

Submission on the Tahmoor South Coal Project

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Healthy planet, **healthy people.**

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Doctors for the Environment Australia (DEA) is a non-profit organisation comprised of Australian medical doctors and students with the goal of promoting human health by advocating for preservation and care for the environment.

It is the position of DEA that ongoing coal mining and combustion poses an unacceptable health risk due to greenhouse gas emissions. For this reason, we oppose the Tahmoor South Coal Project.

DEA is one of many health and medical organisations calling for urgent action to mitigate climate change. In Australia, these include the Royal Australasian College of Physicians (RACP)², The Royal Australian College of General Practitioners (RACGP) and the Australian Medical Association (AMA).³ Internationally, they include the American Medical Association, the World Health Organization (WHO) and the pre-eminent medical journal, The Lancet.⁴ Collectively these groups have highlighted the devastating impact a warming climate will have on human health.

The specific effects of rising temperatures on human health are summarised in this submission, leading to our conclusion that approving the Tahmoor mine expansion is not in the interests of Australia or of human health on the international scale.

Heatwaves

Climate change will increase the number of days of extreme heat. It is estimated that there will be a 2.5 – 20-fold increase in the number of days above 35°C in Australia by 2100.⁵ An association has been demonstrated between heatwaves and an increase in emergency department presentations.⁶ There is strong evidence for an association between hot weather and an increase in all-cause mortality especially in the elderly.⁷

Extreme weather events

The combustion of coal and other fossil fuels are estimated to make up 72% of greenhouse gas emissions contributing to climate change.⁴ Climate change contributes to extreme weather events such as flooding and bushfires, and such natural disasters have increased globally by 46% since 2000.⁶ Extreme weather events pose a health risk through immediate injury and loss of life but also require extensive public health responses to contain the after-effects, for example an infectious disease outbreak following a flood.

Infectious diseases

Climate change is predicted to change the distribution of infectious diseases such as malaria and dengue fever. Since 1950 there has been a 9.4% increase in the transmission of dengue fever by the *Aedes aegypti* mosquito.⁴ Climate change is expected to expand the southern boundary of the range of vector borne disease by expanding the range of tropical vectors such as *Aedes aegypti* and *Aedes albopictus*, which are competent vectors for dengue, Zika, Chikungunya and Ross River virus which are more prominent in tropical climates.

Children

The health effects of climate change are expected to disproportionately affect vulnerable groups including children. Air pollution has been linked to foetal growth restriction, lower birth weight and delayed attainment of developmental milestones.⁶ Children are also more vulnerable to mental health stresses following extreme weather events.⁶

Air pollution

Coal combustion contributes to air pollution, which is a major threat to public health around the world. Population-weighted fine particulate matter exposure has been increasing since 1990, and 71% of the 2,971 cities where the WHO monitor air pollution demonstrate exposure to air pollution above WHO recommended standards.⁴ The number of deaths worldwide attributable to exposure to ambient air pollution is estimated to have increased from 3.5 million in 1990 to 4.2 million in 2015.⁸ DEA takes a global perspective on health, and the opportunity to prevent air pollution deaths in Asia by restricting sale of coal from Australia should not be ignored.

The Carbon Footprint of Tahmoor South

Having described some of the risks that rising global temperatures and changing climate will hold for human health, it follows to describe how the proposed Tahmoor South mining project extension will contribute to those risks.

As described by Justice Preston in the judgement of *Gloucester Resources Limited v Minister for Planning*:

[515] The direct and indirect GHG emissions of the Rocky Hill Coal Project will contribute cumulatively to the global total GHG emissions. ... It matters not that this aggregate of the Project's GHG emissions may represent a small fraction of the global total of GHG emissions. The global problem of climate change needs to be addressed by multiple local actions to mitigate emissions by sources and remove GHGs by sinks.⁹

Similarly, to Tahmoor South, Rocky Hill was a coking coal mine. It is worth noting that the Rocky Hill project, of which the greenhouse gas impact was deemed a grounds for refusal, was considerably smaller than the project currently being assessed, with a projected greenhouse gas footprint less than a third of the proposed Tahmoor South extension. Over 119 million tonnes of CO₂-equivalent greenhouse gas would be released into the atmosphere due to the construction, operation and output of the mine over its 15-year lifespan, and this is the critical number that needs to be considered in terms of its health impacts.

Only Scope 1 emissions are addressed in the Environmental Impact Statement in an attempt to put Project emissions in context with global, Australian, and NSW emissions as shown in (Table 7.2). Scope 1 emissions, while sufficient to comply with the letter of the current Greenhouse Gas Accounting Standards following the Paris Agreement, do not reflect the ongoing carbon cost of the mine once approved. The

proposal projects an increase in the current capacity of the Tahmoor mine by up to 25% which will result in a corresponding increase in the amount of carbon emissions. The conclusion to the EIS also emphasises the Scope 1 emissions of the project:

Average annual Scope 1 emissions from the Project (0.84 million tonnes [Mt] CO₂-e) would represent approximately 0.19% of Australia's commitment under the Paris Agreement (431 Mt CO₂-e) and a very small portion of global greenhouse emissions.

