



Out of sight out of mind

Impacts of Japanese use of Australian coal



Contents

Summary	3
Introduction.....	6
Australian coal industry.....	8
Global size	8
Coal in the Australian economy	8
Coal's political influence	10
Australian opposition	11
Coal's impacts in Australia.....	13
Forest and animal habitat	13
Water	16
Great Barrier Reef	17
Human health	20
The future.....	22

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Summary

Japan uses a lot of coal. The 170 million tonnes the country burned in 2020 is enough to fill the Tokyo Dome 102 times over.

Burning so much coal is a key reason Japan is the fifth-largest greenhouse emitter in the world. If the world is to avoid dangerous climate change, coal use must be phased out.

Japan's coal use not only contributes to climate change, but has major impacts on Australia. Japan imports almost all of its coal, and over 60% of Japan's coal comes from Australia. In recent years, coal mines have expanded in size and have had major impacts on the Great Barrier Reef, forests (including koala habitats), rivers, farms, rural communities, and also on human health, First Nations peoples' rights and workers' rights. These issues make regular headlines in the Australian media as communities challenge coal companies on their environmental and workplace standards.

Japan is Australia's largest coal customer, and Japanese coal demand is a key factor in the development of Australia's coal export industry. Historically, Japan bought over half of Australia's coal exports, and many mines are part-owned by Japanese companies.

Now, Australia is the second-largest exporter of coal in the world after Indonesia, and Australia's exports of coal and gas combine to make it the third-largest exporter of greenhouse gas pollution, after Russia and Saudi Arabia.

Despite the impact of Australian coal on global markets and the global climate, it has a small impact on the Australian economy. Just 0.3% of Australian jobs are in coal mining — 99.7% of Australians do not work in the coal industry. The taxes and fees paid by the coal industry to all levels of government in Australia account for less than 2% of total government revenue.

While a small part of the economy, Australia's coal industry has huge political influence. It makes large donations to political parties and also provides jobs to key politicians and their staff when they want to, or are forced to, leave politics. This movement of staff between mining lobby groups and political offices is often referred to as a 'revolving door' — politicians leave politics for jobs in mining, while mining lobbyists walk into political jobs.

While Australia's coal industry is very powerful, it also faces strong opposition. A wide range of community, environment and farming groups oppose expansion of coal in Australia and push for the phase out of the industry. This opposition is having some success. Ten years after huge new mines were proposed in Queensland's Galilee Basin, mines big enough to double Australia's coal exports, none of these mines have produced any coal.

The reason for this opposition goes beyond concern for global climate change. Most coal mined in Australia comes from 'open-cut' mines — huge holes in the ground that destroy everything on top of the coal. In one region alone, the New South Wales (NSW) Hunter Valley, the unfilled holes from these mines will be as large as Tokyo's Shinjuku-ku, Shibuya-ku, Minato-ku and Chiyoda-ku combined. These mines destroy forests, including koala habitats and farms. Japanese companies such as Itochu, J-Power, Idemitsu and Sumitomo have interests in three mines that are destroying half of the Leard State Forest in NSW, considered the ecological "lynch pin" of the Liverpool Plains region northwest of Sydney. Despite huge public protests and prosecutions under environmental laws, these mines continue.

Coal mines use a lot of water. Farmers in Australia often lead protests against mines due to their water impacts. The most controversial coal company in Australia, the Indian energy company Adani, intends to use 12 billion litres of water per year. This is equivalent to the water a Japanese city of 100,000 people would consume annually. Scientists expect this mine will destroy ancient springs in the Galilee Basin and the animals and plants that depend on them, including koalas, kangaroos and the rare Black-throated Finch. Adani has also been fined for releasing coal-laden water into sensitive wetlands next to the Great Barrier Reef.

Despite being one of the world's great natural treasures and a UNESCO World Heritage site, the Great Barrier Reef is being steadily destroyed by climate change. The rising global temperature is increasing the number and severity of tropical storms, making the ocean more acidic and contributing to coral bleaching.

In March 2020, the Reef suffered its worst coral bleaching episode yet, affecting the main parts of the Reef. The route from many Australian mines to Japan takes coal transport ships straight through the Reef, and the irony of the coal that threatens the Reef's very existence being shipped through its waters has not been lost on Australians.

As well as being destructive to plants, animals, rivers and forests, coal mining is also hazardous to human health. Poor safety standards have led to a resurgence of black lung disease in Australia, an incurable condition that affects coal miners. Long thought to be eradicated in Australia, it re-emerged in 2015, including in Japanese-owned mines, with 133 cases counted by 2020. Communities adjacent to coal railways and ports are also affected by coal dust.

To address climate change, protect Australian biodiversity and water resources, and improve air quality and human health in Japan and Australia, Australian coal exports and Japanese coal consumption must be phased out. Numerous research programs have shown this can be achieved without major disruption to economies or energy systems.

Huge progress has been made. In 2015, Australian coal exports to Japan grew by 28% in the preceding five years and official forecasts expected another 15% growth by 2020. Instead, 2020 levels are largely unchanged from 2015. Similarly, while Japanese coal demand had been expected to grow substantially, it has declined in recent years.

On the other hand, Australian and Japanese interests are still working not only to expand existing coal mines, but to find new uses for Australian coal. For example, Kawasaki Heavy Industries is looking to use Victorian brown coal, the lowest quality coal in Australia, to create and export hydrogen. Despite claims that carbon pollution would be captured, carbon capture projects have failed for decades in Australia and none are currently operating.

With collaboration between Japanese and Australian communities, progress is possible to reduce the damage caused by coal mining in Australia and coal consumption in Japan. The aim of this report is to support this collaboration.

Important koala
habitat is being
**cleared for open-
cut mines** 🌿



Introduction

Japan uses a lot of coal. The 170 million tonnes the country burned in 2020 is enough to fill the Tokyo Dome 102 times over.¹

Burning this coal contributes to the poor air quality in Japan's cities. At least 60,000 premature deaths occur from air pollution in Japan every year.² Beyond the pollution in Japanese skies, this coal produces around 490 million tonnes of greenhouse gasses that contribute to climate change.³ Burning so much coal is a key reason Japan is the fifth-largest greenhouse gas emitting country in the world.

If the world is to avoid dangerous climate change, coal use must be phased out. While Japan has taken some steps towards reducing its coal use and has committed to achieve carbon neutrality by 2050, progress will require more than words. The country has 162 coal-fired power plants operating and a further 16 are planned for the future.⁴

A plan to phase out coal-fired power by 2030 has been prepared by Japanese environment and community groups, such as Japan Beyond Coal and Kiko Network, but this phase-out is not supported by the Japanese Government. In fact, the country's main energy policy document, the 2018 *Fifth Strategic Energy Plan*, describes coal as follows:

Though coal has a problem — it emits a large amount of greenhouse gas — it is currently evaluated as a fuel for an important base-load power supply because it involves the lowest geopolitical risk and has the lowest price per unit of heat energy among fossil fuels.⁵

The suggestion that coal provides cheap energy is wrong. In Australia and the United States, new renewable energy capacity has been cheaper than new coal capacity for several years.⁶ Recent estimates for Japan suggest that new renewables will be cheaper than new coal by 2022 and cheaper than existing coal by 2025.⁷ More importantly, however, the Japanese Government policy ignores the many costs coal imposes on human health and the environment.

