



Dartbrook Mine Modification

Dr Bob Vickers

GP

Doctors For The Environment Australia



 **Doctors for the Environment Australia**
www.dea.org.au

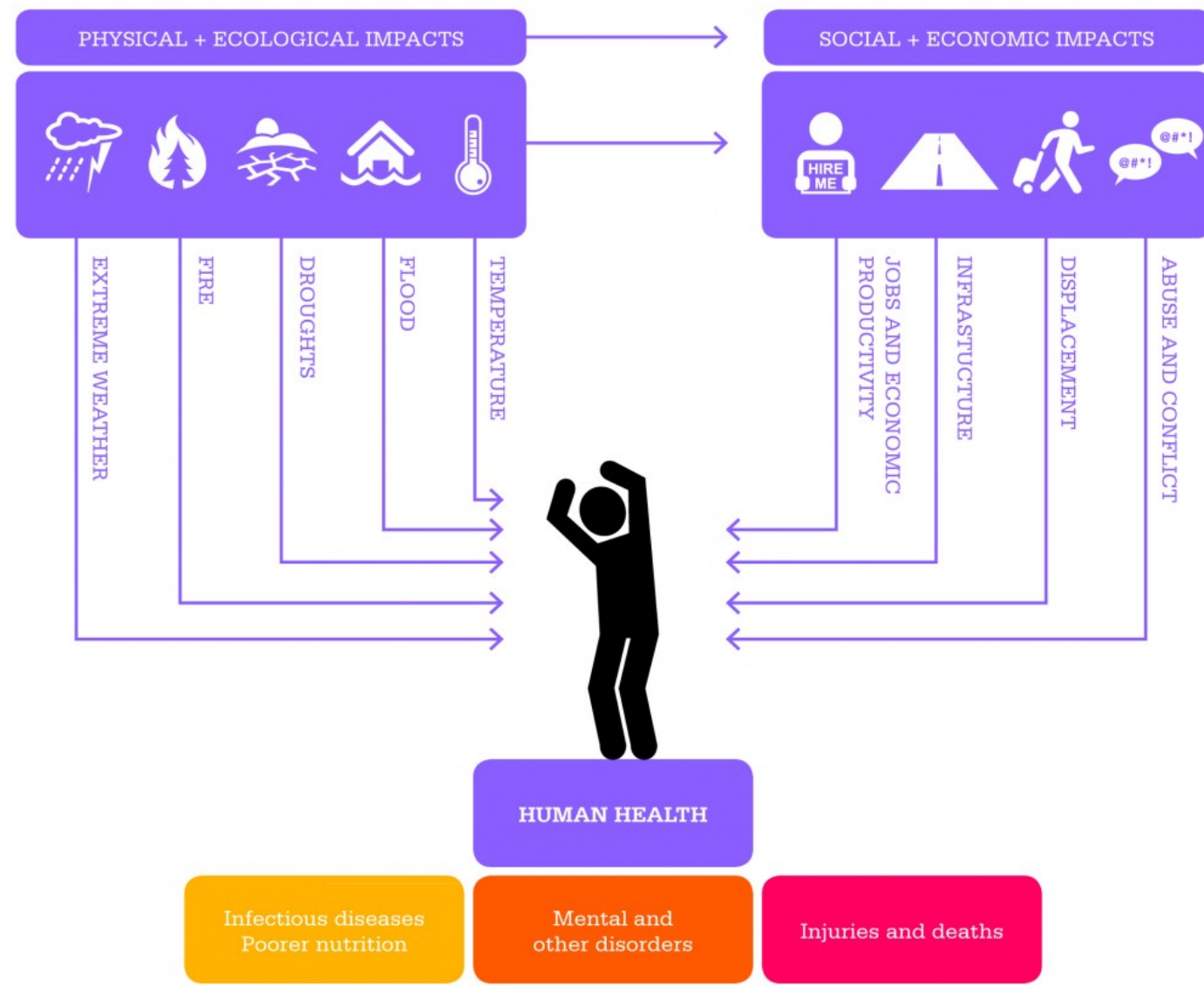
Doctors for the Environment, Australia (DEA) is a voluntary, doctor's organisation, formed in 2001, with members in all States and Territories. The aim of the organisation is to inform and educate the public, the medical profession and policy makers about the relationships between health and the environment. Our priority issue at the present time is the health effects of climate change. DEA is a member of the International Society of Doctors for the Environment.

