Unit: JSB 255 Environmental Justice and Climate Change

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Assessment 2: Case Study (Essay)

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Statement of Authorship:

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OPTION 1: THE ENVIRONMENTAL IMPACT OF THE COAL INDUSTRY IN AUSTRALIA

INTRODUCTION

Australia's history is shaped by the coal industry because of political narratives that claim economic stability and prosperity through job creation in lifeless regional towns (Curran, 2021, p. 1-3). International demand for Australia's coal means the mining industry continues to grow even through a global transition to net-zero emissions (Douvere & Badman, 2012). Whilst the coal industry has played an integral part in Australia's rich economic history, concerns about fossil fuel emissions and a need for a rapid transition to renewable energy have emerged (Readfearn, 2021). This paper will discuss the environmental impacts of Australia's coal industry and the social consequences of its continued support for that industry. Urgent calls from United Nations (UN) Climate Change Conference (COP26) members have launched investigations into coal's long-term economic viability vs ecological harm (Long, 2020; Mao, 2021; United Nations, 2021). This paper examines how socio-cultural, political, economic, and ecological factors influence narratives about Australia's coal industry, and provides recommendations on how to best address its social consequences.

THE ENVIRONMENTAL IMPACT OF THE COAL INDUSTRY IN AUSTRALIA

Australia is one of the largest producers and exporters of coal in the world (Grech et al., 2016, p. 202; Franks et al., 2010, p. 301). Coal mining has driven Australia's economy for decades and remains one of Australia's largest exports with only Indonesia selling more coal globally (Mao, 2021). "It is widely accepted that mineral resources form a key centrepiece of the Australian economy and have helped shape Australia's long-standing energy regime" (Curran, 2021, p. 3). Coal has been strategically portrayed as the 'lifeblood of the Australian economy' for decades and continues to focus on the key narratives of stability and prosperity, jobs, and regional culture (Curran, 2021, p. 1). Rapidly growing demand for coal in the last ten (10) years has been a primary driver for further coal infrastructure development (Douvere & Badman, 2012). Ongoing demand and support for the coal mining industry is framed by public interests in job creation and economic development (Blondeel et al., 2018, 95). These socio-cultural and political drivers reinforce the coal industry as being principal to Australia's economy making the transition to renewable energy difficult (Curran, 2021, p. 1; Higginbotham et al., 2010, p. 259).

Whilst international coal demands are still present, the transition to renewable energy has caused the industry to be viewed as a zero-sum game (Grech et al., 2016, p. 204). Suggesting that if

Australia ended the coal industry today, another country would gain from the economic loss and emissions would not change. This augments the political narrative that Australia's economy relies on the coal industry to stay on-top of the international economic game. Due to Australia's unwavering support for continued exportation and creation of new coal mines, global concerns are being raised about the impact of the coal industry on climate change following increased fossil fuel emissions (Franks et al., 2010, p. 299). A prominent environmental concern is the burning of coal once it has been exported from Australian shores, rather than the mining of coal itself (Readfearn, 2021). In 2020, the Government's emissions data showed the lowest greenhouse gas emissions it had seen in 30 years (Readfearn, 2021; DISER, 2020). However, data compiled by a private UK-based pro-renewables organisation, Ember, found Australian coal burnt overseas released more than twice the number of emissions than Australia produced domestically (Readfearn, 2021). Moreover, it was determined that each new coal infrastructure development in Australia will exacerbate the risk of climate change through increased greenhouse gas emissions.