Most Japanese people are aware of the climate crisis and air pollution from using coal. However, coal also has many other damaging impacts that are less familiar to Japanese consumers, because they are felt in the places where coal is mined and transported, not where it is consumed.

Almost all of Japan's coal is imported, and the vast majority of Japan's coal imports come from Australia. In 2020, 106 million tonnes of coal was shipped from Australia to Japan, 63% of Japan's total.⁸ Indonesia and Russia account for most of the rest of Japan's imports.

¹ International Energy Agency (2020) Coal 2020: Analysis and forecast to 2025, <https://www.iea.org/reports/coal-2020>; Tokyo Dome (no date) What is Tokyo Dome?, <https://www.tokyo-dome.co.jp/en/tourists/dome/about.html>; Aqua-Calc (no date) Calculate weight of compounds and materials per volume, <https://www.aqua-calc.com/calculate/volume-to-weight>

² Cohen et al (2017) Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study 2015, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)30505-6/fulltext#%20](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30505-6/fulltext#%20)

³ Calculation based on a CO2 emissions factor of 2.86, sourced from US Energy Information Administration (1994) Carbon dioxide emission factors for coal, https://www.eia.gov/coal/production/quarterly/co2_article/co2.html#:~:text=The%20amount%20of%20heat%20emitted,components%20vary%20by%20coal%20rank.

⁴ Japan Beyond Coal (2021) Database update: Latest status of coal-fired power plants, <https://beyond-coal.jp/en/>

⁵ Ministry of Economy, Trade and Industry (2018) Strategic Energy Plan (Provisional Translation), July 2018, p 24 https://www.meti.go.jp/english/press/2018/pdf/0703_002c.pdf

⁶ See for example levelised cost estimates in Lazard (2020) Levelised cost of energy and levelised cost of storage – 2020, <https://www.lazard.com/perspective/lcoe2020>

⁷ Institute for Future Initiatives: University of Tokyo et al (2019) Land of the rising sun and offshore wind, https://www.powermag.com/wp-content/uploads/2019/10/land_of_the_rising_sun_and_offshore_wind_carbon_tracker_7_10_19.pdf

⁸ Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly: December 2020, <https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html>

As well as buying Australian coal, Japanese companies also own stakes in many coal mines in Australia, including some of the most controversial mines in the country. Many of these Japanese companies are well-known, including Mitsui, Mitsubishi, J-Power, Itochu, Idemitsu and others. Some of these companies are not looking to move away from coal, but are actually searching for new ways to use more coal. Despite claims to the contrary, these “new” uses — such as creating hydrogen and other gasses and fuels — produce huge amounts of greenhouse gas pollution, with proposed carbon capture and storage technologies (CCS) still years away from completion.

As the source of much of Japan’s coal, many of the impacts of coal production are felt in Australia. In recent years, coal mines have expanded in size and have had major impacts on the Great Barrier Reef, forests (including koala habitats), rivers, farms, rural communities, and also on human health, First Nations peoples’ rights and workers’ rights. These issues make regular headlines in the Australian media as communities challenge coal companies on their environmental and workplace standards.

This report looks in detail at the true costs of Japan’s reliance on Australian coal: the environmental damage (both in Australia and to the world as a whole), the toll on human health, and the short-sighted, incomplete economic approaches that allow coal to be seen as “cheap” in the first place, especially in an age where renewable energy and energy efficiency technologies are providing stiff competition on price.

This document will enable Japanese consumers, investors and parliamentarians to make informed decisions about supporting the current strategy of continued investment in, and expansion of, Japan’s coal-fired power infrastructure.

*Below. Yokosuka Coal Power construction site, Japan.
Photo: Japan Beyond Coal*



Australian coal industry

Global size

Australia is the second largest exporter of coal in the world after Indonesia. Of the 1.2 billion tonnes of coal traded internationally in 2020, 366 million tonnes (31%) came from Australia, and 404 million tonnes (34%) from Indonesia.⁹

Australia's exports of coal and gas combine to make it the third-largest exporter of greenhouse gas pollution, after Russia and Saudi Arabia.¹⁰

Australia's coal industry is already big and intends to more than double in size. Even though avoiding climate change requires that the world use less coal, there are proposals for new mines that would add potential production from new mines of 527 million tonnes per year.¹¹

Japan is Australia's largest coal customer, and Japanese coal demand is a key factor in the development of Australia's coal export industry. In 2020, 27% of Australia's coal exports went to Japan. While other countries are now also important customers for Australian coal companies (for example, China bought 24% of Australia's 2019 coal exports), historically, Japan has bought over half of Australia's coal exports.¹² Without sustained demand for coal by Japan, it is likely that Australia would never have become the major coal and carbon pollution exporter that it is today.

Coal in the Australian economy - few jobs, minimal tax payments

Despite Australia being a big part of the world's coal trade, the coal industry is not a significant part of Australia's economy.

The industry is highly automated, using many machines but employing few people. It pays little in taxes and other fees and most profits go to the international mining companies that own most of the mines, not to Australian communities and governments.

Just 0.3% of jobs in Australia are in coal mining — so 99.7% are not. Even in Queensland, the state that mines the most coal, just 0.9% of workers work in coal mining.¹³ Vastly more Australians work in education (8.5%) and health care (13.8%) than in coal mining.¹⁴ While coal can be a significant employer in particular towns in mining regions, overall it is not a significant employer in the Australian economy. There are already some promising initiatives by local unions, climate groups and communities that aim to help these towns shift to other industries including renewable energy.¹⁵

⁹ International Energy Agency (2020) Coal 2020: Analysis and forecast to 2025, <https://www.iea.org/reports/coal-2020>

¹⁰ Swann (2019) High Carbon from a Land Down Under: Quantifying CO2 from Australia's fossil fuel mining and exports, <https://australiainstitute.org.au/report/high-carbon-from-a-land-down-under-quantifying-co2-from-australias-fossil-fuel-mining-and-exports/>

¹¹ Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly: December 2020, <https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html>

¹² Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly: December 2020, <https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html>

¹³ ABS (2020) 6291.0.55.003 Labour Force, Australia, Table 6, EQ06, <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed-quarterly/latest-release#data-downloads-data-cubes>

¹⁴ ABS (2020) 6291.0.55.003 Labour Force, Australia, Table 6, EQ06

¹⁵ See for example the Hunter Jobs Alliance - <https://www.hunterjobsalliance.org.au/>

The taxes and royalties paid by the coal industry to all levels of government account for less than 2% of total government revenue.¹⁶ For context, revenue fluctuates by between 3-8% every year without damaging the capability of the budget.¹⁷ In Queensland, where royalties make up the biggest portion of revenue, the coal industry only contributes 6% of the state's revenue.¹⁸ This is less than the Queensland government will earn from motor vehicle registration in 2020–21.¹⁹ In essence, the federal and state governments in no way rely on the contribution of coal to fund public goods.

