

Clean Air Communities Submission

NSW EPA - Draft Climate Change Policy and Action Plan



SUBMISSION

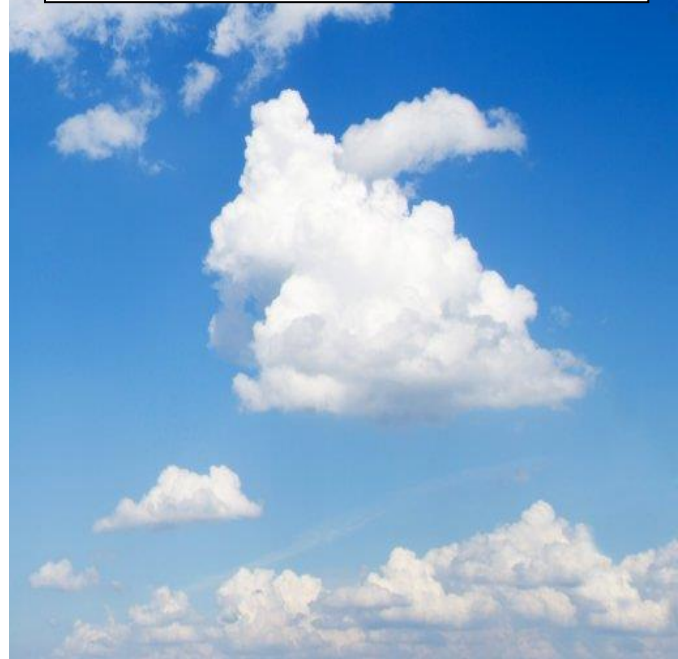
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Clean Air Communities

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Public Consultation on the draft Climate Change Policy and draft Action Plan 2022-2025



Clean
Air
Communities



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Clean Air Communities

Clean Air Communities is a community advocacy and support group founded in 2020 seeking responsible science-based change to protect communities from air pollution exposure.

We recognise and are concerned about all sources of air pollution, but due to the lack of community awareness and government inaction, we are called to focus our efforts on residential smoke pollution.

Residential wood/solid fuel/biomass combustion pollution, is the greatest source of human-generated fine particle air pollution in both Sydney and Melbourne and a major source in Australian urban, regional and rural areas. As it emanates from homes and backyards it impacts where we live, work, play, sleep and breathe the most, affecting the wood-burning household, their neighbours and neighbourhood.

Clean Air Communities is deeply concerned about the effects of all emissions from combustion and the resultant air pollution impacts on the health of Australians, the environment and the climate. Our position is that all forms of avoidable combustion must be phased out in a world that is in a climate crisis, and that we should strive to electrify homes and industry, powering solely with clean non-combustion renewables by 2030.

We all have a right to breathe clean fresh air, everywhere, all the time.

“Because no matter who we are or where we come from, we're all entitled to the **basic human rights of clean air to breathe, clean water to drink, and healthy land to call home**”

Martin Luther King III

Executive Summary

We'd like to congratulate **NSW for becoming the first jurisdiction to regulate greenhouse gases as a form of pollution.**

The dominant emission from biomass combustion is hazardous Group 1 carcinogen PM2.5 particle pollution. Amongst the cocktail of hazardous chemical and gas pollutants from biomass combustion are primary and secondary climate-forcing emissions far more potent than CO2 including methane, black carbon, carbon monoxide, NOx, SOx, ozone etc.

The carbon-neutrality of wood/biomass has been declared by scientists a false solution esp. in the climate emergency time-frame. We need to reject the concept of carbon-neutrality of wood and focus on driving down ALL emissions - rapidly.

The EU, US and other countries' policies for biomass combustion as a climate solution have been disastrous for biodiversity and health, as swathes of native forests from around the world have been felled to fuel industrial furnaces.

We need to stop burning things for fuel, both domestically and industrially, and we call on NSW EPA to show leadership and vision, and to collaborate and engage with all stakeholders to address this matter with urgency.

We acknowledge and appreciate the 8 elements of the EPA's regulatory approach to: **listen, educate, enable, act, enforce, monitor, require and influence**, but given the urgency of the climate crisis, we would like to see more use of **'require' and 'enforce'** approaches.

