JSB255 ECO CRIME

ASSESSMENT 2 CASE STUDY

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THE ENVIRONMENTAL IMPACT OF THE COAL INDUSTRY IN AUSTRALIA

INTRODUCTION

Australia's dismal climate record was recognised at the COP26 summit in October 2021. Slipping four places since 2020, Australia now sits at rank 59 in the Climate Change Performance Index (CCPI), ranking ahead of only 6 countries (Germanwatch, 2021). After receiving 'very low' performance ratings in each CCPI category, experts explain the country's international reputation has been damaged by "climate denialism in politics, refusal to increase ambition, and refusal to recommit to international green finance mechanisms" (Germanwatch, 2021). A significant contributor to the country's poor climate performance is our enormous fossil fuel carbon footprint caused by coal production (Para et al., 2019). Australia is one of the highest CO2 emitters in the world when assessing per capita, and this is largely due to the country's heavy economic reliance on the coal industry (Para et al., 2019). This case study will explore the environmental impacts of Australia's multi-billion dollar coal industry, the broader social consequences, and how the effects have been exacerbated by the Australian government's climate inaction.

IDENTIFYING THE PROBLEM

Coal mining in Australia began shortly after the land was invaded by British colonies in 1788 (Miller, 2021). Since then, the production and export of coal has transformed into a multi-billion-dollar industry that shows no sign of decline due to its heavy influence on the Australian economy. Australia's vast coal resources are the fifth largest in the world, holding approximately 10% of the world's economically recoverable black coal and 24% of the world's economically recoverable brown coal (Parra et al., 2019). Totalling an estimated 145 billion tonnes, if these were fully utilised, it would emit 251 billion tonnes of CO2 into the atmosphere (Parra et al., 2019). Australia has taken full advantage of these resources by establishing itself as the third largest coal producer, second largest exporter of thermal coal, and largest exporter of metallurgical coal (Parra et al., 2019). At a domestic level, coal is the main resource to generate the country's electricity (DISER, 2021). The total emissions of the

coal sector, being the country's single largest contributor to greenhouse gas emissions, makes up one third of Australia's total emissions (Parra et al., 2019; Australian Government, 2017).

EVALUATING THE EXTENT OF THE PROBLEM

Electricity production via coal is the most polluting compared to other sources (Climate Council, 2019). With coal mines in almost every state in Australia, the environmental and social impacts are far-reaching and devastating. The Sydney and Bowen basins produce 90% of Australia's coal exports, and the local community and environment are experiencing the worst of the environmental effects (De Valck et al., 2021). The industry has significantly contributed to the destruction of biodiversity, air and water pollution, soil erosion, and the degradation of Australia's numerous environmental treasures and native wildlife (De Valck et al., 2021). Most notably, during cyclone weather, the Adani Abbot Point Coal Terminal released highly polluted water into the Great Barrier Reef World Heritage Area and surrounding wetlands in 2017, exceeding the company's pollution limit by 800% and causing significant damage to the environment (Slezak, 2018). The environmental impacts of coal mines continue long after production has ceased. The Glencore Ravensworth underground mine that closed in 2014 continues to leak methane equivalent to more than a million tonnes of CO2 (Australian Conservation Federation, 2021). Every year, it emits climate pollution at a scale equivalent to 33,000 cars (ACF, 2021). When assessed over a 20-year period, experts have found methane to be 84 times more powerful than carbon dioxide at warming the atmosphere (Australian Conservation Federation, 2021).

The most alarming environmental impact is the coal industry's direct contribution to the warming of the planet. In 2019, coal combustion caused a 0.3 degree Celsius temperature increase, making coal the largest contributor to the increasing temperature of the earth (International Energy Agency, 2019). At a national level, Australia is already experiencing drought, bushfires, floods, and other extreme weather events as a result of climate change (Castleden et al., 2011). These impacts are felt far beyond Australia's borders, and by establishing itself as a large coal exporter, Australia is responsible for coal burning across multiple countries. In 2017, it was estimated that Australia's domestic and exported coal

emissions contributed approximately 3.5% of global carbon dioxide emissions, with 2.9% being from exported coal (Parra et al., 2019). It is estimated that if global temperature levels reach 2 degrees Celsius, coral reefs will be destroyed, one third of the world will experience catastrophic heatwaves on a 5 yearly basis, and the Arctic will be ice-free in summer months (Parra et al., 2019).

The interrelation between natural and built environments means that all eco-related harm is inextricably linked to the health and wellbeing of humans (White & Heckenberg, 2014). Burning coal releases toxic carcinogenic substances into land, water and air (Climate Council, 2019). In fact, air pollution due to coal production has caused air quality to reach a life threatening level, and epidemiologist Ben Ewald estimates air pollution caused by coal-burning power stations will result in 3,500 deaths between 2018 and 2042 (Rooke, 2021). The health problems caused by coal mining include lung cancer, heart disease, premature death, and coal workers' pneumoconiosis, which has remerged since it's supposed eradication years ago (Climate Council, 2019). Further, extreme weather effects can result in social disruption, stress, and significant mental health issues (Castleden et al., 2011). These issues have an incredibly costly impact on affected individuals and the broader community, costing taxpayers approximately 2.6 billion dollars (Climate Council, 2019).