When considering the taxes paid by the coal industry in Australia, it is important to remember that the industry also receives subsidies from Australian governments. Each year the coal industry enjoys at least \$1 billion (¥80 billion) in fuel tax credits from the federal government.²⁰ State governments provide subsidised infrastructure and other assistance. From 2008 to 2014, state governments spent almost \$10 billion (¥806 billion) on subsidies to the coal industry.²¹

The coal industry often claims it is one of Australia's largest export industries. This is true. Coal worth \$55 billion (¥4,440 billion) was sold in 2020,²² representing 14.7% of the value of Australia's total exports.²³ However, the coal industry does not mention that it is mostly foreign owned. While we talk about the "Australian" coal industry, at least 80% of the industry is owned by overseas investors.²⁴

There is considerable Japanese investment in Australia's coal industry, but more concerningly, many of the mining companies that operate in Australia use tax havens to minimise any kind of payments to Australia. For example, major mining company BHP was forced to pay \$529 million (¥42 billion) in tax back payments due to inappropriate tax avoidance through its Singapore subsidiaries.²⁵ BHP partners with Mitsubishi in many Australian coal projects, potentially linking these tax avoidance issues to a major Japanese company.

This means profits from Australia's coal exports largely go to international investors, not the Australian community. Just as opponents of Kansai Electric Power Co's Sendai Power Station complain that "Tokyo gets the electricity, Kansai gets the profits, Sendai gets the pollution", similarly in regards to Australia's coal exports, "Japan gets the coal, tax havens take the profits, Australia is left with the mess."

¹⁶ Forthcoming

¹⁷ ABS (2020) Government Finance Statistics, Australia 2018-2019, <https://www.abs.gov.au/statistics/economy/government/government-finance-statistics-annual/2018-19#data-download>

¹⁸ Queensland Treasury (2020) Budget Papers 2020-21, <https://budget.qld.gov.au/budget-papers/>

¹⁹ Queensland Treasury (2020) Budget Papers 2020-21, <https://budget.qld.gov.au/budget-papers/>

²⁰ Quicke (2020) Government digs deep for mining company tax rebates, https://nb.tai.org.au/2020_budget_wrap?utm_campaign=budget2020_wrap&utm_medium=email&utm_source=theausinstitute#mining

²¹ Peel, Campbell and Denniss (2014) Mining the age of entitlement: State government assistance to the minerals and fossil fuel sector, <https://australiainstitute.org.au/report/mining-the-age-of-entitlement/>

²² Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly: December 2020, <https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html>

²³ ABS (2020) 5368.0.55.006 Characteristics of Australian Exporters, Table 2, <https://www.abs.gov.au/statistics/economy/international-trade/characteristics-australian-exporters/latest-release#:~:text=The%20total%20value%20of%20exports,and%20liquefied%20natural%20gas%20exports.>

²⁴ Richardson and Denniss (2011) Mining the truth: the rhetoric and reality of the commodities boom, <https://australiainstitute.org.au/report/mining-the-truth-the-rhetoric-and-reality-of-the-commodities-boom/>

²⁵ Chau (2018) BHP settles tax dispute with ATO for \$529 million, without admitting fault, [https://www.abc.net.au/news/2018-11-19/bhp-settles-ato-dispute-for-\\$529-million-without-admitting-fault/10511924](https://www.abc.net.au/news/2018-11-19/bhp-settles-ato-dispute-for-$529-million-without-admitting-fault/10511924)

Below. Australia's Prime Minister Scott Morrison took coal into parliament to show support for the industry.
Photo: Licenced by The Australia Institute.

Coal's political influence in Australia

Despite being a very small part of the Australian economy, the coal industry has huge political influence in Australia.

The current Prime Minister Scott Morrison once waved a lump of coal around while making a speech in Parliament, the last Prime Minister Malcolm Turnbull supported the industry,²⁶ while earlier Prime Minister Tony Abbott declared that coal was “good for humanity”.²⁷

There are several reasons why the coal industry has so much influence. Most obviously, it makes large donations to political parties. Donations from the coal, oil and gas industries to political parties in 2018–19 totalled nearly \$2 million (¥160 million).²⁸

More importantly, the coal industry dominates the lobby groups of the wider mining industry. For example, even though Australia's exports of iron ore are worth twice as much as coal exports, the powerful Minerals Council of Australia — the national industry association for the mining sector — gets three times as much media exposure for coal than it does for iron ore.²⁹

These groups are immensely powerful. The Minerals Council of Australia boasted that it had been able to have Australia's pioneering carbon price and a mining tax abolished, key issues in the downfall of two Australian governments.³⁰ Staff exchanges between mining lobby groups and political offices are often referred to as a ‘revolving door’ — politicians leave politics for jobs in mining, while mining lobbyists walk into political jobs. For example, a former Minerals Council executive is now Prime Minister Morrison's Chief of Staff, while former Federal Resources Minister Ian Macfarlane left politics and became the head of the coal-dominated Queensland Resources Council.³¹



²⁶ Hannam (2015) Malcolm Turnbull's five mistakes about coal, <https://www.smh.com.au/environment/climate-change/malcolm-turnbulls-five-mistakes-about-coal-20151029-gkldzv.html>

²⁷ ABC (2014) Coal 'good for humanity', Prime Minister Tony Abbott says at \$3.9b Queensland mine opening, <https://www.abc.net.au/news/2014-10-13/coal-is-good-for-humanity-pm-tony-abbott-says/5810244>

²⁸ Australian Conservation Foundation (2020) Fossil fuel money: distorting democracy, https://www.acf.org.au/fossil_fuel_money_distorting_democracy

²⁹ Swann et al (2017) What does the MCA stand for? Mainly Coal Advocacy, <https://australiainstitute.org.au/post/what-does-the-mca-stand-for-mainly-coal-advocacy/>

³⁰ Minerals Council of Australia (2013) Annual Report

³¹ Parkinson (2018) Former coal industry boss is Scott Morrison's chief of staff, <https://reneweconomy.com.au/former-coal-industry-boss-is-scott-morrison-s-chief-of-staff-69647/>; QRC (2021) Ian Macfarlane, <https://www.qrc.org.au/staffs/ian-macfarlane-2/>

Australian opposition to the coal industry

While Australia's coal industry is very powerful, it also faces strong opposition.

A wide range of community, environment and farming groups oppose expansion of coal in Australia and are pushing for the phase out of the industry. Opposition to coal takes many forms. Sometimes there are street protests and campaigns to write to politicians, but some campaigns have gone much further.

The best known is the fight against huge new mines in the region of Queensland known as the Galilee Basin. Mines with annual capacity of over 300 million tonnes are proposed — an amount of coal almost double Japan's annual demand. These mines are planned to run for over 60 years, far beyond the period the world has to decarbonise if dangerous climate change is to be avoided.



The campaign against coal in the Galilee Basin, particularly against the mine proposed by Indian company Adani, has united people across Australia. In addition to public protests against the mine, several court cases were launched against it. Some were lost, while others were successful — the federal government was found not to have properly assessed the impact on species like the Yakka Skink (a small lizard) and Ornamental Snake, both classed as 'vulnerable' by the Australian government, and temporarily overturned the mine's approval.³²

Opposition to banks and companies that were considering working with Adani is widespread. People were encouraged to close their accounts with banks considering lending money to the mine. This was highly successful. All the major banks in Australia refused to fund Adani,³³ and two Japanese banks — Nippon Life and Dai Ichi Life — also ruled out financing the project.³⁴ Protests were held outside large engineering companies looking to work with Adani, which helped persuade these companies not to work on the mine.³⁵

The campaign against the Galilee Basin has been largely successful. Ten years after the main mines were proposed, none have produced any coal. Adani claims it will produce some coal this year, but the size of its mine has been cut back to one-sixth of its original size, and no other mines are currently under construction. This has been a major victory for anti-coal and climate campaigners against some of Australia's most powerful companies and political interests.

