

TRANSITION FROM TRADING TO MINING: REPRESENTATION OF BORNEO ENVIRONMENTAL HISTORY IN CONRAD'S MALAY ARCHIPELAGO

*(Peralihan daripada Perdagangan kepada Perlombongan:
Perlambangan Persekitaran Sejarah Borneo dalam Dunia Melayu Conrad)*

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Abstract

The Indonesian government's development of Nusantara as the next national capital (IKN) has drawn significant attention to the extensive extractive activities along the East Coast of Kalimantan in

East Kalimantan Province. There have been forty-two fatalities in the past twelve years due to communities living in close proximity with numerous abandoned coal mining pits in the area. This study investigates the emergence of an economy focused on extracting natural resources on the East Coast of Kalimantan during the 19th century, as documented by Joseph Conrad, an English author from the Victorian era. Data analysis utilises an environmental history methodology. More precisely, researchers employ the New Historicist approach to juxtapose data extracted from literary texts with historical documents, thus yielding a thorough comprehension of the alterations in the environment during the latter part of the 19th century. The findings of this study indicate that the shifts in economic activity that occurred in the stipulated time period were primarily driven by the transition from trading forest products to mining for coal and gold. The shift in economic activity resulting from global market demand has had a significant impact on environmental changes in this region, especially along the East Coast of Kalimantan and this impact continues to the present day.

Keywords: Joseph Conrad, environmental history, East Coast of Kalimantan, New Historicism, mining, environmental changes

Abstrak

Pembangunan Nusantara oleh kerajaan Indonesia sebagai ibu negara (IKN) seterusnya telah memberikan perhatian kepada aktiviti ekstraktif yang meluas di sepanjang Pantai Timur Kalimantan di Provinsi Kalimantan Timur. Terdapat empat puluh dua kematian dalam tempoh dua belas tahun yang lalu kerana kewujudan komuniti yang tinggal berdekatan dengan kawasan perlombongan arang batu yang terbiar di kawasan yang terlibat. Kajian ini meneliti kemunculan ekonomi yang tertumpu pada aktiviti ekstraktif sumber semula jadi di Pantai Timur Kalimantan pada abad ke-19, seperti yang didokumentasikan oleh Joseph Conrad, seorang pengarang Inggeris dari era Victoria. Analisis data dijalankan dengan menggunakan metodologi sejarah alam sekitar. Penyelidik menggunakan pendekatan Historisisme Baru untuk memadankan data yang diambil daripada teks sastera dengan dokumen sejarah, sekali gus menghasilkan pemahaman menyeluruh tentang perubahan dalam persekitaran pada akhir abad ke-19. Dapatan kajian ini menunjukkan bahawa peralihan dalam aktiviti ekonomi yang berlaku dalam tempoh masa tersebut adalah didorong oleh peralihan

daripada perdagangan hasil hutan kepada perlombongan arang batu dan emas. Peralihan dalam aktiviti ekonomi hasil daripada permintaan pasaran global telah memberikan kesan yang besar terhadap perubahan alam sekitar di rantau ini, terutamanya di sepanjang Pantai Timur Kalimantan dan kesan ini berterusan sehingga kini.

Kata kunci: Joseph Conrad, persekitaran sejarah, Pantai Timur Kalimantan, Historisisme Baru, perlombongan, perubahan alam sekitar

INTRODUCTION

The socio-ecological crisis in the East Coast of Kalimantan is growing at an alarming rate, and its long-standing history has contributed to its current condition. From 2011 to 2023, there have been forty-two fatalities in former coal mining pits in East Kalimantan (M. Purnomo Susanto, 2023; Koran Kaltim, 2022). This statistic highlights the ecological impact of the extensive extractive industry in the region. The continuous extractive activity of abundant natural resources has rendered the region ecologically susceptible to natural and man-made disasters. In particular, the negative impact on children in the East Coast of Kalimantan is severely understated. It is imperative to give careful consideration to this tragedy in order to glean lessons from history, enhance future quality of life, and avert the recurrence of catastrophic incidents, particularly in East Kalimantan.