We support the following EPA commitments:

We would like to thank NSW EPA for its initiatives on climate action and to express our support for the following:

- Develop a series of greenhouse gas emissions reduction targets and related pathways for regulated industry sectors (Pillar 2: new action 7)
- Progressively place greenhouse gas emissions limits and other requirements on licences for key industry sectors (New Action 9)
- Embed climate change considerations into EPA decision-making (Pillar 1: new action 1)
- Foreshadow that stronger regulatory responses are on the table for future application.
- New requirements for Climate Change Mitigation & Adaptation Plans
- annual reporting of progress against the Action Plan
- reference to consistency with environmental justice principles
- engagement, consultation, knowledge recognition and benefit-sharing with First Nations Peoples
- consultation with young people, consistent with the principle of intergenerational equity
- the intent to deliver environmental, cultural and health co-benefits from climate action
- assessment and disclosing of climate related risks
- proposed inter-agency engagement to further a whole-of government approach

Recommendations for strengthening the policy & plan

Acknowledgment of NSW EPA statutory obligations:

The policy acknowledges that the NSW Government has a statutory duty to address climate change: “The EPA has a legal duty to protect the community and environment from harm, including that caused by Climate Change” (Acting EPA Chair).

In clarifying the role of the EPA, the draft policy identifies:

- **EPA statutory objectives** – The policy states that the key elements of the statutory objectives – ie, to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development; and to reduce the risk to human health and prevent the degradation of the environment – “extend to protecting the environment and human health from climate change.”
- **EPA statutory duty:** Section 9 of the POEA Act imposes a statutory duty on the EPA to develop environmental quality objectives, guidelines and policies to ensure environmental protection. This includes protection of the environment from climate change. This policy addresses the duty under section 9 of the POEA Act (p14)

We welcome the Draft Policy and Action Plan as an important foundation, but want to strongly encourage the NSW EPA to show visionary leadership now.

We are in the critical decade for action on climate change – which calls for rapid actual emissions reduction. The Draft Policy and Draft Action Plan take us only half-way through the critical decade, and *does not include emissions from domestic settings*.

We call on NSW EPA to work with the NSW government and all relevant agencies/stakeholders, esp. communities, to develop and implement strong and comprehensive approaches now, to protect human health and the degradation of the environment by **addressing the phase-out of residential solid fuel/biomass combustion for heating and forest biomass combustion for industrial electricity generation**.

Bases for community call for action on residential and industrial biomass combustion emissions:

1. First Principle from CODE RED FOR HUMANITY IPCC REPORT 2021ⁱ

✓ Air Quality & Climate Change ARE TWO SIDES OF THE SAME COIN:

The latest alarming IPCC report makes it clear that issues of **air pollution and climate change are inextricably linked**, yet both science and policy arenas treat these issues independently leading to “win”- lose scenarios such as biomass burning for fuel. The (supposed) WIN of treating biomass burning as carbon-neutral leads to a LOSE by resulting in *“significant emissions of air pollutants, including carbon monoxide, nitrogen oxides, volatile organic compounds, and particulate matter, that locally or regionally affect the climate, human health and ecosystems”*.

We must address both Air Quality and Climate Change together; doing so would lead to significant synergies and economic benefits - as will AVOIDING policy actions that “mitigate one of the two issues but worsen the other”.

It's been clear to many scientists and environmental groups that the treatment of biomass as a natural, renewable, carbon-neutral energy source is an accounting fallacy, ignoring other global warming accelerant emissions and 'the other side of the coin': air quality.

NOTE figure (right): this version of the IPCC Report is labelled “subject to copy-editing”.

33 Most human activities, including energy production, agriculture, transportation, industrial processes, waste
34 management and residential heating and cooling, result in emissions of gaseous and particulate pollutants
35 that modify the composition of the atmosphere, leading to degradation of air quality as well as to climate
36 change. These air pollutants are also *short-lived climate forcers* – substances that affect the climate but
37 remain in the atmosphere for shorter periods (days to decades) than long-lived greenhouse gases like carbon
38 dioxide (see FAQ 6.1). While this means that the issues of air pollution and climate change are intimately
39 connected, air pollutants and greenhouse gases are often defined, investigated and regulated independently of
40 one another in both the scientific and policy arenas.

41

42 Many sources simultaneously emit carbon dioxide and air pollutants. When we drive our fossil fuel vehicles
43 or light a fire in the fireplace, it is not just carbon dioxide or air pollutants that are emitted, but always both.
44 It is therefore not possible to separate emissions into two clearly distinct groups. As a result, policies aiming
45 at addressing climate change may have benefits or side-effects for air quality, and vice versa.

46

47 For example, some short-term ‘win-win’ policies that simultaneously improve air quality and limit climate
48 change include the implementation of energy efficiency measures, methane capture and recovery from solid
49 waste management and oil and gas industry, zero-emission vehicles, efficient and clean stoves for heating
50 and cooking, filtering of soot (particulate matter) for diesel vehicles, cleaner brick kiln technology, practices
51 that reduce burning of agricultural waste, and the eradication of burning of kerosene for lighting.