³² Cox (2015) Federal Court overturns approval of Adani Carmichael coal mine in Queensland, <https://www.newcastleherald.com.au/story/3258629/environmentalists-big-win-over-adani-coal-mine/>

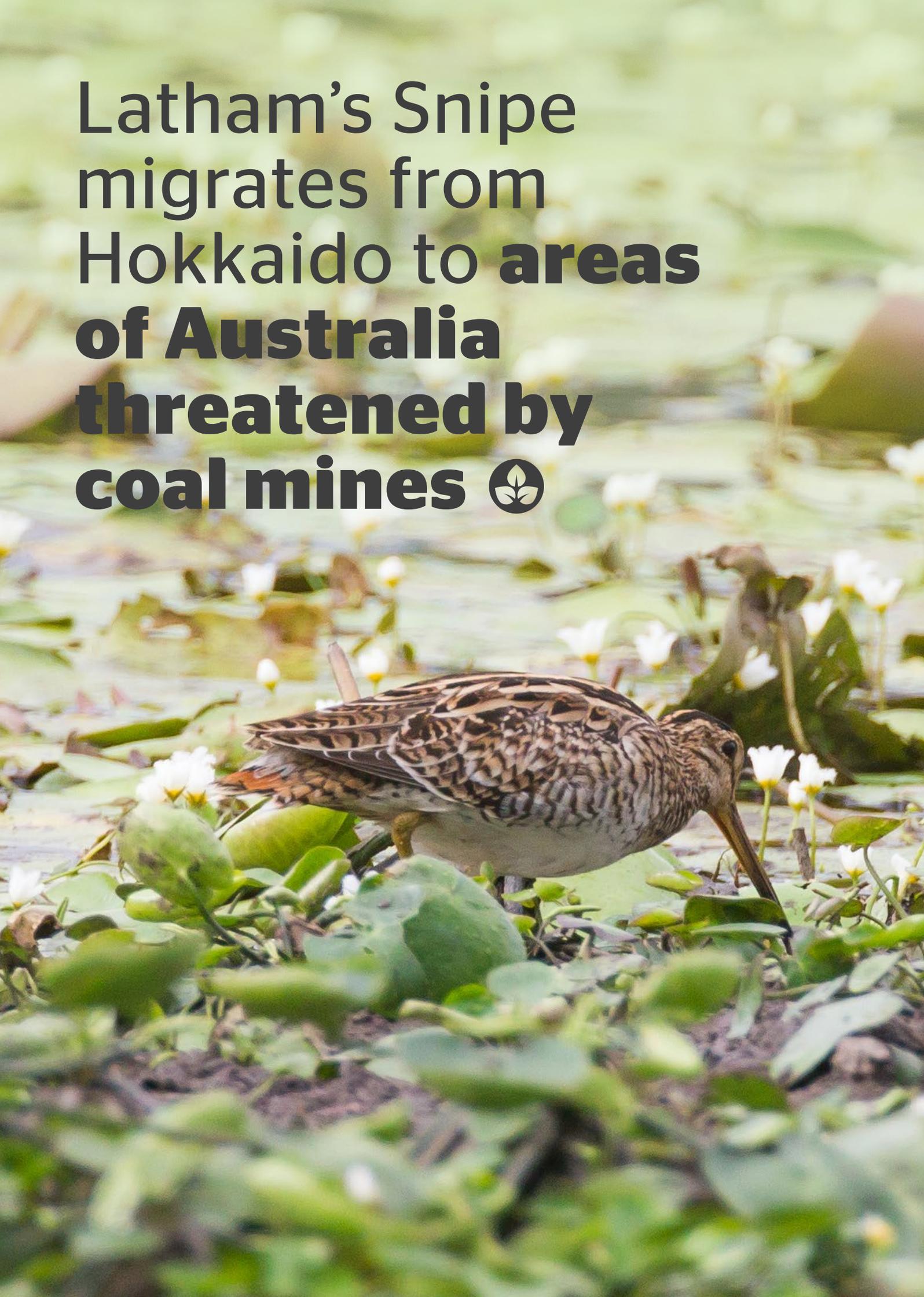
³³ Robertson (2017) Big four banks distance themselves from Adani coalmine as Westpac rules out loan, <https://www.theguardian.com/environment/2017/apr/28/big-four-banks-all-refuse-to-fund-adani-coalmine-after-westpac-rules-out-loan>

³⁴ Market Forces (2021) The Adani List: Companies that could make or break the Carmichael Coal Project, <https://www.marketforces.org.au/info/key-issues/theadanilist/>

³⁵ Smees (2019) Global engineering firm GHD concludes work on Adani's Carmichael coal project, <https://www.theguardian.com/environment/2019/dec/17/global-engineering-firm-ghd-concludes-work-on-adanis-carmichael-coal-project>

Left. School strike for climate, 2019. *Photo:* Ryan Chenoweth *Following page.* Latham's snipe.
Photo: Jukka Jantunen/Shutterstock.com

Latham's Snipe
migrates from
Hokkaido to **areas
of Australia
threatened by
coal mines** 🌿



Coal's impacts in Australia

Forests and animal habitat

Most coal mined in Australia comes from 'open-cut' mines – huge holes in the ground that trucks drive into, load up the coal and drive out, usually taking the coal to a train line for transport to ports.

Open-cut mines destroy everything on top of the coal deposit and impact a wide area around the mine. Less than 20% of Australia's coal comes from underground mines that use tunnels to access the coal and cause less disturbance at ground level.³⁶

The open-cut mines of the Hunter Valley in NSW, Latrobe Valley in Victoria and Bowen Basin in Queensland can easily be seen in satellite images. Hunter Valley mines will leave unfilled holes across an area of 6,050 hectares,³⁷ equivalent to 8,400 soccer fields, or the area of Tokyo's Shinjuku-ku, Shibuya-ku, Minato-ku and Chiyoda-ku combined.

Coal mines often destroy areas of forest in Australia. One example is the Leard State Forest in NSW. The forest is an important conservation area with thousands of hectares of koala habitat.³⁸ The forest here is particularly important, as it serves as a "stepping stone" for koalas moving from one area to another with the seasons.³⁹

The Leard State Forest is also one of the largest remnant areas of critically endangered native "white box" woodland and is considered the ecological "lynch pin" of the Liverpool Plains region, northwest of Sydney. There are 20 threatened bird species, including the critically endangered Regent Honeyeater, and six threatened bat species in the forest. An additional 15 threatened or migratory species occur in the wider area. These include Latham's Snipe, also known as the Japanese Snipe, which migrates to Japan to breed.⁴⁰ Seven endangered and 14 regionally significant plant species potentially are found on site.⁴¹

There are three large open-cut mines in the Leard State Forest, all of which have expanded in recent years, with further expansions possible. These mines will eventually clear almost half of the forest — 3,834 hectares — including 38% of critically endangered white-box woodland.⁴² That is equal to about 5,500 soccer fields of native forest, or the combined area of Shinjuku-ku and Minato-ku, including about 1,700 soccer fields of the endangered white-box woodland, the area of Shibuya-ku.