Academic research on Joseph Conrad's works on the East Coast of Kalimantan has overlooked. At present, academic research on Conrad's works on the East Coast of Kalimantan have concentrated on economic and trade history, colonial cultural influences, and socio-political history. There is little scholarly attention given to environmental history and environmental changes on the East Coast of Kalimantan in his works (Ari Adipurwawidjana, 2020; Francis, 2015; Ida Baizura Bahar, 2010; Zawiyah Yahya, 2003). The three aspects in Conrad's study on the East Coast of Kalimantan can be categorised as follows: the economic and commercial history, as documented by Francis (2015), Ari Adipurnawidjana (2020), and Yoo (2014); the impact of colonial culture and ideology on Conrad's works in the East Coast of Kalimantan, as discussed by Zawiyah Yahya (2003), Muhammad Haji Salleh (1981), Koon (1990), and Ida Baizura Bahar (2010), and; Conrad's works in the East Coast of Kalimantan as a valuable resource for socio-political historical studies, as explored by Warren (1977), Resink (1968), Campo (2000), and Salmon & Zulli (2021).

This paper seeks to expand on existing limited research on the impact of environmental changes on the East Coast of Kalimantan in Conrad's works. Conrad's literary works utilised for this study reflect the "cultural sense of reality" of the 19th century, particularly its latter part, and show the environmental transformation that persistently impact our present existence. The reasoning provided above may derive three questions for this study: (1) In what manner does Joseph Conrad portray alterations in the natural surroundings in his literary works? (2) Within which historical framework does the theme of environmental change manifest itself in Conrad's literary works? (3) How do these changes continue to exist up until now, influencing the present socioeconomic and ecological circumstances on the East Coast of Kalimantan? The responses to the aforementioned three questions yield a fresh comprehension of the ecological chronicles pertaining to the East Coast of Kalimantan. Furthermore, the findings of this study can serve as a foundation for formulating environmental management strategies in the neighbouring regions of East Kalimantan and North Kalimantan, both of which are now situated on the East Coast of Kalimantan.

The main idea of this paper is to analyse environmental transformations by examining historical records and literary works in order to understand the societal and ecological shifts that occurred at a certain period. Historical literary works are written expressions that capture the essence of a particular era, notably the transition from mercantilism to the Industrial Revolution in the latter part of the 19th century (Adipurwawidjana, 2020; Alatas, 1977; Brannigan, 1998; Zawiyah Yahya, 2003). They serve as artistic depictions of the prevailing cultural and societal realities of that time. Hence, this study contends that Conrad's literary works initially document several environmental transformations that took place in the late 19th century along the East Coast of Kalimantan. These changes are distinct from and also supplement existing historical records, and vice versa. Furthermore, the historical backdrop of environmental transformation in Conrad's writings concerning the East Coast of Kalimantan aligns partially with his perspectives and partially remains untold by him. Consequently, the combination of literary and historical works can mutually enhance one another in order to present a comprehensive portrayal of the environmental changes that occurred during that period. Furthermore, the events that occurred in the 19th century has continued throughout the 20th and 21st centuries, with extractive industries remaining at the same levels and exhibiting similar variations. In certain areas, new types of extractive

industry have even emerged (Goh & Potter, 2023; Adipurwawidjana, 2020; Awang Azman Awang Pawi & Nasrullah, 2022).

The historical setting of Conrad's literary works provide valuable information on the environmental and social development, changes, and consequences of the extractive industry on the East Coast of Kalimantan in the late 19th century that continues to impact the present time, as evident in the deaths of forty-two people who lived in close proximity to former coal mine excavations. The consequence of this has led to forty-two fatalities as a result of submerging in former coal mine excavations, with the majority of the casualties being youngsters residing in close proximity.

