The Environmental Changes of Regentschap Pemalang in The Colonial Era

Ilham Nur Utomo\(^1\), Shintawati Dyah Purwaningrum\(^2\), Sidik Fauji\(^1\), Naufal Kresna Diwangkara\(^1\), Fariz Nizar\(^1\), and Sulistyaa Putri\(^3\)

\(^1\)Universitas Islam Negeri Profesor Kiai Haji Saifuddin Zuhri Purwokerto, Faculty of Ushuluddin, Adab, and Humaniora, Purwokerto, Indonesia
\(^2\)Universitas Pandanaran Semarang, Faculty of Engineering, Semarang, Indonesia
\(^3\)Madrasah Aliyah Negeri 1 Jepara, History Teacher, Jepara, Indonesia

Abstract. The environment is an important issue that continues to be discussed from the past, now, and even in the future. One important aspect of environmental problems is environmental change. In a historical context, the environmental conditions are the impact of human behavior in the past. Environmental changes are not only targeting urban areas but also rural areas, including the Regentschap Pemalang area during the colonial era. This research examined environmental changes in the Regentschap Pemalang during the colonial era from 1870 to 1942. It focused on three main aspects, there were background, process, and the impact of environmental change. The method used in this research was the historical method. The results of this research indicated that the background to environmental changes in Regentschap Pemalang was the activity of colonialism and capitalism. The colonial government as the ruler at that time issued policies that supported the activities of colonialism and capitalism. The presence of private capital and the desire to gain large profits led to massive exploitation of natural resources which then changed the environmental structure in Regentschap Pemalang. These changes had an impact on environmental damage. It caused floods and droughts. Environmental changes during the colonial period in Regentschap Pemalang were a necessity because they were in the grip of exploitative colonial power.

1 Introduction

Environmental issues are currently receiving more attention from academics, activists, and those who care about natural conditions. The movement to care for environmental sustainability was triggered by the growing severity of environmental degradation. For example, one of the causes of environmental damage in Pemalang Regency is excessive volumes of waste and uncontrolled development of economic zones. The increase in the volume of waste and environmental pollution that continues to occur is the result of population growth [1]. However, environmental degradation in Pemalang Regency has been occurring since the Dutch colonial period from the 19th to 20th centuries.

* Corresponding author: inurutomo@uinsaizu.ac.id
Environmental degradation is one of the phenomena of environmental change caused by human economic activities [2]. The issue of environmental degradation always threatens the sustainability of human life in a dynamic city or region. City development flow according to E.E. Bergel is that the city was originally a village that underwent persistent changes until it became a city [3]. Changes can be either positive or negative, depending on how the authorities govern the city. In this context, it is interesting to study the Regentschap Pemalang during the colonial period in terms of the efforts of the colonial government with its colonialist understanding to treat the area located on the North Coast of Java.

Colonialism has always attempted to exploit its colonies. The colonial government engaged in exploitation as the policyholder over colonial lands. This exploitation is directed at both urban and rural areas, including Regentschap Pemalang. As a result, this study examines environmental changes in Regentschap Pemalang during the colonial period from 1870 to 1942. The research problem focuses on three main aspects, including background, process, and the impact of environmental degradation as the impact of colonialism and capitalism.

2 Method

This study employed the historical method which included four stages: heuristics, criticism, sources, interpretation, and historiography. The research included scientific articles and books relevant to the research topic. In order to obtain credible sources, collaboration was carried out on the sources that have been obtained. Based on these sources, interpretation was then performed and the results were then synthesized chronologically at the historiographical stage. By employing the historical method, a reliable descriptive-analytical work was produced.

3 Pre-colonial Pemalang

Pemalang is an area located on the North Coast of Java. The northern part faces the Java Sea, while the southern part is a mountainous area. Around 1557, Pemalang was originally known as Babadan [4]. The name was later changed to Pemalang as it is known today. When examined further, the toponymy of Pemalang is founded on several theories. First, Pemalang is a term that comes from the Javanese language, "pepalang" meaning "prevent, block, or transverse". Second, Pemalang is associated with its geographical conditions, which are fed by several "transverse" rivers, which run from east to west [5].