☐ **Scientific committee:**


Prof. Stephen Boyden AM
Prof. Peter Doherty AC
Prof. Bob Douglas AO
Prof. Frank Fenner AC
Prof. Michael Kidd AM
Prof. Steve Leader AO
Prof. Ian Lowe AO
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Climate Change



Climate Change

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Monday 1 April 2019 — Monthly Summary for Australia — Product Code IDCKGC1A00

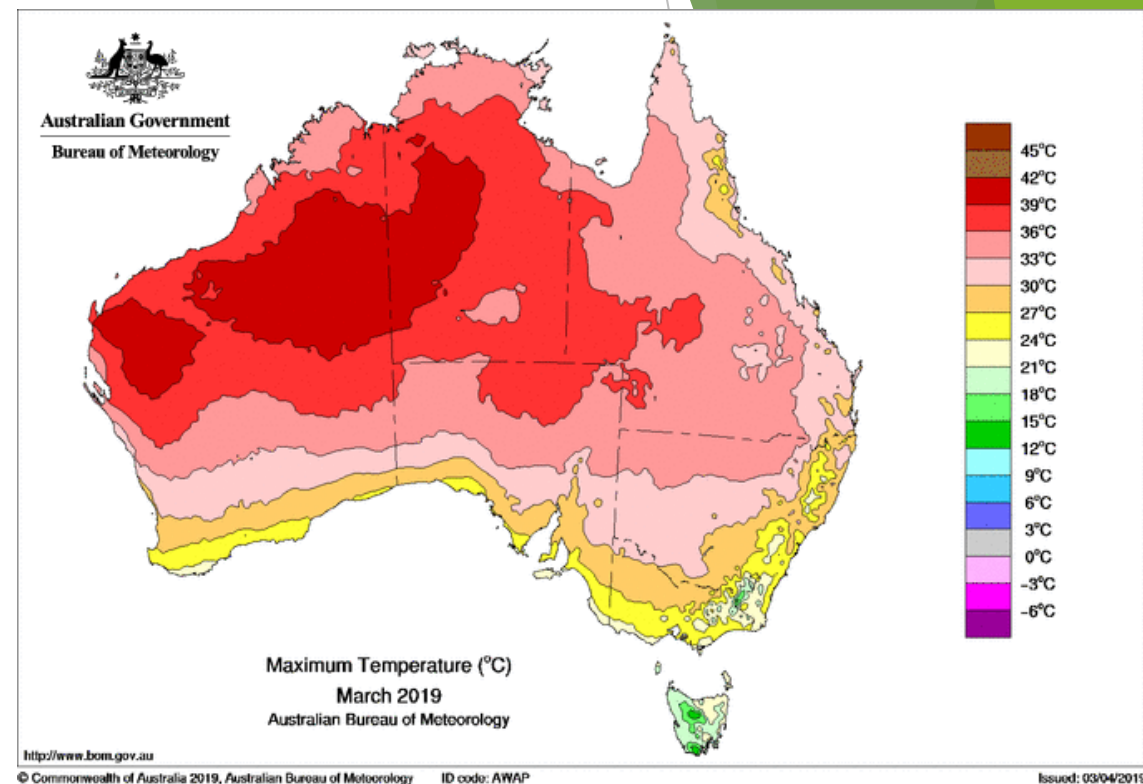
Australia in March 2019

[Temperatures](#) [Rainfall](#) [Extremes](#) [Important notes](#) [the top](#)