52

53 There are, however, also ‘win-lose’ actions. For example, wood burning is defined as carbon neutral because
54 a tree accumulates the same amount of carbon dioxide throughout its lifetime as is released when wood from
55 that tree is burned. However, burning wood can also result in significant emissions of air pollutants,
56 including carbon monoxide, nitrogen oxides, volatile organic compounds, and particulate matter, that locally
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Chapter 6

IPCC AR6 WGI

1 or regionally affect the climate, human health and ecosystems (FAQ 6.2, Figure 1). Alternatively, decreasing
2 the amount of sulphate aerosols produced by power and industrial plants and from maritime transport
3 improves air quality but results in a warming influence on the climate, because those sulphate aerosols
4 contribute to cooling the atmosphere by blocking incoming sunlight.

5

6 Air quality and climate change represent two sides of the same coin, and addressing both issues together
7 could lead to significant synergies and economic benefits while avoiding policy actions that mitigate one of
8 the two issues but worsen the other.

2. Personal stories of despair in communities exposed to residential woodsmoke pollution

Current NSW government solid fuel heating regulations continue to be based on a business-as-usual approach focussed on efficiency and emissions standards that have proven to be a failure in improving air quality for NSW residents.

We hear from distressed and despairing residents throughout Australia, including NSW – and globally - of the misery caused by inescapable direct woodsmoke emissions from neighbouring wood-heaters. Their pleas for help are not addressed by the local councils, leaving them confined indoors, running an air purifier - if they are fortunate enough to afford a unit. Elderly residents are left considering selling their homes in their twilight years, or contemplating legal action which is most often financially out of reach for the vast majority.

Here are some of the common refrains of stress, medical distress, loss of freedom to enjoy one's property etc. that are repeatedly told to us in private conversations, messages, letters or posted on social media, and paraphrased here for privacy:

"I can't breathe in my own home"

"I can't enjoy my garden; I'm driven inside because of the smoke"

"I feel like a prisoner in my own home"

"I have to put wet towels under the doors and windows to keep the smoke out"

"I can't hang my washing outside"

"The children can't play in the garden because of the sickening smoke"

"My children are asthmatics, every time we smell smoke, I'm terrified my children will get an asthma attack and end up in hospital, or it might be the day it kills them"

"I can't go for a walk in my neighbourhood, especially in winter because I have to walk through plumes of smoke the whole time"

"I cycle to work to do the right thing for my health and help reduce vehicle pollution, but the whole ride to the city, I'm breathing in thick smoky air – the cycling is like smoking cigarettes"

"I've got a heart condition; I'm frightened what all this smoke is doing to my health"

"My wife has cancer, and it's really upsetting to not be able to make a safe space in our home for her to have the best chance to recover – the smoke makes her feel sicker"

"I'm terrified of complaining to Council, because the neighbours might find out it's me"

"Every time I call the Council to complain about the smoke, they say they can't do anything – no one will help us"

"The neighbours know that the smoke makes me sick, but they won't stop burning"

"I ended up in emergency because the neighbours lit their wood fire again, even though I showed them my medical papers. The triage nurse was so angry she wanted to call the police"

"I don't feel safe in my own home after I made a complaint to Council; not only have I had to buy an air monitor and air purifiers, but I've also had to buy surveillance cameras. This has just gotten worse and worse, but I can't afford to move"

"I feel doomed, I don't know what more to do; if I were renting, I would have moved out by now"

"The neighbour's wood heater was making our whole family sick. We told the neighbours, but they wouldn't stop. We offered to pay to replace the wood heater – they wouldn't accept. Council wouldn't help us. We decided to take the matter to court at great personal expense, and won the case. But we still ended up selling our house as we feared for our life, and now hated our home."

"I can't afford to buy an air monitor and air purifiers; I feel so helpless"

"I am elderly and have been writing to council and ministers for 8 years and nothing has been done about the wood-heater that pollutes my home in the colder months".

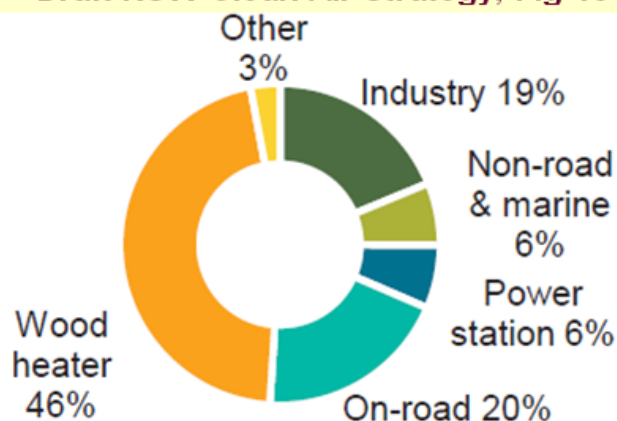
"I live in my car because I need to be able to drive to somewhere with clean air...it's very hard to find anywhere where there isn't smoke" ...