According to the second theory, the origin of the name Pemalang is related to geographical conditions, demonstrating that Pemalang has many rivers. This represents how important the river is in people's lives. The abundance of rivers in Pemalang is natural given the area's location, which is bounded by Mount Slamet and the Java Sea. In fact, the Pemalang area's boundaries were later based on flowing rivers, such as the Rambut River, which became the Pemalang-Tegal boundary, and the Sragi River, which became the Pemalang-Pekalongan boundary.

In the historical context, Siswokartono creates a periodization that divides Pemalang into three stages, including ancient, middle, and new periods [6]. Pemalang in ancient times lasted under two dynasties, including the Plawangan Dynasty and the Sirawung Dynasty. The middle period lasted in the early 12th to 18th centuries. The new period lasted from the early 19th century to 1945. This periodization was of a local nature because it was designed specifically for Pemalang and differed from the national historical periodization. However, this periodization is necessary to understand how Pemalang evolves over time because each period is unique.
If we look at Pemalang long before the arrival of the West, it was made up of a set of settlements that existed thousands of years ago. This thesis is supported by archaeological evidence such as punden, ancient tombs, inscriptions, and others. Settlements are scattered around the river with fertile agricultural land. In addition, settlements are also dispersed in coastal and mountainous areas near food sources. The settlement then developed until the period of the Hindu-Buddhist and Islamic Kingdoms, so the people of Pemalang received Hindu-Buddhist and Islamic influences.

In pre-colonial times, Pemalang was known as a fertile agricultural area. Aside from the rivers that flow to support agricultural activities, the highlands at the foot of Mount Slamet also benefit from its fertile soil. During the Islamic Mataram Kingdom, Pemalang was included in its territory which was known for its excellence as a rice producer. Agricultural activities can also be found in north coastal areas [7]. The majority of the population relies on subsistence farming to meet primary needs, particularly food. The subsistence pattern is more environmentally friendly because it is limited by human capabilities and needs.

4 Colonial Government Policies in The Economic Sector

Following the VOC's bankruptcy at the end of the 19th century, power over the Dutch East Indies was retained by the colonial government, which was overseen by the Dutch Empire in Europe. Governor General Herman Willem Daendels, the highest authority in the Dutch East Indies colonial government, decided to abolish the VOC-built regional government system [8]. The colonial government implemented new policies in the Dutch East Indies for the sake of colonialism. The Cultivation System (cultuurstelsel) was implemented in the Dutch East Indies in 1930. Governor-General Johannes van den Bosch's idea succeeded in increasing the number of exports of agricultural and plantation products. In carrying out the Cultivation System, the colonial government mobilized a massive labor force through the mandatory deployment of peasants [9].

The Cultivation Policy lasted over thirty years before the colonial government implemented a new policy known as the Agrarian Law (Agrarisch wet) in 1870. The availability of private capital allowed plantations and factories to establish themselves in the countryside. Furthermore, the implementation of the Agaria Law resulted in structural changes in the livelihood sector, as evidenced by the large number of villagers who left agriculture jobs to become laborers or non-agricultural workers [10]. Furthermore, massive infrastructure was built to support the private sector's exploitation interests in the Dutch East Indies.

The impact of enforcing the Agrarian Law is visible in the establishment of plantations and factories that reach out to the countryside. For instance, a new sugar factory and plantations along the Tegal-Pekalongan highway [11]. Private investors not only brought capital in the form of money, but also modern technology to run their businesses in the Dutch East Indies. The exploitation process will run more efficiently and effectively with modern technology. As a result, the 1870 policy was very open to industrialization, which had implications for the natural environment.