This calculation obscures the essential truth that it is all emissions produced by this project, including Scope 3 emissions, which present the ongoing health threat. The atmosphere does not take into account geography of origin when absorbing greenhouse gas emissions. A more complete indication of the climate impact of this project is to state that on average, 7.67 million tonnes of CO₂-e will enter the atmosphere annually. It is true this does not impact on Australia's commitment under the Paris Agreement, but assessment and containment of greenhouse gas impacts should be inspired by the Paris framework rather than limited by it.

In 2018, the Intergovernmental Panel on Climate Change (IPCC) was commissioned by the United Nations Framework Convention on Climate Change (UNFCCC) to report on the impact that 1.5°C of warming would have on the globe. The Report particularly emphasised the difference that limiting warming 1.5°C rather than a higher temperature increase of 2°C would have, with the authors reporting:

*"Lower risks are projected at 1.5°C than at 2°C for heat-related morbidity and mortality (very high confidence) and for ozone-related mortality if emissions needed for ozone formation remain high (high confidence). Urban heat islands often amplify the impacts of heatwaves in cities (high confidence). Risks from some vector-borne diseases, such as malaria and dengue fever, are projected to increase with warming from 1.5°C to 2°C, including potential shifts in their geographic range (high confidence)."*¹⁰

The Special Report advises that:

*"Pathways that limit global warming to 1.5°C with no or limited overshoot show clear emission reductions by 2030".*¹⁰

This was also noted by Justice Preston in reviewing the proposed coal project at Rocky Hill, Gloucester NSW in 2019 (*Gloucester Resources Limited v Minister for Planning*):

[422] The effects of carbon in the atmosphere arising from activities in the Project site, and the burning of the coal extracted from the mine, are inconsistent with existing carbon budget and policy intentions to keep global temperature increases to below 1.5° to 2° Celsius (C) above pre-industrial

levels and would have a cumulative effect on climate change effects in the long term.¹⁰

With reference to the projected outputs reported in the EIS, the year 2030 is projected to have the second-highest output in the coming decades from this proposal, with over 10 million tonnes of CO₂-equivalent greenhouse gases projected to result from the activities and output of the mine. This is the equivalent of over 2 million passenger cars being driven for a year.¹¹

The year 2030 has been explicitly highlighted by the Intergovernmental Panel on Climate Change as a deadline for the reduction of carbon emissions in order to preserve a future climate that gives people the best chance at a healthy life. Extending coal projects to increase their capacity beyond this date is contrary to the best evidence we have available to preserve a healthy climate future.

There is no other regulatory body on the planet that currently has the power to assess the impact that the Scope 3 emissions from Tahmoor South will have on climate change over the coming decades. This is a responsibility that lies wholly with the New South Wales Department of Planning.

The economic benefit of any mining project needs to be balanced with the future costs of climate change mitigation and adaptation. The EIS is deficient in not addressing the financial costs that climate change will have for the NSW Health budget, as we care for people affected by the increased temperatures, infectious disease and mental health impacts as described above. The financial impacts of climate change on future state budgets and the impact of Vickery Mine Expansion specifically are difficult to quantify, but there has been no attempt to quantify these despite the obvious relevance to our future.

Due to the negative public health impact of climate change on New South Wales residents, it is essential that the entire carbon impact of the project, the product coal, and the total greenhouse gas produced is taken into account in assessing the proposed Tahmoor South coal project. DEA holds the position that this project should not proceed due to the contribution this project will make to global climate change and the local impact that increasing global temperatures will have on Australia. When assessed holistically, this project is not in the community interest despite short term local economic benefits.

References

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² RACP Climate Change and Health, accessed from: <https://www.racp.edu.au/advocacy/policy-and-advocacy-priorities/climate-change-and-health>; Doctors for Climate Action accessed from: https://www.racp.edu.au/docs/default-source/advocacy-library/pa-dfca-global-consensus-statement.pdf?sfvrsn=1a6d311a_12

³ AMA position statement 'Climate Change and Human Health', 28 August 2015, accessed from <https://ama.com.au/position-statement/ama-position-statement-climate-change-and-human-health-2004-revised-2015>

⁴ The 2018 Report on the Lancet Countdown on health and climate change, accessed from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)32594-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)32594-7/fulltext)

⁵ Garnaut R. The Garnaut Climate Change Review: Final Report. Melbourne: Commonwealth of Australia, 2008

⁶ No Time For Games Summary Report Update (2018). Accessed from <https://www.dea.org.au/no-time-for-games-summary-report-update-2018/>

⁷ Synoptic analysis of heat-related mortality in Sydney, Australia, 1993-2001. Vaneckova P et al. International Journal Biometeorology 2008; 52(6): 439-51.

⁸ Cohen, A.J. 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. The Lancet 389, 1907- 1918.

⁹ Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7

¹⁰ Global Warming of 1.5°C, an IPCC Special Report, Summary for Policymakers, Intergovernmental Panel on Climate Change. http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

¹¹ United States Environmental Protection Agency: Greenhouse Gas Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. Website accessed 4/3/19.