LITERATURE REVIEW

Environmental History and Extractivism

Various elements, such as political, economic, and political-ecological issues, have an impact on how an area's landscape changes across time, as discussed in environmental history (Cronon, 2003). These influential components are accountable for alterations in the land within a certain region. The region's environment is mostly influenced by economic factors. Global market demands for forest products and mining commodities have a significant impact on environmental changes in Kalimantan (Goh & Potter, 2023). Therefore, foreign influence serves as a variable in the historical context of a region's environmental evolution and land alteration.

Significant environmental change frequently encompasses extractive sectors (Willow, 2019). Extractivism is an economic process that involves extracting the valuable components of a region's resources, while leaving behind the undesirable bioproducts or waste that are generated during the extraction of natural resources (Willow, 2019; Huggan & Tiffin, 2015). This approach is motivated by substantial economic gains, without considering the negative impacts on the neighbourhood and surrounding environment. Communities residing in proximity to mining and plantation sectors frequently encounter this phenomenon (Willow, 2019; Goh & Potter, 2023; Peluso, 1992; Lindblad, 2012; Toumbourou, 2020). Extractivism is often linked to ecological harm and adverse effects on the well-being of communities residing near the extractive industry's site (Willow, 2019; Toumbourou, 2020).

Conrad and The Malay Archipelago

The historical and literary records documented the early interaction of this region with extractive economic activity and global commodity markets, specifically through the trading of forest products and minerals and coal mining. Joseph Conrad, a renowned author of British colonial literature, thoroughly explored the historical dynamics between European colonial capitalism and the Malay world. He was a prominent Victorian author in the field of English literature, as noted by Baines (1960) and Sherry (1966), who authored a total of 16 literary works centred on the Malay world and Southeast Asia. These include notable titles such as *Almayer's Folly* (Conrad, 1895), *An Outcast of the Island* (Conrad, 1896), *Lord Jim* (Conrad, 1900), *The Rescue* (Conrad, 1920), *The Lagoon* (Conrad, 1908), and several others. These works primarily narrate the events that took place on the East Coast of Kalimantan, focusing on the early trading of forest goods as well as the extraction of gold and coal (Conrad, 1895, 1896, 1900; Campo, 2000; Resink, 1968; Warren, 1977; Lopian, 2009).

According to Conrad, European explorers came to this region during the latter part of the 19th century. They engaged with local authorities and communities in trade and search for gold in the inland areas of the East Coast of Kalimantan. Historical documents indicate that local authorities engaged in the trading of forest products and issued permits for European visitors to conduct gold seeking trips. These records are documented by Conrad (1895, 1896, 1900), Campo (2000), Resink (1968), Warren (1977), and Lopian (2009). In conclusion, the history of environmental change in East Kalimantan and the East Coast of Kalimantan primarily involves both local authorities and global market players. Many of these market firms had offices in Singapore and Makassar, which were trading centres connected with Europe during the 19th century.

METHODOLOGY

This paper analysed Conrad's literary works, which narrates the commercial activities and emergence of mining on the East Coast of Kalimantan during the latter half of the 19th century. His works are chosen in this study because they provide documentation of the initial stages of the ecological shift in East Kalimantan, a region located on the East Coast of Kalimantan. This study continues previous research (Awang Azman Awang Pawi and

Nasrullah Mappatang, 2022; Haris Retno Susmiyati et al., 2021) that analysed the historical backdrop alongside Conrad's literary works to comprehend the rise of extensive coal mining in East Kalimantan. This mining activity has led to notable ecological transformations and serious human consequences, including numerous casualties in coal mine pits.

The library research employed literary and historical works as primary sources of this study, together with additional secondary sources, to investigate the underlying causes, mechanisms, and current consequences of environmental change in East Kalimantan. The main focus of data collection and analysis was to use data from literary and historical sources as reference (Greenblatt, 1989, 2000; Brannigan, 1998; Vesser, 1998). Adopting this comprehensive strategy was essential for gathering the required data to create a historical account of environmental transformation in East Kalimantan. The research relied on data as its main source, covering the shift from forest product trade to mineral and coal mining. This enabled a more solid and accurate analysis of the data.

