

# SUSTAINABLE CORPORATE SOCIAL RESPONSIBILITY PROGRAM AS AN EFFORT FOR COMMUNITY ADAPTATION TO CLIMATE CHANGE, CASE STUDY IN BUKIT BATU DISTRICT, BENGKALIS REGENCY

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**Abstract.** Climate change is currently a very troubling problem in the world. Indonesia is also one of the countries affected by climate change. This also happened in the Bukit Batu District, Bengkalis Regency, Riau Province. The impact of climate change can be seen directly in the Bukit Batu area with the emergence of disasters that occurred there, in the coastal area the perceived impact is an increase in tidal water levels every year which causes tidal flooding and abrasion, in addition to the problems in peat areas that often occur. There are land and forest fires during the summer season and flooding in the rainy season. Through the Corporate Social Responsibility (CSR) program of PT Kilang Pertamina Internasional Unit Sungai Pakning, like “Program Kampung Iklim”, “Kampung Gambut Berdikari”, “Permata Hijau Pesisir Gambut”, “Sekolah Cinta Gambut” programs, the community around the company began to be able to adapt in various ways with the assistance provided by the company and government too. So that with the CSR program, the community will be able to live sustainably. In addition, collaboration between stakeholders is also very helpful for the success of the program in supporting community adaptation efforts to climate change. This study uses a qualitative descriptive method to describe the condition of the area affected by climate change with a purposive sampling procedure for the CSR program of PT Kilang Pertamina Internasional Unit Sungai Pakning. With this collaboration program, climate change problems have begun to be handled, such as in Pangkalan Jambi and Sungai Pakning Village.

**KEYWORDS:** climate change, CSR, peatland, coastal

## 1 INTRODUCTION

Climate change is one of the problems in the world today. Many negative impacts due to the impacts of climate change such as global warming, rising sea levels, extreme weather and others. This also happens in Indonesia, the impact of climate change is also felt by almost all people in Indonesia. Julismin (2013) explains that climate change in Indonesia has an impact, including increasing temperatures throughout Indonesia, changes in rain patterns, and so on.

This also happened in the Bukit Batu District, Bengkalis Regency, Riau Province. The impact of climate change can be seen directly in the Bukit Batu area with the emergence of disasters that occurred there, in the coastal area the perceived impact is an increase in tidal water levels every year which causes tidal flooding and abrasion, in addition to the problems in peat areas that often occur. There are land and forest fires during the summer season and flooding in the rainy season.

All efforts have been made by the community, the government and the private sector who are jointly trying to deal with climate change. One of the real efforts made by the company in dealing with climate change is through the Corporate Social Responsibility (CSR) program. Several CSR programs were formed based on the need to adapt and deal with climate change.

In Bukit Batu District, Bengkalis Regency, the CSR program of PT Kilang Pertamina Internasional Unit Sungai Pakning was developed with the community and government for adaptation

to climate change. Some examples of CSR programs that have been developed include the PROKLIM Program, “Kampung Gambut Berdikari”, “Permata Hijau Pesisir Gambut”, and the Sekolah Cinta Gambut. Some of the stakeholders involved include the Bengkalis Environment and Forestry Service, Bengkalis Education Office, Manggala Agni, as well as various community groups such as fishermen's groups, farmers' groups, Masyarakat Peduli Api “MPA”, and all elementary schools in Bukit Batu District.

Efforts to adapt to climate change also involve various universities such as Sebelas Maret University, Gadjah Mada University, Bogor Agricultural Institute, Riau University, Bengkalis Polytechnic and others. With the collaboration in program implementation, the community in Bukit Batu District is expected to be able to adapt to climate change and be able to live better.

## **2 METHOD**

This research was conducted using a qualitative method which is a research procedure to produce descriptive data from the observed research object. While the approach is carried out by case studies by looking at the types of CSR programs carried out in an effort to adapt to climate change in the field. Data collection was carried out through participatory observation and focus group discussions (FGD). Then the sample was carried out by purposive sampling on groups of direct beneficiaries of the CSR program of PT Kilang Pertamina Internasional Unit Sungai Pakning.

## **3 RESULT AND DISCUSSION**

The impact of climate change is starting to be felt by the people of Bukit Batu District and its surroundings, several times the settlements have been submerged by tidal floods or due to the ongoing rainy season, on the other hand, land and forest fires often occur during the summer. Through the CSR program, PT Kilang Pertamina Internasional Unit Sungai Pakning helps the community in adapting to climate change and begins to manage these disasters so they don't happen again.