In brief

- Warmest March on record for Australia
- Both mean maximum and minimum temperature above average for nearly all of the country, but days near average in northern Queensland associated with severe tropical cyclone *Trevor*, and along parts of the south coast following a cold end to the month
- Warmest March on record for Western Australia and the Northern Territory
- Amongst the six warmest Marches on record for New South Wales, Queensland, South Australia
- Rainfall for the month was below to very much below average in a wide band from the Kimberley and Top End down to the top of the Great Australian Bight, across southern South Australia and Victoria, in northern and eastern Tasmania, and pockets along the west coast of Western Australia
- Two severe tropical cyclones contributed to above to very much above average rainfall in far northern Queensland, the southern Gulf of Carpentaria coast, western to central Queensland and parts of the south and southeast of the State, the east of the Northern Territory, northeast South Australia, and part of the Pilbara coast
- A wet end to the month brought totals to above average for eastern New South Wales, far eastern Victoria, and southeast Queensland

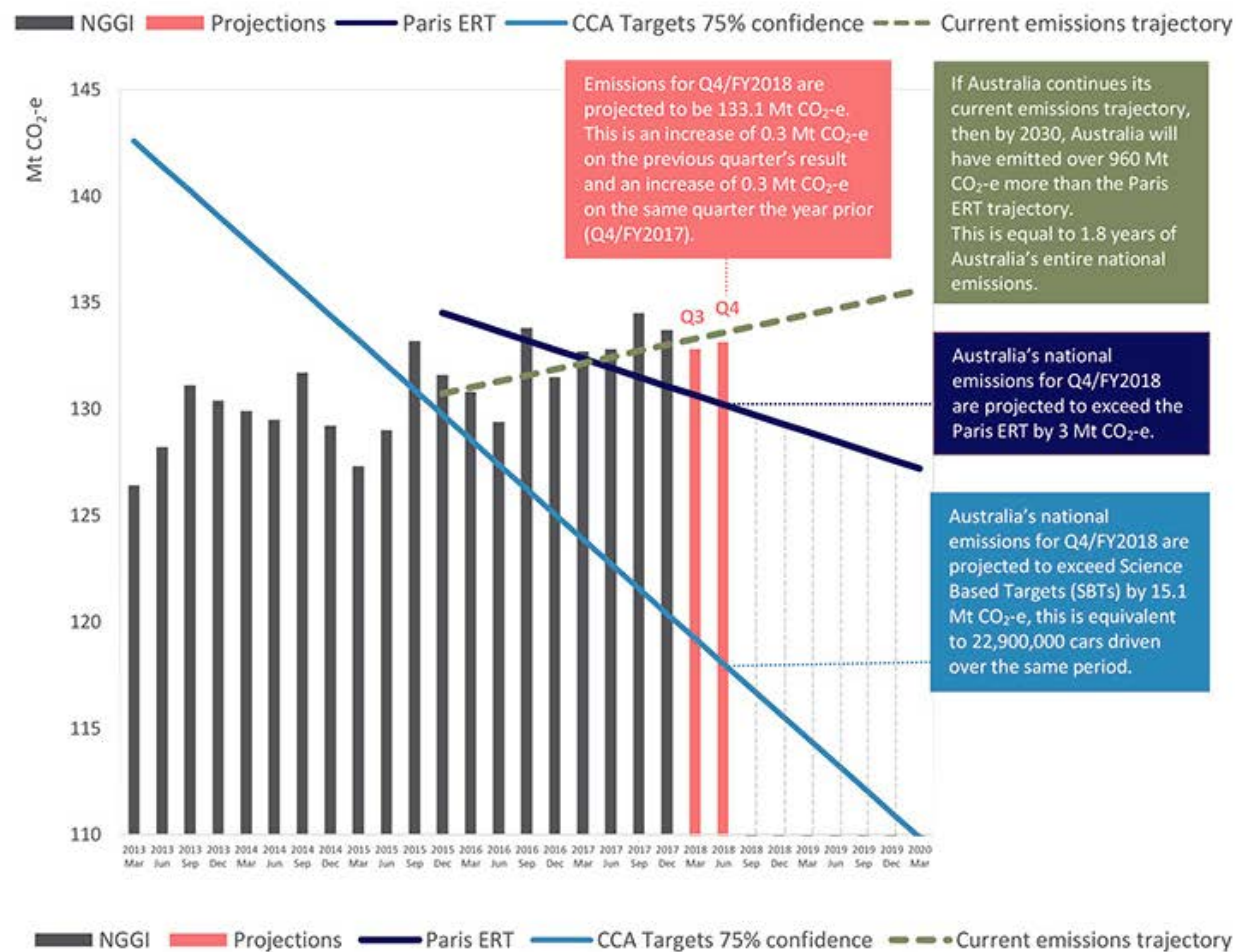
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Climate Change



