.A.M. 2022, 'A Review on Climate Change Impacts on Forest Ecosystem Services in the Mediterranean Basin', *Journal of Landscape Ecology*, vol. 15, no. 1, pp. 1–26, DOI:10.2478/jlecol-2022-0001.
- Baxter, P. & Jack, S. 2015, 'Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers', *The Qualitative Report*, vol. 13, no. 4, pp. 544–59, DOI: 10.46743/2160-3715/2008.1573.
- Bickford, N., Smith, L., Bickford, S., Bice, M.R. & Ranglack, A.D.H. 2017, 'Evaluating the role of CSR and SLO in ecotourism: Collaboration for economic and environmental sustainability of arctic resources', *Resources*, vol. 6, no. 2, e21, DOI:10.3390/resources6020021.
- Bires, Z. & Raj, S. 2019, 'Determinants of environmental conservation in Lake Tana Biosphere', *Heliyon*, vol. 5, no. 7, p. e01997, DOI:10.1016/j.heliyon.2019.e01997.

- Cho, M., Furey, L. D. & Mohr, T. 2017, 'Communicating corporate social responsibility on social media: Strategies, stakeholders, and public engagement on corporate facebook', *Business and Professional Communication Quarterly*, vol. 80, no. 1, pp. 52–69, DOI:10.1177/2329490616663708.
- Christis, J. & Wang, Y. 2021, 'Communicating environmental csr towards consumers: The impact of message content, message style and praise tactics', *Sustainability*, vol. 13, no. 7, e3981, DOI:10.3390/su13073981.
- Cox, R. 2010, *Environmental Communication and the Public Sphere*, Sage Publication, California.
- DeLorme, D.E., Stephens, S., Hagen, S. & Bilskie, M. 2018, 'Communicating with coastal decision-makers and environmental educators via sea level rise decision-support tools', *Journal of Science Communication*, vol. 17, no. 3, pp. 1–18, DOI:10.22323/2.17030203.
- Dubravská, M., Marchevská, M., Vašaničová, P. & Kotulič, R. 2020, 'Corporate social responsibility and environmental management linkage: An empirical analysis of the Slovak Republic', *Sustainability (Switzerland)*, vol. 12, no. 13, e5431, DOI:10.3390/su12135431.
- Dutta, A. & Imeri, A. 2016, 'Corporate Responsibility and Corporate Reputation: Case of Gulf Petroleum and Investment Company', *Journal of Empirical Research in Accounting & Auditing An International Journal*, vol. 03, no. 01, pp. 40–51. doi: 10.12785/jeraa/030104.
- Faisal, F., Napitupulu, M.A. & Chariri, A. 2019, 'Corporate social and environmental responsibility disclosure in Indonesian companies: Symbolic or substantive?', *Pertanika Journal of Social Sciences and Humanities*, vol. 27, no. 1, pp. 259–77.
- Flor, A.G. 2004, *Environmental communication: Principles, approaches and strategies of communication applied to environmental management*, UP Open University, Quezon City.
- Flor, A.G. & Cangara, H. 2018, *Komunikasi lingkungan: Penanganan Kasus-kasus Lingkungan Melalui Strategi Komunikasi*, Prenadamedia Group, Jakarta.
- Fredriksson, M. & Olsson, E.K. 2014, *A model for evaluating corporate environmental communication*, *Critical Studies on Corporate Responsibility, Governance and Sustainability*, Emerald Group Publishing Limited.
- Freeman, R.E. & Phillips, R. A. 2021, 'Stakeholder Theory and the Resource-Based View of the Firm', *Journal of Management*, vol. 47, no. 7, pp. 1757–70, DOI:10.1177/0149206321993576.
- Giampiccoli, A. & Glassom, D. 2020, 'Community-based tourism in protected areas benefits communities and conservation: a model', *Advances in Hospitality and Tourism Research (AHTR)*, vol. 9, no. 1, pp. 106–31, DOI:10.30519/ahtr.741805.