The data collection process involved a meticulous content analysis of literary and historical texts and documents. The relevant data are then extracted and cited, which constituted the primary data for this study. Subsequently, the data collection results were analysed, presented as text quotations and documents, using the environmental history approach by Cronon's (2003) to ensure a rigorous and systematic examination of the research topic. Cronon emphasises the history of land transformation due to the involvement of global markets in determining landscape changes. This means that global market demand is a determining factor in regional environmental changes.

Cronon (1991) argues that the interconnectivity between global and local, as well as urban and rural areas is a key driver of regional transformation. Hence, the following analysis examines the link between East Kalimantan and the East Coast of Kalimantan with the global market network, dating back to the 19th century. The objective is to assess the environmental changes in this region caused by the demand for global market commodities. This is accomplished by studying the current social and ecological impact in the region. New Historicism and Cultural Materialism regard literary and historical works as equivalent historical settings and co-texts. They utilise data analytic tools to complement and rectify the connection between literary and historical texts (Veeser, 1989;

Brannigan, 1998). In order to conduct a more detailed examination of the changes in the ecology in the area, Conrad's literary works, *Almayer's Folly* (OI) and *An Outcast of the Island* (OI) were scrutinised.

New Historicism and Cultural Materialism

This study employed a methodology known as New Historicism, as proposed by Stephen Greenblatt (1989, 2000) and John Brannigan (1998). This approach prioritises an equitable and impartial examination of both literary and historical materials, while constructing an environmental history framework for the East Coast of Kalimantan (Veaser, 1998). This study is crucial as it provides an opportunity to investigate the origins of extractive industrial activities, which are currently experiencing a significant rise in prevalence in the coastal region of East Kalimantan. In addition to environmental degradation and natural disasters, the said activities in the area have caused the deaths of over forty individuals, with children comprising the majority of victims (Jatam, 2020). Thus, employing the New Historicist approach has enabled this study to uncover the abundance of historical sources pertaining to environmental change in East Kalimantan through the examination of historical documents and narratives found in current literature.

TEXTUAL ANALYSIS

Conrad's writings state that the exchange of European goods and Kalimantan forest products took place in the 19th century on the East Coast of Kalimantan through trade connections in major trading hubs in the region, such as Singapore and Makassar. Consequently, the integration of Berau, situated on the East Coast of Kalimantan, into the worldwide market network during that period resulted in a significant increase in the demand for commodities. The substantial demand gradually caused environmental change, leading to the extraction of numerous forest products from nature, as mentioned in Excerpt 1 by Conrad (1895:5):

Excerpt 1

Into the river, whose entrance only he knew, Lingard had brought various *cargoes of Manchester goods, copper gongs, guns and gunpowder*. ... Many tried to follow him and searched for plenty of land for *gutta-percha and rattan, pearl shells and bird's nests, wax*

and resin, but that little Flash could overcome every ship in the sea. Some of them mourn on sand cliffs and hidden coral reefs, having lost everything and barely escaping with their lives from the cruel grip of this bright and smiling sea; others are discouraged; and for many years the seemingly green and peaceful islands that guarded the entrance to the promised land kept their secrets with all the remorseless serenity *of tropical nature*.