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Climate Change



Actions

- 16.1 Manage the risks of climate change and improve the region's resilience to flooding, sea level rise, bushfire, mine subsidence, and land contamination.
- 16.2 Review and consistently update floodplain risk and coastal zone management plans, particularly where urban growth is being investigated.
- 16.3 Incorporate new knowledge on regional climate projections and related cumulative impacts in local plans for new urban development.
- 16.4 Review and update the Newcastle Mines Grouting Fund and investigate its relevance to other areas.

Department of Planning and Environment Hunter Regional Plan - A biodiversity rich natural environment

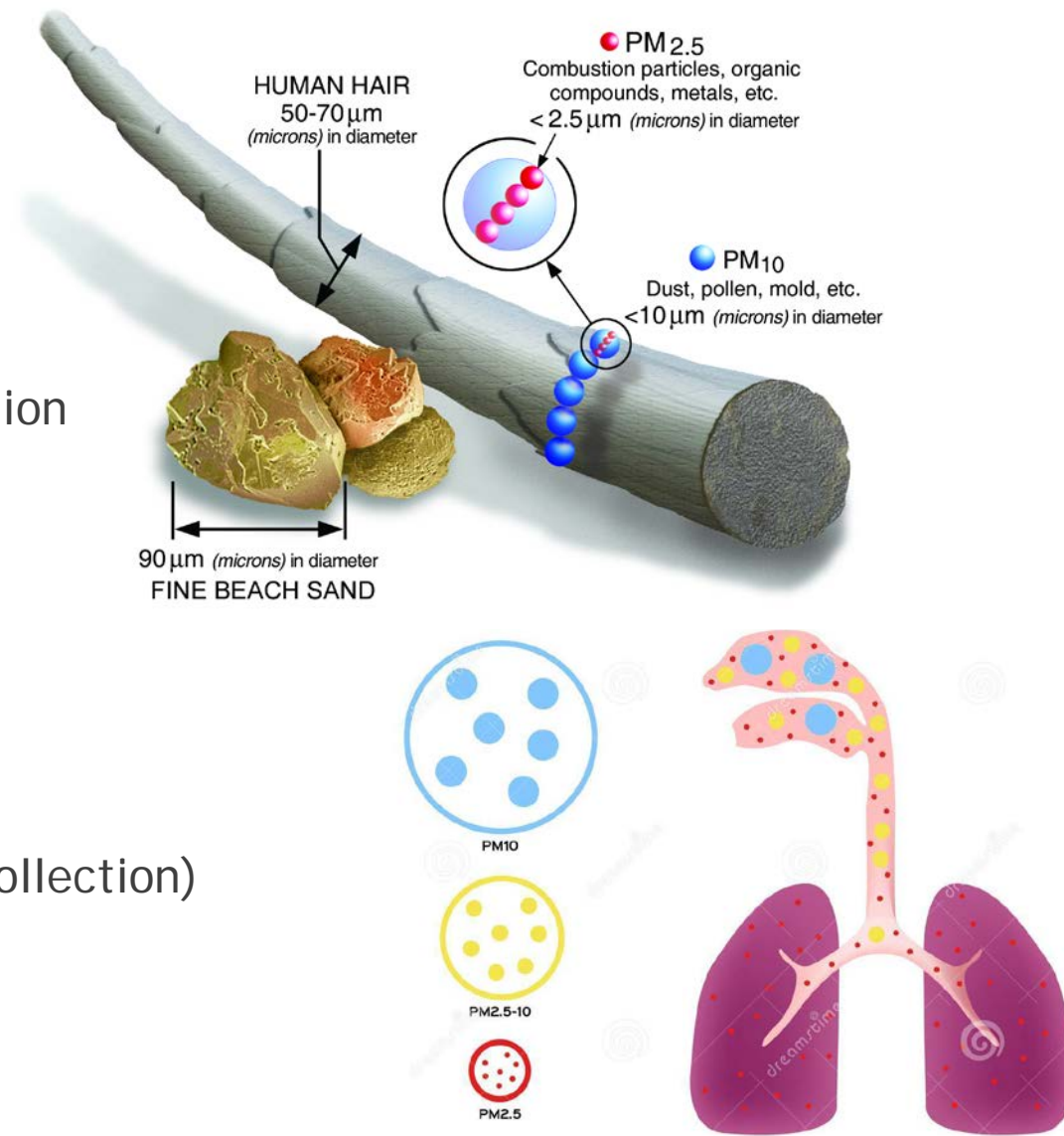


Climate change

- ▶ *“but we are only a small fraction of CO2 emissions”*
- ▶ Gloucester Resources Ltd vs Minister for Planning
 - ▶ “Causal link between the projects greenhouse gas emissions and climate change and its consequences”
 - ▶ Downstream indirect emissions should be considered in determining the approval i.e. scope 3
- ▶ Total GHG emissions of 28.6 Mt CO2-e, not 3.69 Mt CO2-e