Australia's coal industry is at the forefront of the war on climate change, "from ongoing protests and class actions to the nation's commitment to the Paris Climate Agreement" (Groves & Pritchard, 2020). There are no national regulatory standards on coal mining environmental protection in Australia (Weng et al., 2012, p. 80). Most states implement their own safety standards, such as Cumulative Impact Assessments (CIA) and Environmental Impact Statements (EIS) (Grech et al., 2016, p. 202; Spaling & Smit, 1993, p. 588). A lack of legislative safeguards on the environmental impacts of coal is a cause for concern for signatories of the UN Framework Convention on Climate Change (UNFCCC) ('Paris Agreement'). Going into the 2021 UN COP26 in Glasgow, Australia was viewed as the 'bad guy' because the Government resisted pleas from two-thirds of countries who had already pledged to net-zero emissions by 2050 (Long, 2020; Mao, 2021; United Nations, 2021). Recent assessments by the Intergovernmental Panel on Climate Change (IPCC) found that there is an immediate need for rapid and deep reductions in greenhouse gas emissions globally to achieve the goals of the Paris Agreement (United Nations, 2021). Environmental injustice research can identify a range of social categories and communities that are likely to experience the direct impact of the coal industry in Australia (Higginbotham et al., 2010, p. 260).

The current government remains convinced that the expanded development of the coal industry is tied to strong economy, despite environmental opposition and 'genuine concerns about the economic viability of new coal projects' (Blondeel et al., 2018, p. 97). The IPCC says there is still time for Australia to limit the affects the coal industry has on the environment (United Nations, 2021). It is important to investigate the social consequences of Australia's coal industry to understand global environmental injustices. Environmental injustice focuses on the functioning of communities, their cultures and how their attachment to place and environment are being threatened and undermined by the coal industry (Curran, 2021, p. 5; Higginbotham et al., 2010, p. 259). Environmental harms from fossil fuels and mining were persistently neglected by global authorities causing the unequal distribution of pollution across communities with varying racial, ethnic and class compositions (Higginbotham et al., 2010, p. 260).

Social Consequences

Social movements have always focused on the impact that Australia's coal industry has on people's lives and the environment surrounding them. The Lock the Gate Alliance, founded in 2010, is a notable example of a new movement adopting a wider environmental justice discourse (Hutton, 2012, p. 16). The organisation is a resistance against the government-supported expansion of Australia's coal industry, often against the will and without consideration for residents, communities, and agriculture (Hutton, 2012, p. 15). The central aims of the Lock the Gate movement are to protect water systems, agricultural lands, bushlands/wildlife, the health of those impacted and Idigenous cultural heritage (Hutton, 2012, p.17). They investigated the Hunter Valley in News South Wales, a mature and high-density coal mining region, following concerns of increased water contamination and air pollution due to coal mine expansions (Franks et al., 2010, p. 299). Studies have investigated how Australia's coal industry has impacted the environment in the Hunter Valley region. Studies have outlined the social consequences that have emerged from the Government's refusal to conduct health assessments on air and water pollution in Hunter Valley (Franks et al., 2010, p. 299).

The Upper Hunter is a site for three power stations and thirty-four coal mines (Higginbotham et al., 2010, p. 260). Higginbotham et al. (2010, p. 259) identifies the region as a "major source of industry profits and state revenue from the mining, combustion and export of coal." The Upper Hunter region's complex economic profile has been a driver for continued expansion of coal

mining in Australia (Higginbotham et al., 2010, p. 260). Upper Hunter residents are being exposed to increased industrial air pollution and have called upon the state government to cease further expansion of the coal industry until an assessment of health impacts has been conducted (Franks et al., 2010, p. 305; Higginbotham et al., 2010, p. 260-261). "Public health researchers have identified environmental pollution as a major contributor to health inequities" (Higginbotham et al., 2010, p. 260). A report by the Lock the Gate Alliance found that coal mining communities, such as the Hunter Valley, are at a higher risk of lung cancer and chronic heart, respiratory and kidney diseases from fine particle pollution from coal mines and power stations (Lock the Gate, 2021; CAHA, 2015, p. 18). Furthermore, a clinical report by the Climate and Health Alliance (CAHA) (2015, p. 15) associated these health concerns with the rapid expansion of coal mining. Inaction from the state government on ceasing coal industry expansion in the Hunter Valley region could lead to permanent displacement of regional communities due to the danger from air and water pollution.