In the aforementioned data from Excerpt 1, Conrad depicted the commercial transactions taking place in East Kalimantan during that period. He explained that Lingard had clandestinely moved a variety of Manchester goods, including copper gongs, cannons, and gunpowder, into the river through a concealed entrance that only he was aware of. Despite multiple endeavours by others to discover ample reservoirs of gutta-percha, rattan, pearl shells, bird's nests, wax and resin, the diminutive craft Flash demonstrated unparalleled superiority over all other ships at sea. Certain individuals mourned on sandy cliffs and hidden coral reefs, having experienced substantial losses and a narrow escape from the relentless grip of this vibrant and joyful ocean. On the other hand, several individuals experienced a sense of discouragement. For many years, the verdant and serene islands, enveloped in enigma, safeguarded the entrance to the long-awaited utopia with the unwavering tranquility typical of tropical landscapes. These procedures encompassed the British and local commerce activity involving European goods and forest commodities from Borneo.

Using the data provided, Conrad (1895:77) detailed the expedition to locate gold mining sites in the interior of Kalimantan such as in Excerpt 2:

Excerpt 2

“It’s hard to see white faces here. I have lived here for many years in solitude. The Malays, you understand, are not a company for white people; what’s more, they are not affectionate; they don’t understand our ways. What a bastard they are. I believe I am the only white person on the east coast who is a resident. We occasionally receive visitors from Macassar or Singapore—traders, agents, or explorers, but they are rare. *There was a scientific explorer here a year or so ago*. He lives at my house: drinking from morning till night. He lived happily for several months, and when the liquor he had brought was lost *he returned to Batavia with reports of the mineral riches in the interior*. *Ha ha ha! Nice, right?*”

By the end of the 19th century, there was a widespread belief among the population that the natural resources of Kalimantan, including gold, minerals, and coal, had the potential to generate immense wealth. Conrad depicted the scientific investigations conducted to acquire gold deposits in Kalimantan via the character of Tom Lingard in Excerpt 3 (Conrad, 1896: 119–120):

Excerpt 3

Then he has to be patient to try and keep a few trades together. He'll be fine. But the great thing - and here Lingard spoke more modestly, bringing himself to an abrupt halt in front of the awestruck Almayer - the great thing was *chasing gold down the river*.

He—Lingard—would devote himself to him. He had been inland before. *There are large deposits of alluvial gold there*. Great. He felt confident. Never seen the place. Dangerous work? Certainly! But what reward! He would explore—and search. Not a shadow of a doubt. Hang danger! *At first they would get as much as possible for themselves. Silence the matter. Then after a period of time they formed a Company. In Batavia or in England. Yes, in England. Better. Splendid! Why, of course. And that baby will be the richest woman in the world.*

In addition to gold, minerals and coal were also in great demand due to their role as essential fuel and raw materials for Europe during the Industrial Revolution. The 19th century was a turning point in Southeast Asia's economic landscape, as it saw the emergence and rapid growth of trading and mining companies. This era was characterised by a fervent search for oil, coal, and other mineral concessions on the East Coast of Kalimantan (Lindblad, 2012). As Conrad accurately described in Excerpt 3, this was the beginning of extractivism in gold, mineral, and coal. This transformative period not only revolutionised the region's economy, but also led to significant changes in the environmental landscape of the East Coast of Kalimantan, with the exploitation of natural resources and the establishment of mining operations.

Historical Context and Co-Text

The Malay Archipelago underwent notable ecological transformations during the late 19th and early 20th centuries. The economic changes in

Europe helped to shape the ecological changes in the Malay Archipelago's economic system, as the Malay Archipelago became a colony of Europe. (Alatas, 1977; Zawiyah Yahya, 2003; Resink, 1968). The economic system transitioned from mercantilism to capitalism during the Industrial Revolution. The Malay Archipelago—comprising British Malaya and Dutch Indies—is a region that functions as a colony within the framework of colonial capitalism (Alatas, 1977; Kheng & Abu Talib, 1990). Colonialism fostered the establishment of a capitalist economic system in colonial territories, labelling it colonial capitalism. The implementation of colonial capitalism resulted in the transformation of the Malay Archipelago into a colony, where its primary function was to supply raw resources for the developing European industry.