Each mine will leave huge voids when mining stops. In total, around 900ha or 1,400 soccer pitches of forest will become holes, nearly the area of Bunkyo-ku.⁴³ These holes fill with water, which can be extremely saline or toxic, and are surrounded by highwalls prone to land slips that put human and animal lives at risk.⁴⁴

³⁶ Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly: December 2020, <https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html>

³⁷ Walters (2016) The Hole Truth: The mess coal companies plan to leave in NSW, http://downloads.erinsights.com/reports/the_whole_truth_LR.pdf

³⁸ NSW Planning Assessment Commission (PAC) (2012), Maules Creek Coal Project: Review report, p 21, <http://www.pac.nsw.gov.au/resources/pac/media/files/pac/projects/2011/08/maules-creek-coal-project/completed-review-report/maules-creek-review-report-main-volume.pdf>

³⁹ Fuller (2012) Concern for Koalas in the Leard State Forest, <http://www.abc.net.au/local/audio/2012/11/12/3630754.htm>

⁴⁰ Birdlife Australia (no date) Latham's Snipe, www.birdlife.org.au/bird-profile/lathams-snipe

⁴¹ PAC (2012) Maules Creek Coal Project: Review report, p 15-16, <http://www.pac.nsw.gov.au/resources/pac/media/files/pac/projects/2011/08/maules-creek-coal-project/completed-review-report/maules-creek-review-report-main-volume.pdf>

⁴² Calculated from Planning Assessment Commission review reports for Maules Creek, Tarrawonga and Boggabri, available at <https://www.planningportal.nsw.gov.au/major-projects>

⁴³ Walters (2016) The Hole Truth, Energy & Resource Insights, p 8, http://downloads.erinsights.com/reports/the_whole_truth_LR.pdf

⁴⁴ Ibid., p 4, 9-15

Leard State Forest, the ecological “lynch pin” of the Liverpool Plains region, is home to 20 threatened bird species, including the **critically endangered Regent Honeyeater** 🌿



The coal companies are supposed to create “environmental offsets” to plant or restore areas of similar forest in an attempt to compensate for the destruction the mines cause. The coal companies in the Leard State Forest have regularly been accused of failing to do this, with charges against them laid by the NSW government.⁴⁵

Japanese companies have been involved in all three mines destroying the Leard State Forest. The largest mine, the Maules Creek Mine, is 15% owned by ICRAMC Pty Ltd (an Itochu Corp entity) and 10% owned by J-POWER, and 75% owned by Whitehaven Coal.⁴⁶ Whitehaven is an Australian company, with around half of its sales revenue coming from Japan. Its chairman is Mark Vaile, the former Deputy Prime Minister of Australia, another example of the ‘revolving door’ between politics and coal companies.⁴⁷

The next largest mine, Tarrawonga, was partly owned by Idemitsu until it sold its share in 2018.⁴⁸ Idemitsu owns 80% of the adjacent Boggabri mine, with stakes also owned by Chugoku Electric Power, Nippon Steel and Sumitomo Metal Corporation.⁴⁹

The mines and the destruction of the forest were opposed by local people, including the Laird brothers — fifth-generation farmers, after whose ancestors the Leard State Forest is named.⁵⁰ People from all around Australia joined them, including 92-year old war veteran Bill Ryan⁵¹ and David Pocock, a former captain of Australia’s national rugby union team who also played in Japan for the Panasonic Wild Knights. Pocock said:

“I believe it's time for direct action on climate change, standing together as ordinary Australians to take control of our shared future.”⁵²

Protests delayed the action for at least 18 months.⁵³ By early 2016, 400 to 450 people had been arrested,⁵⁴ and many hundreds more attended the protests.

The Aboriginal people of the area, the Gomeroi people, also opposed the mines. They asked then federal Minister for the Environment Greg Hunt to stop them, as sacred burial sites were being destroyed. Sacred areas were bulldozed, and the Gomeroi’s request to salvage their cultural artefacts was refused by the mining companies.⁵⁵

Despite the protests, all three mines eventually went ahead, approved by the state and federal governments, both with close links to the coal industry. Sadly, the mines have been as destructive as their opponents feared, putting the future of the koala and other plants and animals at risk.

⁴⁵ Hannam (2020) Whitehaven Coal faces 16 charges for breaching NSW mining laws, <https://www.smh.com.au/national/nsw/whitehaven-coal-faces-16-charges-for-breaching-nsw-mining-laws-20200811-p55kk2.html>

⁴⁶ Mining Data Online (no date) <https://miningdataonline.com/property/331/Maules-Creek-Mine.aspx>

⁴⁷ Whitehaven Coal (2020) Annual report, <https://whitehavencol.com.au/wp-content/uploads/2020/09/Whitehaven-Coal-Annual-Report-2020.pdf>

⁴⁸ Murphy (2018) Whitehaven Coal buys Idemitsu’s Tarrawonga mine share, <https://www.northerndailyleader.com.au/story/5402888/whitehaven-coal-takes-over-full-ownership-of-tarrawonga-mine/>

⁴⁹ Idemitsu (no date) Boggabri Coal <https://www.idemitsu.com.au/operations/boggabri-coal/>; Nippon Steel (2015) Announcing Acquisition of 10% Interest in Boggabri Coal Mine, https://www.nipponsteel.com/en/news/20150323_100.html

⁵⁰ Laird (2014) Our history and struggle for our land at Maules Creek NSW - the Laird Family, <http://web.archive.org/web/20180411224034/https://www.wilderness.org.au/articles/our-history-and-struggle-our-land-maules-creek-nsw-laird-family>

⁵¹ Staff Writer (2014) Kokoda Track veteran Bill Ryan, aged 92, arrested at mine protest, <http://www.dailytelegraph.com.au/news/kokoda-track-veteran-bill-ryan-aged-92-arrested-at-mine-protest/news-story/263ce81f4b8134a642166b8085826b9a?nk=2e467983dd127e480f2d57a43e72fd20-1485144461>

⁵² Reuters (2014) Former Wallabies captain David Pocock arrested at NSW coal mine protest in Leard State Forest, <http://www.abc.net.au/news/2014-11-30/former-wallabies-captain-pocock-arrested-at-coal-mine-protest/5929024>

⁵³ Powell (2014) Trees are starting to fall in Leard State Forest, Greenpeace, <http://www.greenpeace.org.au/blog/trees-are-starting-to-fall-in-leard-state-forest/>

⁵⁴ Mitchell (2016) EPA Investigating ‘Black Dust Plume’ at Whitehaven Coal Site, <https://newmatilda.com/2016/03/03/epa-investigating-black-dust-whitehaven-coal-site/> <https://newmatilda.com/2016/05/22/whitehaven-eying-more-coal-in-maules-creek/>

⁵⁵ Validakis (2014) Traditional Owners say Whitehaven Coal have “disrespected” them, <https://www.australianmining.com.au/news/traditional-owners-say-whitehaven-coal-have-disrespected-them/>

Water

Coal mines use a lot of water. They use it for washing and processing the coal, preventing it from catching fire as well as to keep down dust on their roads and waste piles.