And so many, many more....

3. Residential wood heaters- the highest human source of PM_{2.5} in Sydney that requires substantial action not business-as-usual approach

The region of Sydney is the area with the greatest population and therefore where the greatest population exposure to pollution will occur. As the city grows, this exposure to pollution will increase. Most Sydney residents will be unaware that the **highest human source of PM_{2.5} pollution is a staggering 46%ⁱⁱ from domestic solid fuel combustion from the ~5% of householdsⁱⁱⁱ who own a wood heater, according to ABS data on capital cities. This is greater than vehicle emissions at 20% and greater than industry, including coal-fired power stations at 19%.**

Weighted-Population Exposure, PM_{2.5} Sydney, Draft NSW Clean Air Strategy, Fig 13



The draft NSW Clean Air Strategy conservatively estimates that this small number of wood-heaters emits a staggering 5,000,000kgs/year of PM_{2.5}^{iv} in Sydney – completely dwarfing other human source emissions. It is unconscionable that so much pollution is emitted where the greatest number of people in NSW live – and it is largely discretionary and non-essential lifestyle recreational use. Most of these homes already have cleaner alternatives for heating.

On the other hand, power generation and vehicle fuel combustion serve many purposes for us to fulfil our lives, to conduct our business, to be productive, as well as some proportion of discretionary use. Solid fuel combustion for domestic purposes can be exchanged for clean electric heating very simply in most cases – and the health and economic benefits would be tremendous. The current NSW government position to continue to permit wood heating is a disservice to its population, given the known cumulative health impacts on everyone.

5% of Sydney households that own a wood heater generate 5,000,000kgs/year of PM_{2.5} toxic air pollution
This calls on NSW EPA to engage with agencies to comprehensively & urgently address this source of pollution & climate emissions

4. Short-Lived Climate Pollutants (SLCPs) - biomass combustion

We are very pleased with NSW EPA myth buster series produced for councils, and congratulate NSW EPA for acknowledging:

Biomass combustion is a global warming accelerant, releasing not just CO₂ but also other direct and indirect global warming emissions including, black carbon, methane, ozone, NO_x and SO_x, which are multiple times more impactful than CO₂:



The Global Warming Potential of CO₂ is 1 – the following 20-year GWPs of components of **biomass combustion emissions** are:

Black carbon = 4,470

Methane = 56

Ozone = 69

These SLCPs produced by homes that burn solid fuels both indoors and outdoors compound global warming and yet are not addressed by the NSW government policies and legislation.

5. Addressing global warming emissions from forest biomass for electricity generation

Combustion of forest biomass is inconsistent with objectives to limit greenhouse gas emissions as it **produces more emissions than coal per equivalent amount of energy generated** (biomass burning power plants emit 150% the CO₂ of coal, and 300 – 400% the CO₂ of natural gas, per unit energy produced^v) and thus does not reduce greenhouse gas emissions in the electricity sector and therefore does not contribute to meeting greenhouse gas emissions reduction targets.

I. “Biomass combustion is Carbon Neutral”– It’s a Myth

As discussed in the previous section, the carbon-neutrality of biomass as a policy must be rejected as a myth. Globally and especially in the EU and US, the conversion of coal-fired power stations to biomass combustion for electricity generation has been a disaster for air quality, health, climate and forest ecosystems. This strategy is recognised now by scientists as a myth and an accounting error. A tree that is burned in one evening possibly took 50 years or more to capture the carbon that is released in one night. The replacement rate of trees planted to compensate for trees burned is simply not practicable in the Climate Emergency time frame which is immediate – by 2030. The tree is removed from the carbon-capture environment, released as global-warming emissions, and its absence is also felt in biodiversity impacts.

Burning wood produces far more carbon

than burning fossil fuels,

for each kilowatt hour of electricity produced

The result is a large carbon debt, with emissions often 3 times or more

than those of burning fossil fuels

Letter of Scientists regarding Japanese Policies for Using Wood for Bioenergy (March 14, 2020)^{vi}.

II. Community concerns about forest logging for biomass energy

A study^{vii} commissioned by the Forest Wood and Products Australia found 65% of rural based respondents found native forest logging unacceptable, with only 17% supporting logging in native forests. Australians want to see native forests protected for biodiversity and ecosystem benefits rather than logged for fuel.