In handling disasters, both natural and non-natural disasters, it is necessary to have good disaster management so that disaster management becomes effective. According to Nurjanah (2012) disaster management is a science that studies disasters and all aspects related to disasters, especially disaster risk and how to avoid disaster risk. Disaster management is a dynamic process of the functioning of the management functions that we know so far, for example the functions of planning, organizing, actuating, and controlling. Effective management of disaster risk management requires a combination of four concepts, namely over all hazards, comprehensive, integrated and community preparedness, including in disaster management efforts due to climate change. Effective disaster management requires the active cooperation of various stakeholders. So it can be said that in disaster management, one of the success factors for handling is integrated handling

Purwanto, W (2021) explained that a company's CSR if it is well structured can be one of the solutions in disaster management, of course, in collaboration with various parties. Widhagdha, 2018, explained that disaster-prone land can be converted into locations that provide many benefits if managed properly, one of which is on peatlands. However, CSR programs cannot succeed if they run alone, but there must be cooperation by various parties.

(Cristian, Y., et al. 2021) explains that cross-sectoral cooperation can be a solution in solving problems or disasters on the coast. Greenwood, M. (2007) argues that stakeholder involvement can be understood as a practice carried out by an organization to positively involve various parties in an activity within it. Involving stakeholders from various types of actors can provide a positive impetus for the achievement of a common goal, namely disaster management in Bukit Batu District. In this case, cross-sectoral cooperation in disaster management in Bukit Batu District involves the Government, the Community, and the surrounding companies. The following are some of the CSR programs implemented by PT Refinery Pertamina Internasional Unit Sei Pakning and in collaboration with various parties, including:

### 3.1 Kampung Iklim Program (PROKLIM)

The PROKLIM program is a program launched by the Ministry of Environment and Forestry which aims to increase the involvement of the community and other stakeholders to strengthen adaptation capacity to the impacts of climate change and reduce GHG emissions as well as to provide recognition of climate change adaptation and mitigation efforts that have been carried out that can improve welfare at the local level in accordance with regional conditions. The implementation of the Proklim refers to the Regulation of the Minister of Environment and Forestry Number 84 of 2016 concerning the Climate Village Program, which contains the main components, requirements for proposals, assessment and categories of Proklim ([ditjenppi.menlhk.go.id](http://ditjenppi.menlhk.go.id)).

In its implementation, the CSR program of PT Kilang Pertamina Internasional Unit Sungai Pakning encourages the community to meet the criteria for the PROKLIM assessment aspect that has been set by the Ministry of Environment and Forestry, so that the surrounding community is able to adapt well to climate change. Not only encouraging, the CSR program also helps facilities and infrastructure to support Proklim programs, especially in adaptation and mitigation efforts to climate change, such as making canal blocking, installing solar panels, revegetation of burned land cover, and others. As a result, the people in Pangkalan Jambi Village and Kampung Jawa, Sungai Pakning Village, were able to adapt to climate change that occurred in Bukit Batu District, Bengkalis Regency. This program is also carried out in collaboration with the Bengkalis Regency Environmental Service and the Pangkalan Jambi and Sungai Pakning Village Government. Currently, there are several locations for the CSR program of PT Kilang Pertamina Internasional Sungai Pakning Unit that are participating in Proklim Program, namely Sungai Pakning, Pangkalan Jambi, Pakning Asal, Batang Duku and Tanjung Leban Village.

With this program, the community began to be trained to adapt to climate change in their area. In addition, the community has also become more aware of the importance of protecting the environment so that the community is also able to contribute to the prevention of climate change.

### 3.2 Kampung Gambut Berdikari Program

The Kampung Gambut Berdikari Program is a program implemented in the peat area around the PT Kilang Pertamina Internasional Unit Sei Pakning. This program focuses on efforts to address climate change in peat areas. The impact of climate change on peatlands can be overcome with various programs such as disaster mitigation of land and forest fires through empowering fire-aware communities (MPA), honey cultivation, and most recently, peat water filtration, as an effort to fulfill clean water in society.

What often happens is the erratic season, so that land and forest fires often occur, crop failures and droughts occur. A prolonged dry season with an uncertain time is very dangerous for land in peat areas. Dry peat causes fire proneness, besides that, drought on peatlands also causes crop and harvest failures for the community, especially farmers who use peatlands.

The impact of this program is that the community is able to adapt to disasters caused by climate change such as land and forest fires, floods, drought in peatlands and various problems that exist in peatlands. With the CSR program “Kampung Gambut Berdikari”, it has begun to overcome existing problems such as drought in peatlands, which can be overcome by making canals and canal blocking to maintain the water level in peatlands. Then other problems of drought in agricultural land began to be overcome with portable hydrant wells, and peat water filtration and then burned areas could be overcome with the MPA program. The result is that currently in the areas affected by climate change, land and forest fires are no longer occurring, and the agricultural sector has started to run well.



Picture 1. Masyarakat Peduli Api Program

### 3.3 Permata Hijau Pesisir Gambut Program

Permata Hijau Pesisir Pesisir is one of the CSR programs that is a solution in disaster management due to climate change in coastal areas. Rising sea levels in the last few years have caused the Bukit Batu District to suffer from severe abrasion. One of the areas affected by a fairly large abrasion is in Pangkalan Jambi Village. The abrasion that hit Pangkalan Jambi Village has eroded the land area by approximately 115m. This causes the displacement of the location of the community's settlements to higher ground, because the area they originally occupied has become prone to abrasion or has even been abraded.