Coal mines also affect groundwater as it drains into the mine, often affecting rivers connected to groundwater sources.

In the Leard State Forest discussed above, the Maules Creek mine has been particularly controversial, using 60 times more water than it was licenced to use in 2016 – effectively stealing water.⁵⁶ In 2019, the mine was accused of stealing groundwater from local farmers,⁵⁷ and in February 2020, locals complained of finding small white styrofoam balls — used in the mining process — in the local river system.⁵⁸

Perhaps the most controversial coal mine in relation to water is the Watermark mine proposal, owned by Chinese company Shenhua. If it goes ahead, this mine will be located in some of Australia's best irrigated farming areas in the Liverpool Plains northwest of Sydney.

These farms rely heavily on groundwater, and local farmers have campaigned strongly against this mine.⁵⁹

The most controversial coal company in Australia, the Indian energy company Adani, will also have a big impact on water in Australia. The company's mine proposal could use up to 12 billion litres of water per year. The average Japanese person uses 314 litres per year, so the mine would have water use equivalent to that of a Japanese city of 100,000 people, in an arid area of Australia. Scientists expect that this impact will destroy ancient springs in the area as well as the animals and plants that depend on them, including koalas, kangaroos and the rare Black-throated Finch.⁶⁰

Adani also owns a major coal port on the Queensland coast, Abbot Point Coal Terminal, adjacent to important wetlands and the Great Barrier Reef. In 2018, the company was fined for polluting the wetlands with coal-laden water.⁶¹ The Great Barrier Reef has been central in the debates and politics around coal and climate change in Australia.

Scientists expect the proposed Adani mine would **destroy ancient springs in the area as well as the animals and plants that depend on them**, including koalas, kangaroos and the rare Black-throated Finch.⁶⁰

⁵⁶ Lock the Gate (2019) Regulator finds unlawful water take at Whitehaven's Maules Creek coal mine, https://www.lockthegate.org.au/regulator_finds_unlawful_maules_water_take

⁵⁷ Ibid.

⁵⁸ Lock the Gate (2020) Farmers fear Whitehaven may have contaminated river system, https://www.lockthegate.org.au/farmers_fear_whitehaven_may_have_contaminated_river_system

⁵⁹ Foley (2020) Shenhua coal mine questioned over 'disturbing' water report omissions, <https://www.smh.com.au/politics/federal/shenhua-coal-mine-questioned-over-disturbing-water-report-omissions-20200616-p5532i.html>

⁶⁰ Slezak (2018) Adani plans to protect desert springs are worthless, water experts say, <https://www.abc.net.au/news/2018-06-19/adani-plans-to-protect-desert-springs-worthless-experts-say/9882548>; Japanese Ministry of Land, Infrastructure, Transport and Tourism (2008) Water resources in Japan, https://www.mlit.go.jp/tochimizushigen/mizsei/water_resources/contents/current_state2.html; Queensland Government (2020) Wildlife of Doongmabulla Springs DIWA nationally important wetland, <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=diwa-wetland-doongmabulla-springs>

⁶¹ Horn (2018) Adani prosecuted over release of coal-laden water near Great Barrier Reef, <https://www.abc.net.au/news/2018-09-05/adani-prosecuted-over-release-of-sediment-near-barrier-reef/10204374>

Great Barrier Reef

As well as some 50 coal mines,⁶² Queensland is also home to the Great Barrier Reef, a UNESCO World Heritage site. This famous natural wonder is the largest reef system in the world, eight times longer than the world's next longest reef, and around the same size as Japan.⁶³

The Reef has 1,600 species of fish, 600 varieties of coral, and over 30 types of whale and dolphin.⁶⁴ The Great Barrier Reef has long been among the top Australian attractions for Japanese tourists.

Sadly, despite being one of the world's great natural treasures, the Reef is being steadily destroyed by climate change. The rising global temperature is increasing the frequency and severity of tropical storms, making the ocean more acidic and contributing to coral bleaching.

This bleaching becomes worse with every passing year. In 1998, the Great Barrier Reef experienced its worst coral bleaching for 700 years. This was a taste of what was to come: the bleaching was worse in 2002,⁶⁵ and since then the Reef has suffered three even worse bleaching events over the course of only five years. The most recent, in March 2020, was the most widespread yet, simultaneously affecting all three sections of the Reef — Northern, Central and Southern — for the first time.⁶⁶

⁶² Queensland Government (2019) 2019 Calendar Year — Coal Production Statistics, <https://www.data.qld.gov.au/dataset/annual-coal-statistics/resource/d22a8d8b-7c00-42d2-884a-c438d51cefc3>

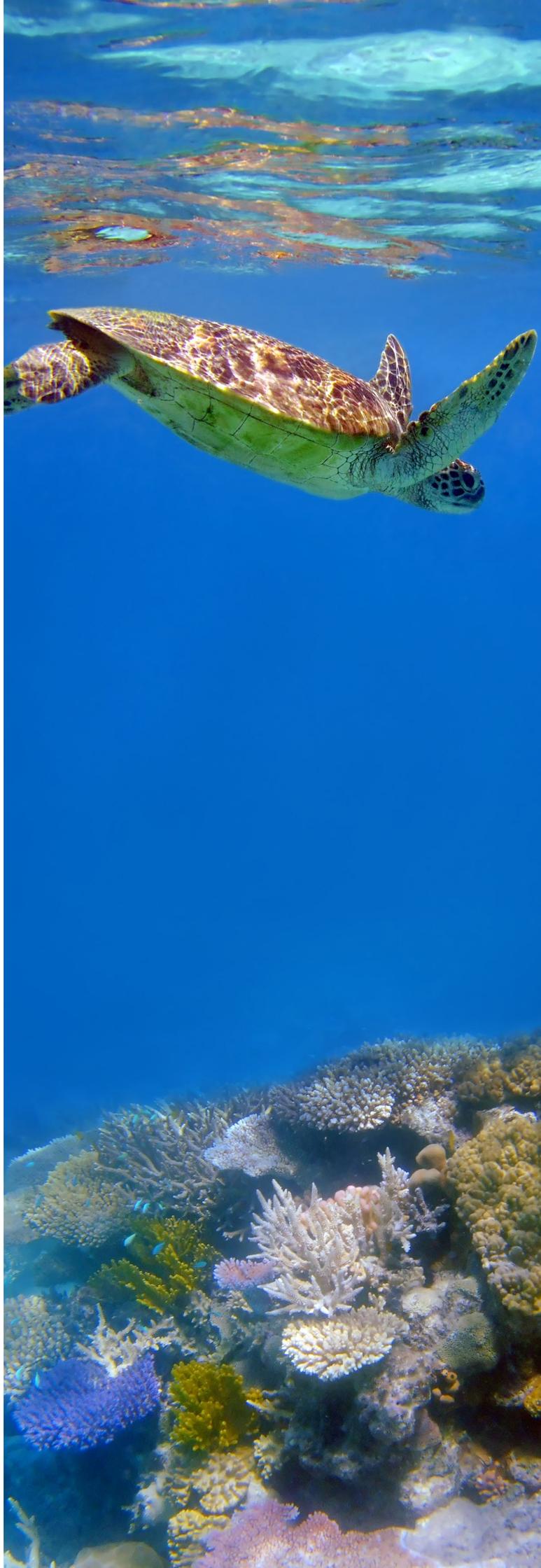
⁶³ Australian Government (2017) Facts about the Great Barrier Reef, <http://www.gbrmpa.gov.au/about-the-reef/facts-about-the-great-barrier-reef>