THE BROAD SOCIAL CONSEQUENCES

It has been internationally recognised that the Australian Government are failing their moral obligation to acknowledge and address the immense harm the coal industry is having on the global environment and community. The incompetency and negligence of the government in addressing the coal industry's harm was highlighted in 2017 when Scott Morrison, then Treasurer, ridiculed the Opposition's commitment to renewable energy by passing around a lump of coal in parliament. During this parliamentary performance he said, 'don't be afraid, don't be scared, it won't hurt you. It's coal" (Hamilton, 2017). As Prime Minister, he has handled the climate crisis with the same disregard.

The COP26 summit was the 26th United Nations Climate Change conference where parties to the 2015 Paris Agreement gathered to discuss accelerating global climate action (United

Nations, 2021). Australia is one of 196 signatories to the Paris Agreement, a legally binding international treaty that came into force in 2016 (United Nations, 2021). As a signatory, Australia has committed to taking an active role in limiting global warming temperatures to 1.5 degrees and aiming for a climate neutral world by 2030 (United Nations, n.d.). Only in October 2021 did the Australian government announce an emissions reduction plan to reach net zero emissions by 2050. However, this plan has been widely criticised for not having any modelling or proposed policies (Martin, 2021).

Despite the significant environmental and health-related harms, the coal industry is showing no sign of decline. New South Wales authorities have approved 23 coal and gas projects since the Paris Agreement came into force in November 2016 (Morton, 2022). These projects are estimated to release 3 billion tonnes of greenhouse gases (Morton, 2022). The government has approved four plans for coalmine expansions, and granted a hundred-million-dollar loan for a coalmine project in Queensland (Morton, 2022). In response to the continued approval of coal mining projects, particularly the approval of the Vickery coal mine in New South Wales, a group of young people brought legal action against the Minister for the Environment (Smyth et al., 2021). The Federal Court of Australia found that under administrative law, the Minister owes Australian children a novel duty of care to not cause harm to them as a result of the extraction of coal and the emission of carbon into the atmosphere (Smyth et al., 2021). The significance of this decision is that the Australian court declared climate harm to be catastrophic and "reasonably foreseeable" rather than a future problem, as it has done in the past (Schuijers, 2021). It also set an important precedent that will provide citizens with a legal avenue to challenge a government decision relating to projects that could exacerbate the climate crisis (Smyth et al., 2021).

Beyond this landmark civil decision, the environmental harm caused by the coal industry has rarely been considered in a criminal context in Australia. Activities so closely tied to economic success are rarely subject to discourses of criminalisation due to the capitalist nature of industrialisation, politics, and broader society (White, 2018). Capitalist ownership and control of resources underpins the Australian political economy and has become a big driver of global warming (White, 2018). The exploitation and degradation of our environment is considered a necessary harm because natural resources are considered

commodities to be utilised for personal profit (White, 2018). It is this capitalist lens that has positioned conversations of climate change to take on a purely 'constructionist' position (White, 2018). When discussing the impacts of the coal industry and climate change, discourse is centred on nature as a social construct as it relates to humans, rather than a separate entity deserving protection (White, 2018).

RECOMMENDATIONS

When addressing coal phase-out initiatives across the globe, Climate Analytics declared, "Ending [Australia's] dependence on coal for electricity generation by 2030 is the single most important element of Australia's domestic contribution to global efforts" (Climate Analytics, n.d.). The Australian government needs to urgently devise a plan to phase out coal, not only to reduce the country's environmental impact, but to restore the country's reputation as a climate ally (McKenzie, 2021). Australia has fallen behind the majority of countries that are undertaking significant political and economic change to move towards decarbonisation (McKenzie, 2021). As other countries strategize away from coal, Australian coal exports, which account for 77% of the country's coal production, will likely be affected (De Valck, 2021). Corporations within the Australian energy sector have also begun to shift as they look towards renewable resources (Rooke, 2021). Experts have highlighted that utilizing 100% clean energy resources to create a fully decarbonised electricity sector is achievable by 2030 if the government works towards adapting infrastructure and creating an operational strategy (Rooke, 2021). To do so by 2030 would be a considerable task, but the resources are available and mature (Rooke, 2021). The urgency to act has been made clear by the current environmental harms being caused by the coal industry, and the future projected harms should the earth's temperature continue to increase.

CONCLUSION

The Australian government has continuously prioritised the country's coal industry to grow the economy, however this has come at the cost of safeguarding citizens from the catastrophic impacts of climate change. A lack of federal leadership has damaged our country's reputation at an international level, and this was further solidified by our poor

performance in the Climate Change Performance Index. Without the introduction of any effective national policies, Australia remains a significant contributor to the climate crisis (McKenzie, 2021). The eco-related harms caused by the Australian coal industry are being felt at both a national and international level. To prevent further environmental catastrophe, the Australian government must take urgent action to stay in line with our Paris Agreement commitments to keeping the surface temperature level under 1.5 degrees Celsius (United Nations, n.d.). These commitments can only be fulfilled by a drastic shift away from coal mining towards renewable energy sources.

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