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Abrasion is also exacerbated by the damage to mangroves due to illegal logging, thus making abrasion faster. People still use mangrove wood for charcoal and “troco” or foundations for houses, so many mangroves are being cut down illegally. These are some of the factors that cause abrasion to get worse in coastal areas.

In handling it, PT Kilang Pertamina Internasional Unit Sungai Pakning carried out a CSR program in the form of planting mangroves accompanied by the construction of a Triangle Mangrove Barrier, its function was as a simple breakwater that was able to inhibit the speed of waves so that mangrove planting was successful and was able to capture sediment, so as to form new land in the abraded area.



Picture 2. Triangle Mangrove Barrier

Then to make this program sustainable, community empowerment was carried out for fishermen groups and mangrove managers. Community empowerment programs in Pangkalan Jambi Village include a mangrove ecotourism unit managed by a group of fishermen and a food processing unit made from mangroves and fish caught by fishermen managed by coastal women. With this program, the community gets social, economic and environmental benefits.

#### 3.4 Sekolah Cinta Gambut Program

Development of Local curriculum "Sekolah Cinta Gambut" As a tool for sustainable peatland conservation. "Sekolah Cinta Gambut " is a local curriculum that explains peatlands' characteristics, potentials, and risks. Peatlands in Bengkalis Regency have potential natural resources ranging from petroleum to palm oil. Exploration in oil and palm plantations benefits the community and saves the potential for natural disasters. Floods, abrasion, and most dangerously forest fires often occur in this area. The incompatibility and absence of various parties in peatland management were the factors that caused the disaster. Many parties in Bukit Batu Subdistrict, Bengkalis Regency have carried out peatland conservation and established a natural disaster management system on peatlands properly so that to disseminate and sustain disaster conservation and mitigation activities to the younger generation, it is necessary to develop a local curriculum related to peatland management.



Gambar. Sekolah Cinta Gambut

The development of the "Sekolah Cinta Gambut" curriculum is intended for students and starts from elementary school students, so the research subjects are elementary school teachers in Sungai Pakning Village, Bandar Laksamana Village, and Siak Kecil Village, Bukit Batu District. SWOT analysis is used to analyze the ability level of elementary school teachers. Potential and problems in making local content curriculum for the "Sekolah Cinta Gambut ":

1. Strengths
  - a. Teachers have a strong desire to conduct peat environmental learning
  - b. The teacher has very good knowledge of the environmental conditions of the peatlands in the Bukit Batu District
  - c. Most of the teachers live in Bukit Batu District so they know the root causes of natural disasters such as floods and forest fires and have experienced these disasters
  - d. Most of the teachers are from the younger generation, are technology literate, and have been professionally certified
2. Weakness
  - a. Most of the Teachers do not understand local content curriculum development
  - b. Most of the Teachers do not understand the development of modules/textbooks
  - c. Most of the Teachers do not understand peatland theory and disaster mitigation
  - d. Most of the Teachers often do teacher center learning compared to active learning.
3. Opportunity

- a. CSR Pertamina RU II Sei Pakning helps and fully supports the development of the peat love school curriculum
4. Treats
- a. The Bengkalis District Education Office is not yet interested in developing and implementing a local content curriculum related to peatlands.
  - b. Elementary school curriculum has full class hours so it is difficult to add new subjects

The development of the peat love school curriculum took advantage of the opportunity for CSR assistance from Pertamina RU II Sungai Pakning which helped organize training and assistance in developing the “Sekolah Cinta gambut” curriculum in collaboration with the academics of Sebelas Maret University (UNS). according to the strengths and weaknesses of elementary school teachers, there are 3 types of training.

The first is training related to Peatland Environment and disaster mitigation. In this training, there are 3 competencies; (1) knowing the theory and practice of the Peatland environment and disaster mitigation, (2) telling and compiling the knowledge and experiences of teachers related to peat environmental conditions and disasters in Bengkalis Regency. (3) analyzing environmental problems in the peatlands of Bengkalis Regency.

#### 4 CONCLUSION

The CSR program compiled by PT Pertamina Kilang Internasional Sei Pakning Unit has good planning, and good implementation as well, and collaboration with the community, government and universities will be able to reduce the impact of climate change and even overcome climate change at the CSR program location. CSR programs such as Proklim, Independent Peat Village, Permata Hijau Pesisir Peat to Cinta Gambut School are able to overcome climate change problems, especially in coastal and peat areas. The problems of drought, abrasion to land and forest fires have begun to be resolved with the CSR program. As well as increasing awareness of the community to participate in preventing climate change in their surrounding environment.

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