The system of exploitation that was open to foreign capital continued in the early 20th century when ethical political policies were implemented. The ethical-political program known as the politics of reciprocation, which focuses on the development of education, irrigation, and emigration has not consistently enabled the Bumiputras to prosper. In fact, the implementation of ethical politics increased the scale of exploitation by the colonial government and the private sector. During the ethical-political period, many new sugar factories were established, two of which were in Regentschap Pemalang (Sumberharjo and Petarukan Sugar Factories). Many irrigation facilities, such as weirs, were built to support
plantation and factory activities [12]. As a result, the colonial government's policy reforms essentially did not put an end to the exploitation of colonial lands. More than that, it allows exploitation and capitalism activities.

5 Colonialism, Capitalism, and Environmental Degradation

Colonialism is inextricably linked to capitalism in exploitation activities in Regentschap Pemalang. As a policymaker, the colonial government made it easy for the private sector to carry out capitalization in colonial lands. The form of this relationship can be seen in the existing sugar factories, including the Comal Sugar Factory, the New Comal Sugar Factory, the Banjardawa Sugar Factory, the Petarukan Sugar Factory, and the Sumberharjo Sugar Factory. All of these sugar factories were also supported by infrastructure provided by the private sector and the colonial government, such as ditches and weirs for irrigation and railroads and roads for transportation. These facilities were built solely to serve the growing interests of colonialism and capitalism during the ethical-political era.

The establishment and operation of a sugar factory in Regentschap Pemalang from 1870 to 1942 altered the landscape of the environment. Sugar factories and their supporting facilities are frequently built on green land surrounded by rice fields, resulting in a row of magnificent buildings. Furthermore, rice fields have been converted into sugarcane plantations. The conversion of rice fields to sugar cane plantations has a significant impact on the availability of water in the surrounding area. This is due to the fact that sugar cane requires more water than rice or paddy fields, threatening water availability during the dry season. Furthermore, the area of sugarcane plantations tended to expand in the early 20th century. It doesn't stop there; sugar factory operations generate waste that jeopardizes environmental sustainability. Basically, agricultural land has shrunk due to the construction of factories, roads for sugarcane transportation, and irrigation [13].

Massive exploitation carried out by the colonial government and the private sector caused environmental degradation in Regentschap Pemalang. Signs of environmental degradation are demonstrated by several historical facts. First, green land is converted into factories and supporting buildings (settlements, clinics, roads, and railroads). Second, paddy fields have turned into sugarcane plantations, which require more water than rice plants. Third, environmental degradation exposes Regentschap Pemalang to natural disasters, particularly floods. At the beginning of the 20th century, floods were common in Regentschap Pemalang, both in coastal and mountainous areas.

In addition to the negative impacts that have already been mentioned, the practices of colonialism and capitalism have caused environmental degradation, which has resulted in disease outbreaks in Regentschap Pemalang. Environmental conditions that are polluted and exacerbated by the lives of residents who do not maintain cleanliness are conducive to disease outbreaks. Social issues such as crime are exacerbated by the presence of industrialization, which attracts urbanization, which, in turn, accelerates environmental degradation in Regentschap Pemalang.

6 Conclusion

The environmental changes that occurred in the Regentschap Pemalang during the colonial period were motivated by the colonial interests of the colonial government and private-sector capitalism. The colonial government and the private sector attempted to gain as much profit as possible from the colonial lands while disregarding environmental preservation. Through the Abararist Wer policy and Ethical Politics, the colonial government allowed private parties to establish businesses in the Dutch East Indies. There was a sugar factory in Regentschap
Pemalang that changed the pattern of land use from a green land to sugar factory buildings and their supporting facilities. Aside from that, private-sector plantations have altered green areas in the mountains and forced forest-dwelling animals into villages. This environmental change has resulted in a variety of natural disasters, one of which is flooding, which is caused not only by heavy rains but also by unfavorable environmental conditions as a result of industrialization. This confirms the strong relationship between colonialism and capitalism as a cause of environmental degradation in Regentschap Pemalang.

References
2. N. Syah and Y. H. Dansan, Ekologi Industri (Deepublish Publisher, Sleman, 2021).