Research into environmental justice found that a range of social characteristics in communities – race, low socioeconomic area, ethnicity, geographical location – means a higher chance of experiencing worse health overall from mining pollution (Higginbotham et al., 2010, p. 260). Environmental justice occurs when vulnerable groups are disproportionately affected by hazards from the coal industry (Higginbotham et al., 2010, p. 262). Inequitable distribution of hazards, known as procedural injustice, is influenced by underlying socio-cultural and political factors (Higginbotham et al., 2010, p. 262). It explains the burden of risk imposed on socially disadvantaged groups and a lack of public participation in decision-making processes (Higginbotham et al., 2010, p. 263; Curran, 2021, p. 7). Indigenous representation in environmental management of coal mining developments and waste is minimal or ignored (Mathews, 2021, p. 64). This is due to the lack of national environmental safeguards and the failure of state governments to legislatively incorporate cultural perspectives. The Indigenous perspective is imperative to understanding the natural environment and provides unique insight into how to stop unnecessary climate displacement (Thornton, 2021, p. 16).

RECOMMENDATIONS

Australia's coal industry continues to grow exponentially because of long-standing supportive political and economic narratives. Whilst the end of the industry is inevitable, it is imperative that

the Australian Government implements environmental safeguards now to support a rapid transition to renewables. Over the years climate change activists and organisations have made concentrated recommendations to Australia to cut back on fossil fuel emissions globally (Groves & Pritchard, 2020). There are three possible recommendations that would dramatically change the Australian coal industry's environmental impact on the world if implemented immediately.

Australian coal communities, such as the Hunter Valley, will become vast expanses of unusable, contaminated land and many regional residents will be without work. Workers in the thermal coal mines of Hunter Valley, some of whom have worked for the mine for generations, are bound to be displaced and without skills suitable to other careers. It is time for the Australian Government to start planning for a future without coal. It is recommended that the Australian Government ceases all new coal mining infrastructure developments and declines all new coal mining applications. The purpose of this recommendation is to encourage the government to focus funding on more sustainable renewable energy developments rather than new coal infrastructure. Renewable energy infrastructure has been solely funded by the state governments (Blondeel et al., 2018, p. 98). With support from the federal sector, Australia could become a leading renewable energy hub. Furthermore, this funding could be used for upskilling and providing training to existing coal mine workers to support their transition to renewable energy.

Alongside the need for future-proofing of jobs, the health of coal mining communities and their environment is essential to minimising the impact of the industry on the world. Hunter Valley residents alongside large activist organisations, such as Lock the Gate, are pressuring the government to "examine the relationship between industrial emissions in the Upper Hunter and the health status of the population" (Higginbotham et al., 2010, p. 261). By conducting this necessary research into the relationship between health and the coal industry, governments across the globe will be more likely to cut back on harmful practices that create find particles. They will have necessary data to design innovative, environmentally friendly ways to address the air and water pollution as a result of the coal industry. By understanding the extent of the problem, scientists and governments will be able to address it faster and more directly.

Finally, it is imperative that we address the harms caused to the natural environment by the coal industry. Whilst the damage from Australia's coal industry is already done, the production process and aftercare of impactful mining/exporting can be addressed nationally. It is recommended that

the federal government provides a national policy framework to ensure proper environmental protections are being upheld by transnational corporations, including expectations of emissions minimisation once exported. The policy framework should include emissions targets that are in-line with the United Nations Paris Agreement and its members (United Nations, 2021). By doing so, Australia could become a leading nation in renewables, net-zero emissions targets, and a cleaner coal industry until it is completely phased out.

CONCLUSION

Australia's long history of coal mining and exportation continues to cause concerns for the longevity of the environment and global warming. Investigations into the environmental impacts of Australia's coal industry found political narratives to be dominated by ideas of economic benefit, stability and prosperity, and job creation. The Australian Government needs to take immediate action to ensure environmental justice is upheld throughout the transition to renewable energy. After examining the Hunter Valley region mining sector, it is evident there is a vast array of social consequences to the expansion of the coal industry in Australia. It is important the Australian Government considers the three main recommendations outlined in this report to ensure communities and the natural environment are safeguarded from climate destruction.

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