⁶⁴ Australian Government (2017) Facts about the Great Barrier Reef, <http://www.gbrmpa.gov.au/about-the-reef/facts-about-the-great-barrier-reef> and <http://www.gbrmpa.gov.au/about-the-reef/biodiversity>

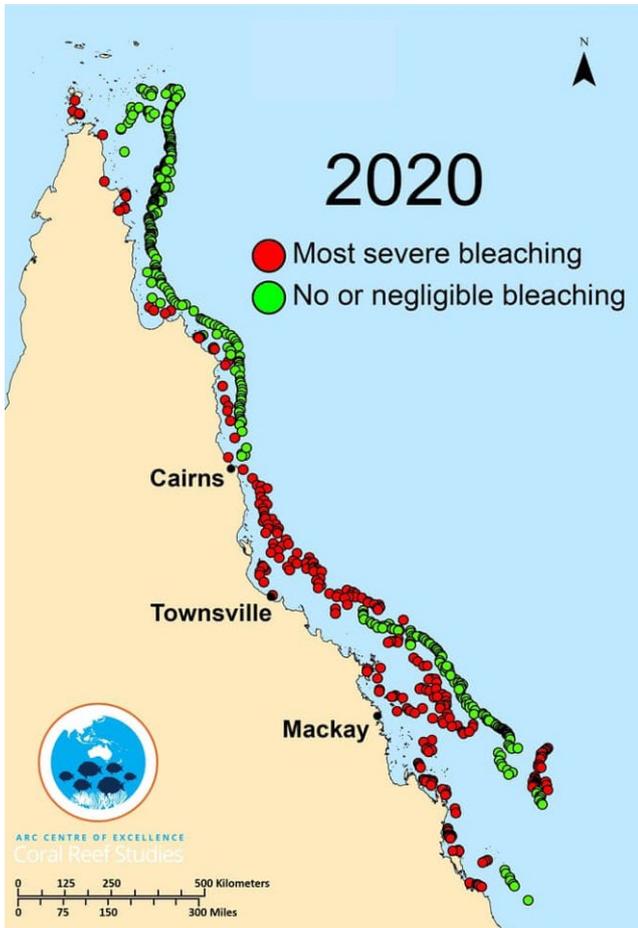
⁶⁵ Queensland Government (2017) Biodiscovery and the Great Barrier Reef: Human Impact on the Reef, <http://www.qm.qld.gov.au/microsites/biodiscovery/05human-impact/climate-change.html>

⁶⁶ Readfearn (2020) Great Barrier Reef's third mass bleaching in five years the most widespread yet, <https://www.theguardian.com/environment/2020/apr/07/great-barrier-reefs-third-mass-bleaching-in-five-years-the-most-widespread-ever>

Right. Green turtle, Great Barrier Reef.
Photo: Regien Paassen/Shutterstock.com



Coral bleaching on the Great Barrier Reef, March 2020



Source: ARC Centre of Excellence in Coral Reef Studies

The map shows the extent of the damage.

The route from many Australian mines to Japan takes coal transport ships straight through the Great Barrier Reef, and the irony of the coal that threatens the Reef's very existence being shipped through its waters has not been lost on Australians. The possibility of a coal ship running aground on the Reef is an ever-present danger, and even without such a catastrophic event, the expansion of coal ports at Hay Point and Abbot Point threaten the Reef with destructive sediment.⁶⁷

It is unsurprising, then, that conflict between the coal industry and people wanting to protect the Reef have become a central issue in Australian politics.

Some examples of this conflict include:

- Reef tourism businesses writing to the Prime Minister of Australia urging the government to rule out new coal mines.⁶⁸
- Australia's most senior marine scientists calling for coal mine approvals to be revoked in the wake of mass bleaching events.⁶⁹
- World renowned naturalist David Attenborough condemning Australia's attitude to the reef and its cavalier approach to coal mines: "[Australia has] been upstanding and talking about what I see as the truth, [but then it] suddenly says, 'No, it doesn't matter ... it doesn't matter how much coal we burn ... we don't give a damn what it does to the rest of the world.'" ⁷⁰

⁶⁷ Flannery (2014) The Great Barrier Reef and the coal mine that could kill it, <https://www.theguardian.com/environment/2014/aug/01/-sp-great-barrier-reef-and-coal-mine-could-kill-it>

⁶⁸ Slezak (2016) Great Barrier Reef: tourism operators urge Australian government to tackle climate change, <https://www.theguardian.com/environment/2016/may/07/great-barrier-reef-tourism-operators-urge-australian-government-to-tackle-climate-change>

⁶⁹ Wilacy (2017) Great Barrier Reef: 'Godfather of Coral' urges Adani approval rethink following recent bleaching events, <http://www.abc.net.au/news/2017-06-22/godfather-of-coral-urges-adani-mine-approval-rethink/8639082>

⁷⁰ Cox (2019), David Attenborough attacks Australian PM on climate record and support for coal, <https://www.theguardian.com/environment/2019/sep/24/david-attenborough-attacks-australian-pm-on-climate-record-and-support-for-coal>

**The expansion of coal ports
at Hay Point and Abbot Point
threaten the Reef with
destructive sediment** 



Human health

As well as being destructive to the environment, coal mining is also hazardous to human health. The greatest danger is the dust produced.

As well as powdered coal, dust can include heavy metals like arsenic and mercury, which are toxic and carcinogenic on inhalation, even at low concentrations. Exposure to these substances can lead to cancer, heart disease and respiratory problems. The dust is also combustible, and some of the worst mining accidents in history have involved dust explosions.

Black lung disease, otherwise known as “coal worker’s pneumoconiosis,” is caused by prolonged exposure to coal dust and has no cure once contracted. An Australian government inquiry described black lung as, “a cruel and insidious disease which can lie dormant in an individual for many years and which will inevitably result in that person’s early death.”⁷¹

In 2013, there were an estimated 25,000 deaths worldwide due to black lung, mainly in developing countries.⁷² In Australia, black lung was thought to be eradicated, with no cases reported since the 1980s.⁷³ However, it re-emerged in Queensland coal mines in 2015,⁷⁴ with 133 cases counted by 2020.⁷⁵

Workers, their families, and trade unions have all been appalled at the re-emergence of black lung disease in Australia. A parliamentary inquiry in Queensland found the disease’s return was attributable to a number of factors, including failures of regulatory and monitoring systems, the increased use of contract and non-union labour and a culture where companies focused more on profits than safety.

Sadly, that inquiry also found some mine operators were reluctant to take responsibility for the health of their workers, citing “responses ranging from quick acknowledgement and action to blame-shifting and avoidance.”⁷⁶ Mine workers who gave evidence to the inquiry were fearful about possible recrimination from mine owners, including possible sacking:

“I will lose my job for speaking [publicly]. There is no doubt about that... No one who has spoken [today] still works there. They have all gone so they probably feel a bit more protected.