As economic patterns shifted, commodities also transformed. Initially, the Malay Archipelago's primary commodities were forest and marine items such as rattan, resin, forest gum, and sea cucumbers. However, over time, gum, tobacco, tea, sugar, coffee, coal, and oil became the essential colonial commodities in the region (Lindblad, 1988, 2012; Dick et al., 2002; Warren, 1977). The transition from hunting and gathering in forests and seas to farming, mining, and extracting commodities necessitated extensive land expanses for plantations and mining operations. The Malay Archipelago's plantations and mining operations yielded substantial quantities of globally traded commodities.

Singapore became the central hub for the economic operations of British colonialism in the Malay Archipelago and Southeast Asia. During the 19th century, at the onset of industrial capitalism, the British designated Singapore as their commercial port, following an agreement that mandated their departure from Java and other Dutch colonies (Dick et al, 2002; Lindblad, 2012; Irwin, 1955). Over the next few decades, this tiny island in the Malacca Strait underwent significant growth and transformed into a bustling port city (Goh & Potter, 2023; Lindblad, 2012; Ita Syamtasiyah Ahyat, 2013; Magenda, 1989; Peluso, 1992; Andaya, 2008, 2019; Andaya & Andaya, 2001; Dick et al., 2002). Otherwise, as an ironic fact, the Dutch colonies of Makassar, Samarinda, and Tanjung Redeb in Berau had stronger commercial connections with Singapore than Dutch colonial trading hubs in Java, such as Surabaya, Semarang, and Batavia.

The strengthening of Singapore's position as a hub for explorers and merchants prompted numerous British individuals to assume the roles of armed traders and adventurers in the Malay world and Southeast Asia.

James Brooke assumed the role of the White Rajah in Sarawak, where he governed trade and mining activities in the northern–western Borneo. (Irwin, 1955; Lindblad, 1988; 2012). In 1845, Erskine Murray, a British explorer in Kutai, sought to establish a monopoly on the trade of forest and river resources. Living in Berau, William Lingard had a strong desire to imitate James Brooke, who successfully established control over river and sea trade on the East Coast of Borneo at the request of the Sultan of Gunung Tabur (Lapian, 2009; Lindblad, 2012; Ita Syamtasyiah Ahyat, 2013; Magenda, 1989; Peluso, 1992; Irwin, 1955). Murray was the only one out of the three individuals who lived in dire circumstances.

The Sultan of Gunung Tabur had a prominent part in the coal trade throughout the latter half of the 19th century. He engaged in transactions with Dutch colonial government steamships that were performing patrols, as well as with steam-powered merchant ships that visited Berau (Campo, 2000; Bruyns, 2005). This indicates that the local kingdom in Berau, encompassing Gunung Tabur, Sambaliung, and Bulungan, were extensively engaged in coal mining. The Gunung Tabur kingdom was a prominent hub of activity in this industry, offering coal storage vaults for purchase to European merchant ships, Dutch navy ships, and other steamship owners visiting Berau. This mining operation persists as an extractive sector that supplies coal to other global industries in certain countries (Campo, 2000; Warren, 1977; Yoo, 2014; Lapian, 2009).

Samarinda, a city that served as a trading centre for the Kutai kingdom and an administrative city under Dutch colonial rule, was also a bustling hub for British traders. George Peacock King was one such notable individual who achieved prosperity during the mid-19th century. When Murray arrived in Samarinda, he established himself as a trader and exerted his monopolistic control over the Sultan of Kutai in Tenggarong. King was among a group of British traders and adventurers who dared to travel directly to Singapore, the primary source of essential commodities for Europe and the rest of the globe (Warren, 1977; Lindblad, 2012; Lapian, 2009). Conrad was greatly impressed by William Lingard's achievement of the title of "Rajah Laut" by establishing a trade monopoly in Tanjung Redeb, Berau. In the Lingard Trilogy—*Almayer's Folly*, *An Outcast of the Island*, and *The Rescue*—William Lingard serves as the main character, though Tom Lingard plays a significant role (Lapian, 2009; Warren, 1977; Lindblad, 2012; Zawiyah Yahya, 2003; Muhammad Haji Salleh, 1980).