- ▶ If GHG emissions are calculated per employee, it would be 10,000 times the average annual emission compared to the average Australian citizen.

Air Quality

- ▶ Eye, nose and throat irritation
- ▶ Shortness of breath
- ▶ Exacerbation of asthma
- ▶ High blood pressure
- ▶ Kidney disease
- ▶ Strokes
- ▶ Pulmonary oedema (fluid collection)
- ▶ Heart disease
- ▶ Low birth weight
- ▶ Type 2 diabetes



Air Quality

- ▶ “The proposed varied coal clearance system and associated surface truck haulage would marginally increase air quality and noise impacts compared to approved Hunter Tunnel coal clearance system.”
- ▶ “The department is recommending **strict conditions** requiring compliance with revised air quality standards...”
- ▶ Because if you don't we will take 3 years to fine you 0.001% of your annual revenue!
(or 0.006% annual shareholder dividend)

Whitehaven Coal Mining Ltd convicted and fined \$38,500 by Court

20 March 2019

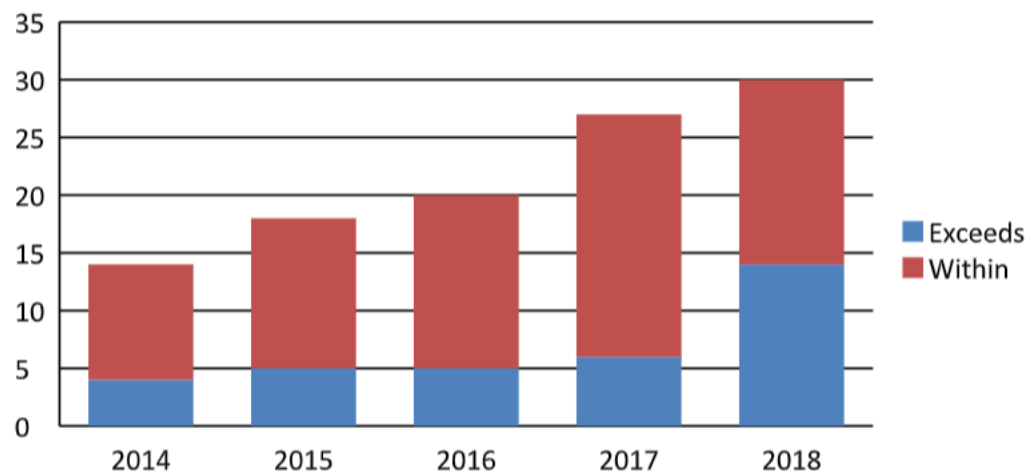
The NSW Land and Environment Court has convicted and fined Whitehaven Coal Mining Limited \$38,500 after it pleaded guilty to breaching its environment protection licence for a blast at its Rocglen Mine near Gunnedah in August 2016, following successful prosecution by the NSW Environment Protection Authority (EPA).