If you mouth off, you are not going to stay there long. You will get done for a safety issue or something. Like I said, I understand you guys saying you can offer protection. You cannot. Sorry, guys. They will pick me on something else. They will pick me on a safety issue or something else and I will be gone.”⁷⁷

⁷¹ Senate Select Committee on Health (2016) Fifth Interim Report (Black Lung) – Black Lung: “It has bugged my life”, page xi, http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Health/Health/Fifth_Interim_Report.

⁷² Queensland Parliament (2017) Black lung, white lies: Inquiry into the re-identification of Coal Workers’ Pneumoconiosis in Queensland, page 57, <http://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2017/5517T815.pdf>

⁷³ Queensland Parliament (2017) page 5.

⁷⁴ ABC (2017) Black lung inquiry finds ‘catastrophic failure’ in public administration in Queensland, <http://www.abc.net.au/news/2017-05-29/black-lung-report-catastrophic-failure-qld-public-administration/8568000>

⁷⁵ Burt and McGhee (2020) Cases of mine-dust lung disease and silicosis increasingly found in Queensland coal mine workers, <https://www.abc.net.au/news/2020-02-25/silicosis-and-black-lung-cases-rise-queensland-workers/11998404>

⁷⁶ Queensland Parliament (2017), p 221

⁷⁷ Queensland Parliament (2017), p 246

The inquiry expressed strong disappointment that one of the five major Queensland mine operators, BHP Billiton Mitsubishi Alliance (BMA), had to be compelled to appear before the inquiry.⁷⁸ In August 2017, the Queensland Mines Minister threatened to close down four coal mines for failing to meet their dust-monitoring obligations.⁷⁹

Beyond the effects on the miners themselves, coal mines can also affect the health of surrounding communities. Higher-than-normal rates of respiratory disease, lung cancer, and low birth weight all occur in townships that are situated close to mines.⁸⁰ These effects are not confined to the places where coal is produced. Coal is transported in uncovered wagons and stored in piles at export ports like Newcastle, north of Sydney. It is the world's biggest coal export port, and residents remain fearful of the effects of living in a city through which so much coal passes. In the words of Newcastle resident and air quality campaigner⁸¹ James Whelan:

"We are the world's largest coal terminal and experience an unfair burden — air and water pollution, uncovered coal trains and stockpiles, a devastated natural environment and an economy that relies too heavily on the declining coal industry."⁸²

⁷⁷ Queensland Parliament (2017), p 246

⁷⁸ Queensland Parliament (2017), p 250

⁷⁹ O'Brien (2017) Failure to meet dust-monitoring obligations may close four Queensland coal mines, Minister says, <http://www.abc.net.au/news/2017-08-11/failure-meet-dust-monitoring-may-close-4-qld-coal-mines-minister/8795234>

⁸⁰ Australian Mine Safety Journal (2017) Health Hazards in Coal Mining, <https://www.amsj.com.au/health-hazards-coal-mining/>

⁸¹ The Change Agency (no date) Who We Are, <https://www.thechangeagency.org/community-organising-fellowship/who-we-are/>

⁸² Kirkwood & Kelly (2018) Controversial fourth Newcastle coal loader now history, <https://www.newcastleherald.com.au/story/5440760/pwcs-officially-cancels-t4-coal-loader/>



The future

To address climate change, protect Australian biodiversity and water resources, and improve air quality and human health in Japan and Australia, Australian coal exports and Japanese coal consumption need to be phased out.

Japan Beyond Coal's goal of phasing out coal power by 2030 is not only inevitable for Japan's sustainable energy transition and climate protection, but also for Australia's clean and safe future. Numerous research programs have shown that this can be achieved without major disruption to economies or energy systems.⁸³

A reason to be optimistic is that, compared to predictions just a few years ago, Australia is exporting, and Japan is importing, far less coal than expected. In 2015, Australia exported 385 million tonnes of coal, an increase of 28% on the 301 million tonnes exported in 2010. At that time, official Australian Government forecasts expected exports to increase by another 15% to 445 million tonnes of coal in 2020. Instead, Australia's exports in 2020 were 390 million tonnes, virtually unchanged over five years.⁸⁴

Similarly, in 2015 the Australian Government expected Japan to import 289 million tonnes of coal in 2020, including an astonishing 244 million tonnes of thermal coal for power stations.⁸⁵ Instead, Japan imported only 170 million tonnes, 133 million of which was thermal coal.⁸⁶

On the other hand, Australian and Japanese interests are still working not only to expand existing coal mines, but to find new uses for Australian coal. For example, Kawasaki Heavy Industries is looking to use Victorian brown coal, the lowest quality coal in Australia, to create and export hydrogen. The Australian and Victorian Governments subsidise this project with taxpayer funds.⁸⁷ If developed at scale, this would create huge quantities of greenhouse gases. Kawasaki's claims that it could capture the pollution and store it underground are contradicted by decades of subsidies to carbon capture and storage, yet there is currently no operating CCS project in Australia.⁸⁸ As would be expected, community opposition to this project is strong.⁸⁹

With collaboration between Japanese and Australian communities, progress is possible on reducing the damage caused by coal mining in Australia and coal consumption in Japan.

⁸³ See for example Denniss et al (2016) Never gonna dig you up! Modelling the economic impacts of a moratorium on new coal mines, <https://australiainstitute.org.au/report/a-coal-moratorium-and-the-australian-economy/>; Quiggin (2020) Getting off coal: Economic and social policies to manage the phase-out of thermal coal in Australia, <https://australiainstitute.org.au/report/getting-off-coal-economic-and-social-policies-to-manage-the-phase-out-of-thermal-coal-in-australia/>; Renewable Energy Institute (2020) Proposal for 2030 Energy Mix in Japan: Establish a Society Based on Renewable Energy, <https://www.renewable-ei.org/en/activities/reports/20200806.php>

⁸⁴ Australian Department of Industry, Science, Energy and Resources (2020) Resources and energy quarterly, various years.

⁸⁵ As opposed to metallurgical coal for making steel. Australian Department of Industry, Science, Energy and Resources (2015) Resources and energy quarterly: March 2015 forecast data, <https://www.industry.gov.au/data-and-publications/resources-and-energy-quarterly-all/resources-and-energy-quarterly-march-2015>

⁸⁶ International Energy Agency (2020) Coal 2020: Analysis and forecast to 2025, <https://www.iea.org/reports/coal-2020>

⁸⁷ HESC (2020) About Hydrogen Energy Supply Chain, <https://hydrogenenergysupplychain.com/about-hesc/>

⁸⁸ Brown and Swann (2017) Money for nothing, <https://australiainstitute.org.au/report/money-for-nothing/>; Note that at time of writing, Australia's one CCS project at the Gorgon Gas plant was not operational. See Cox (2021) Western Australia LNG plant faces calls to shut down until faulty carbon capture system is fixed, <https://www.theguardian.com/environment/2021/jan/15/western-australia-lng-plant-faces-calls-to-shut-down-until-faulty-carbon-capture-system-is-fixed>

⁸⁹ Platt (2019) Start made on Hastings hydrogen plant, <http://baysidenews.com.au/2019/07/22/start-made-on-hastings-hydrogen-plant/>



Japan can help

Australian threatened species by ending

its **reliance on**

Australian coal 

With collaboration
between Japanese and
Australian communities,
**progress is possible on
reducing the damage
caused by coal mining**
in Australia and coal
consumption in Japan 

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