Conrad established the area as the administrative territory of the Dutch colonial authority, with its headquarters located in Batavia (Resink, 1968; Warren, 1977; Koon, 1990). Nevertheless, the British were able to wield significant influence over the Dutch colonial holdings on the East Coast of Kalimantan at that time.

In addition, it is essential to acknowledge the existence of the Shell oil firm in East Kalimantan, specifically in the Mahakam Delta area, spanning from Sanga-Sanga to the Balikpapan Bay Delta in the southern half of the region. Nevertheless, its existence was closely connected to its collaboration with the Royal Dutch and Menten, a Dutch explorer, who had strong connections with the Sultan of Kutai and the Dutch colonial authorities in Batavia in order to obtain permits for coal mining and oil exploration in the Kutai Sultanate (Magenda, 1989; Warren, 1981; Lindblad, 2012; Lopian, 2009). Shell, a British corporation, had no direct affiliations with the colonial authorities in Malaysia or Singapore.

Conrad's narratives were primarily set in the Kingdom of Berau, though a few also unfolded in the maritime regions adjacent to the Kingdoms of Kutai and Bulungan (Sherry, 1972; Baines, 1960; Sherry, 1966; Lopian, 2009). Plantation and mining were two economic activities that permanently and irreversibly transformed the natural environment on the East Coast of Kalimantan. This region included the Berau Sultanate areas of Sambaliung and Gunung Tabur, the Kutai Sultanate, and the Bulungan Sultanate (Lindblad, 1988, 2012; Ita Syamtasiyah Ahyat, 2012; Magenda, 1989). Conrad explored these regions, which provided the setting for his novels and short stories. As a result, more than one century later, these areas represent the over-extractive region in the island with social and ecological damage.

"Postcolonial ecology" refers to the environmental changes due to economic activities during the colonial period (Huggan & Tiffin, 2015). The impact of colonial economic operations has had a lasting and continuing effect. Existing historical documents, including those explicitly about Conrad's works set in the Malay world, have provided further information to complete the narrative gaps in the analysis of Conrad's literary works. Hence, literature and contemporary history mutually enhance, assess, and scrutinise one another to comprehensively and accurately depict the pertinent past, specifically in ecological change and its impact today.

DISCUSSION

This study demonstrates that the environmental changes occurring on the East Coast of Kalimantan in modern times are mostly caused by extractive activities. This process began in the late 19th century when the economic focus shifted from trading forest goods to mining for gold and coal. Joseph Conrad's novels, *Almayer's Folly* (AF) and *An Outcast of the Island* (OI), which were published in 1895 and 1896 respectively, depict the initial shifts in the environment during that time period. In addition, the historical background and co-texts of the two works serve as historical references for understanding environmental changes on the East Coast of Kalimantan. The current environmental change in East Kalimantan, also known as the East Coast of Kalimantan, is a consequence of colonial economic practices that originated in the shift in global demand for commodities among the European colonial powers during the early stages of the Industrial Revolution. These colonial powers required raw materials, such as gold, coal, and forest products like rattan and gutta-percha, for trade and energy.

The environmental change that Conrad described in his works about the Malay world, particularly the East Coast of Kalimantan, is an early reflection of the ecological crisis that continues in East Kalimantan as a historical process. The Industrial Revolution and early capitalism in Europe were instrumental in converting international commodities from forests and seafood to mining. The presence of capitalism in Dutch India led to the emergence of colonial capitalism, which not only exploited the native Dutch Indian population, but also played a significant role in the ongoing environmental changes in East Kalimantan.