- Ho, S.S., Tan, W., Goh, T.J. & Tandoc, E. 2022, 'Communicating the Future of Energy Use: Qualitative Insights into the Efforts of Environmental Groups in Indonesia, Malaysia, and Singapore', *Environmental Communication*, vol. 16, no. 1, pp. 1–9, DOI:10.1080/17524032.2022.2107553.
- Johan, M.R.M. & Noor, N.A.Z.M. 2013, 'The role of corporate communication in building organization's corporate reputation: an exploratory analysis', *Interdisciplinary Journal of Contemporary Research in Business*, vol. 4, no. 12, pp. 1230–40.
- Jurin, R.R., Roush, D. & Danter, K.J. 2010, *Environmental Communication. Second Edition*, *Environmental Communication*, 2nd edn, Springer, New York.
- Kirat, M. 2015, 'Corporate social responsibility in the oil and gas industry in Qatar perceptions and practices', *Public Relations Review*, vol. 41, no. 4, pp. 438–46, DOI:10.1016/j.pubrev.2015.07.001.
- Kitić, B., Kostić–Stanković, M., Cvijović, J. & Lečić–Cvetković, D. 2015, 'Environmental Aspect of Business Communications', *Management - Journal for theory and practice of management*, vol. 20, no. 1, pp. 69–76, DOI:10.7595/management.fon.2015.0004.
- Maruto, R. & Alfisnardo. 2022, '11 Tim Ikuti Lomba MPA Cepat Tanggap Pertamina Sungai Pakning', *Antara*, Pekanbaru, viewed 23 October 2022, <<https://riau.antaranews.com/berita/297665/11-tim-ikuti-lomba-mpa-cepat-tanggap-pertamina-sungai-pakning>>.
- Meijers, M.H.C., Remmelswaal, P. & Wonneberger, A. 2019, 'Using Visual Impact Metaphors to Stimulate Environmentally Friendly Behavior: The Roles of Response Efficacy and Evaluative Persuasion Knowledge Using Visual Impact Metaphors to Stimulate Environmentally', *Environmental Communication*, vol. 13, no. 8, pp. 995–1008, DOI:10.1080/17524032.2018.1544160.
- Meijers, M.H.C., Smit, E.S., de Wildt, K., Karvonen, S.G., van der Plas, D. & van der Laan, L.N. 2022, 'Stimulating Sustainable Food Choices Using Virtual Reality : Taking an Environmental vs Health Communication Perspective on Enhancing Response Efficacy Beliefs Stimulating Sustainable Food Choices Using Virtual Reality : Taking an Environmental vs Health', *Environmental Communication*, vol. 16, no. 1, pp. 1–22, DOI:10.1080/17524032.2021.1943700.
- Morsing, M. & Spence, L.J. 2019, 'Corporate social responsibility (CSR) communication and small and medium sized enterprises: The governmentality dilemma of explicit and implicit CSR communication', *Human Relations*, vol. 72, no. 12, pp. 1920–47, DOI:10.1177/0018726718804306.
- Nascimento, S.T. & Castro, P.T.A. 2022, 'Proposal for Assessment and Inventory of the Landscape as Geoheritage', *Anuario do Instituto de Geociencias*, vol. 45, e48794, DOI:10.11137/1982-3908\_2022\_45\_48794.
- Nassani, A.A., Yousaf, Z., Radulescu, M. & Haffar, M. 2022, 'Environmental Performance through Environmental Resources Conservation Efforts: Does Corporate Social Responsibility Authenticity Act as Mediator?', *Sustainability*, vol. 14, no. 4, e2330, DOI:10.3390/su14042330.
- Pemerintah Indonesian. 2009, *Undang-Undang Nomor 10 Tahun 2009 Tentang Kepariwisataaan*, Indonesia.
- Pertamina. 2022, 'Corporate Social Responsibility: Komitmen Perusahaan', *Pertamina*, viewed 23 October 2022, <<https://www.pertamina.com/id/tanggung-jawab-sosial-perusahaan>>.
- Pollach, I., Johansen, T.S., Ellerup Nielsen, A. & Thomsen, C. 2012, 'The integration of CSR into corporate communication in large European companies', *Journal of Communication Management*, vol. 16, no. 2, pp. 204–16, DOI:10.1108/13632541211217605.
- Ramya, S.M., Shereen, A. & Baral, R. 2020, 'Corporate environmental communication: a closer look at the initiatives