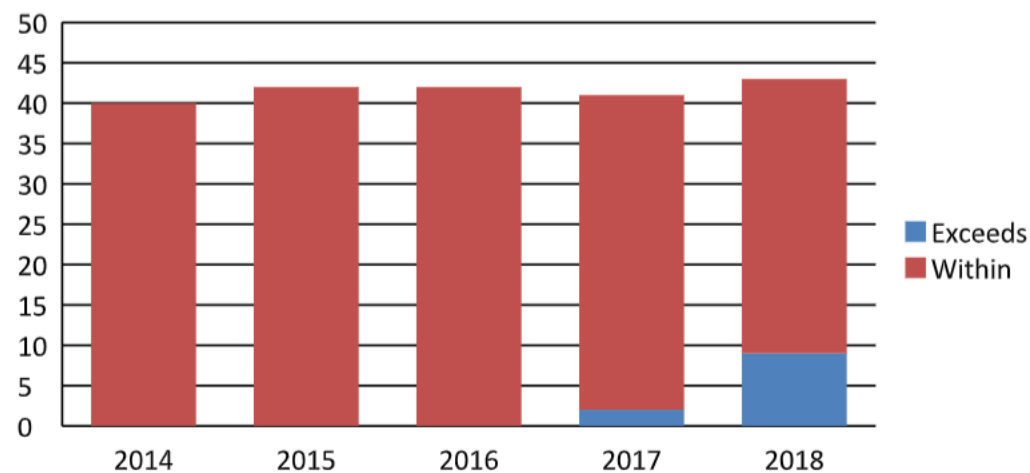
Air Quality - 2018

Location	PM 2.5	PM 10
Sydney Basin		
Liverpool	10.1	
Chullora	8.6	
Richmond	8.1	
Paramatta North	9.2	
Prospect	8.5	
Campbelltown	8.4	
Lower Hunter		
Carrington	8.2	27.3
Mayfield	8.3	26.9
Beresfield	8.7	
Upper Hunter		
Muswellbrook	9.4	27.2
Singleton	8.1	
Singleton NW		26.9
Camberwell	8.4	31.3
Maison Dieu		27.9
Mt Thorley		29.1
Warkworth		26.4
Rest of NSW		
Wagga Wagga North	8.4	27.4
Tamworth	8.3	

NSW locations within and exceeding the fine particle standard



NSW locations exceeding the coarse particle standard.



Air Quality

Risks from air pollution to human health

Effects on health in the Hunter 2007 ED respiratory presentations

Age group	location	n	Rate/100,000
0-14	Singleton	2026	13255
	Muswellbrook	1305	13368
	Rest of HNEAHS	41983	8806
	Sydney	114713	5981
65+	Singleton	306	5005
	Muswellbrook	235	5676
	Rest of HNEAHS	19869	5035
	Sydney	49868	3967



Water Quality and Quantity

- ▶ The World Health Organisation estimates that eight litres of freshwater are required to dilute every litre of polluted water order to prevent harmful contamination
- ▶ Continued operation of this project will lead to drawdown on the Permian Aquifer
- ▶ Dartbrook has permission to extract Hunter Regulated River Water and discharge water which will increase salinity



Social Impacts

- ▶ DIDO workers create negative social and economic stress on the region¹
- ▶ Significant growth in **casualization** of the workforce
- ▶ **82% of mining industry job advertisements** on Seek.com were contractor companies
- ▶ Casual workers are **paid on average 30%** less than permanent workers
- ▶ Gender inequality with recruitment and employment. Casual workers are not entitled to maternity leave.



Conclusion - Oppose

- ▶ Climate change
- ▶ Air quality
- ▶ Social impacts
- ▶ Water quality and quantity