Indonesia's incorporation into the global capitalist system has continued consistently in the post-colonial era. In Kalimantan, both throughout the colonial and post-colonial eras, mining and plantation activities, along with the economic focus on land usage, have resulted in significant environmental degradation. The pursuit of economic gains has motivated endeavours to harness the natural resources of this island. The economic structure of Indonesia from its colonial period up until the decentralisation phase, also referred to as the post-Suharto era (1998–present), has had a significant impact on the ecological problem (Dick et al., 2002; Goh & Potter, 2023). This period also signifies the ecological state of East Kalimantan, characterised by extensive endeavours to exploit natural resources. The shift from colonial capitalism during Conrad's time to neoliberal capitalism in the present time is a significant element that contributes to the ecological

crisis and human catastrophe in East Kalimantan. The deaths of children in coal mining pits serve as clear evidence of this dire situation. All forms of extractive activity are the result of the shift in the mode of production from trade (mercantilism) to mining and planting in the colonial period, which has continued since Indonesia's independence.

Several studies on Conrad's works on the Malay Archipelago, specifically East Kalimantan, have been conducted. However, the current study examines a few of the ecological factors that occurred after colonialism. The research demonstrates the colonial ramifications resulting from the colonial capitalist system in place when Conrad arrived on Kalimantan Island as a crew member of a Singaporean merchant ship. Indonesia, in particular, is currently grappling with the integration of today's neoliberal system that has far-reaching ramifications. The recent discovery of a change in global commodity demand from forest yields to gold and coal sheds light on the economic activities of colonial powers and their environmental consequences, as seen through the lens of postcolonial ecological analysis. Conrad's study on the Malay Archipelago stands out for its fresh and original perspective on the shift in global commodity trade through the lens of postcolonial ecology.

Currently, coal mining in East Kalimantan continues in spite of the environmental impacts and forty-two casualties (Jatam, 2023; Toumbourou, 2022). Indonesia's high global demand for coal contributes to East Kalimantan's continued massive coal production. Apart from energy transformation, East Kalimantan itself needs to rethink regional and national sources of income that no longer rely on extractive industries. Therefore, it is necessary to transform into a new economic model that is no longer extractive and environmentally destructive on the East Coast of Kalimantan, and East Kalimantan in general.

CONCLUSION

The most significant finding of this study is that specific factors, such as deforestation and the introduction of new market commodities, are the causes of environmental change. Joseph Conrad's literary works—specifically *Almayer's Folly* (AF) and *An Outcast of the Island* (OI)—as well as existing historical records helped to shape these unique findings. This approach challenges the common practice of disregarding literary works as sources of environmental history. Furthermore, Conrad's works provide a valuable reference for the early history of environmental changes

on the East Coast of Kalimantan. This study differs from previous studies that primarily focused on the historical aspects of colonial trade and politics.

This study significantly enriches our understanding of the East Coast of Kalimantan's environmental history, particularly concerning the European global market. The European Industrial Revolution drove the region's connectivity and catalysed profound environmental changes. The market's increasing demand for raw materials, such as forest products and gold, as well as fuel in the form of coal, reshaped the environment history of Kalimantan's tropical forest, leading to its current extractive state.

A fundamental limitation of this study is the need for primary historical sources, such as local manuscripts and colonial documents, which could provide additional data to complement the literary works that form the primary data. These historical sources are critical because they can help for better understanding of the historical context and co-text of Conrad's works. Otherwise, the inclusivity of this research to the intersection of postcolonial ecology and feminism or gender studies is the other limitation of this study. Future research must address these limitations, as they will lead to more comprehensive insights into the history of environmental changes in East Kalimantan from the 19th century to the present.

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AUTHOR CONTRIBUTIONS

Nasrullah: Concept and design, data collection, research writing, interpretation of results, preparing the final manuscript, revising; Awang Azman Awang Pawi: concept and design of the study, approving the final manuscript, revising, submission of final manuscript; Ummi Hani Abu Hassan: Concept and design of the study, approving the final manuscript, revising.

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DATA AVAILABILITY STATEMENT

The data supporting the findings of this study are available within the article.

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