- from leading manufacturing and IT organizations in India', *Social Responsibility Journal*, vol. 16, no. 6, pp. 843–59, DOI:10.1108/SRJ-11-2019-0376.
- Rashid, Y., Rashid, A., Warraich, M.A., Sabir, S.S. & Waseem, A. 2019, 'Case Study Method: A Step-by-Step Guide for Business Researchers', *International Journal of Qualitative Methods*, vol. 18, pp. 1–13, DOI:10.1177/1609406919862424.
- Santos, C.A.M., Lyra, G.B. & Rodriguez, D.A. 2022, 'Impact of Climate Change on Cassava Yield in Guapimirim, State of Rio de Janeiro, Southeast Brazil', *Anuario do Instituto de Geociências*, vol. 45, pp. 1–16, DOI:10.11137/1982-3908\_2022\_45\_40817.
- Shao, J., Mahmood, A. & Han, H. 2021, 'Unleashing the potential role of csr and altruistic values to foster pro-environmental behavior by hotel employees', *International Journal of Environmental Research and Public Health*, vol. 18, no. 24, e13327, DOI:10.3390/ijerph182413327.
- Siano, A., Conte, F., Amabile, S., Vollero, A. & Piciocchi, P. 2016, 'Communicating sustainability: An operational model for evaluating corporate websites', *Sustainability*, vol. 8, no. 9, e950, DOI:10.3390/su8090950.
- Strydom, A.J., Mangope, D. & Henama, U.S. 2019, 'Making community-based tourism sustainable: Evidence from the Free State province, South Africa', *Geojournal of Tourism and Geosites*, vol. 24, no. 1, pp. 7–18, DOI:10.30892/gtg.24101-338.
- Testarmata, S., Fortuna, F. & Ciaburri, M. 2018, 'The communication of corporate social responsibility practices through social media channels', *Corporate Board role duties and composition*, vol. 14, no. 1, pp. 34–49, DOI:10.22495/cbv14i1art3.
- Uda, S.K., Hein, L. & Sumarga, E. 2017, 'Towards sustainable management of Indonesian tropical peatlands', *Wetlands Ecology and Management*, vol. 25, no. 6, pp. 683–701, DOI:10.1007/s11273-017-9544-0.
- Vlibeigi, M., Sarhangi, E. & Karevani, N. 2020, 'Local Environmental Conservation Activities as a Key Factor for Social Interaction (Case Study: Bagh-Shater Local Community)', *Journal of Population and Social Studies*, vol. 29, pp. 32–46, DOI:10.25133/JPSSv292021.003.
- Vlibeigi, M., Sarhangi, E. & Karevani, N. 2021, 'Local Environmental Conservation Activities as a Key Factor for Social Interaction (Case Study: Bagh-Shater Local Community)', *Journal of Population and Social Studies*, vol. 29, pp. 32–46, DOI:10.25133/JPSSv292021.003.
- Yanti, R., Syahza, A., Hidir, A. & Suwondo, S. 2018, 'The communication model of forest management based on environmental awareness', *Management of Environmental Quality: An International Journal*, vol. 29, no. 6, pp. 1093–109, DOI:10.1108/MEQ-02-2018-0028.
- Yasir, Y. 2020, 'Environmental Communication Model of Farmer Community in Peatlands Ecotourism Development', *Journal of Physics: Conference Series*, vol. 1655, no. 1, DOI:10.1088/1742-6596/1655/1/012133.
- Yasir, Y., Nurjanah, N. & Yohana, N. 2021, 'Corporate Communications in Contribution to Addressing Environmental Problems: Case Study of an Indonesian State Oil Company', *Information & Media*, vol. 91, no. 1, pp. 152–74, DOI:10.15388/Im.2021.91.57.
- Yasir, Y., Firzal, Y., Yesicha, C. & Sulistyani, A. 2022, 'Environmental Communication Based on Local Wisdom in Forest Conservation: A Study on Sentajo Forbidden Forest, Indonesia', *Journal of Landscape Ecology*, vol. 15, no. 2, pp. 127–145, DOI:10.2478/jlecol-2022-0014.

#### Author contributions

Yasir Yasir: conceptualization; formal analysis; methodology; validation; writing-original draft; writing – review and editing; visualization. Nurjanah Nurjanah: methodology; validation. Samsir Samsir: methodology; supervision.

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