The EU must protect forests, not burn them for energy.



Executive Vice President of the European Commission, Frans Timmermans, and governments of EU Member States

ENGLISH -

241,827

of 300,000 signatures

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29 SIGNATURES UNTIL 10K

Hundreds and thousands of global communities, including Australians, scientists^{viii}, health and environmental organisations have raised their collective voices against the use of forest biomass as a fuel source, but it has proceeded unabated.

We call on NSW EPA to work with all agencies to transition away from this harmful and unpopular policy, and work to close down the Redbank/Verdant facility.

Grist

Newsletters

Logging is destroying southern forests – and dividing US environmentalists

More than 150 conservation, environmental, and social justice organizations have accused The Nature Conservancy of "promoting false climate solutions."



Join the #StopFakeRenewables campaign

The European Union is revising the law that makes this scandal possible, but because of lobbying from countries such as Sweden, Finland, Estonia, Austria, Romania and Poland things could get even worse. We must convince our politicians to stop subsidising burning trees in the name of climate change.

466,325 PEOPLE LOVE THE PLANET AND ITS NATURE

JOIN US

500+ experts call on world's nations to not burn forests to make energy

by Justin Catanoso on 15 February 2021

f t in w e b



III. NSW EPA must ensure that renewable energy sources are ecologically sustainable

**“BURNING FOREST BIOMASS FOR ENERGY –
Not a source of clean energy and harmful to forest ecosystem integrity”**



We fully and wholeheartedly endorse the findings of the recently published paper^{ix} by Mackey, et al.

Amongst its many salient points:

“A rethink of the role of forest biomass burning for energy in national decarbonization policy is required. We argue that a global ban on using forest biomass for industrial scale bioenergy is urgently needed given its negative effects on climate mitigation and forest ecosystem integrity”.

We call on NSW EPA to work with agencies/stakeholders to ensure that only genuinely clean renewables are part of the climate solution in NSW, with ecological sustainability a priority.

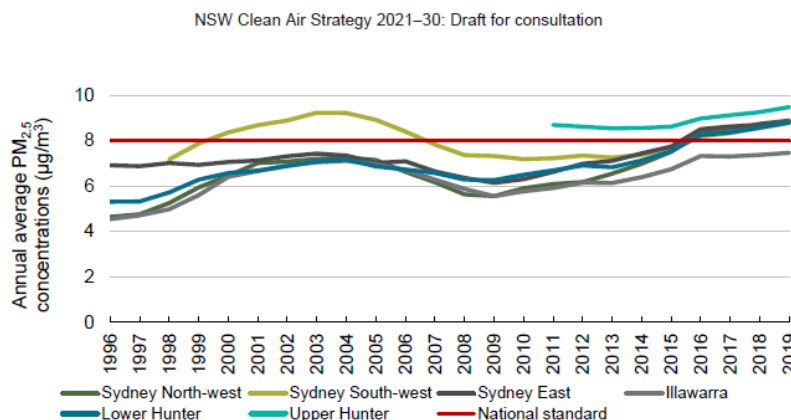
6. Consideration of revision of WHO air quality guidelines 2021

The latest WHO guidelines have been revised for better community health - now set at a maximum of $5\mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$ annually.

NSW annual $\text{PM}_{2.5}$ levels have been sitting above the new recommended limit of $5\mu\text{g}/\text{m}^3$ annually for over 20 years - and are on the rise, revealing that the business-as-usual approach is not protecting the health of NSW residents, and that supporting the wood-heater and biomass industry that burns forests for fuel will continue to burden the health of communities around Australia.

In a warming world, bushfire smoke is an increasing threat, planned burns smoke stifles our air for months, wood-heaters pollute on any cool/cold days, and fire pits, chimineas, wood-fired BBQs, food smokers and slow cookers can be lit at any time unregulated/unenforced.

Current epidemiology and scientific research suggest there is no safe level for $\text{PM}_{2.5}$ and so it is incumbent on us to strive for a continuous and rapid improvement of air quality through a phase-out strategy of solid fuel combustion.



We call upon NSW EPA to work to address this issue to prevent costly ongoing health, well-being, productivity and economic impacts.

7. Consideration of biodiversity impacts with a focus on health:

Human health is inextricably linked to the health of the planet. Loss of biodiversity is directly linked to poor outcomes for human health. Tragically Australia is amongst the top seven countries worldwide responsible for 60% of the world's biodiversity loss between 1996 and 2008. Australia ranks as the second worst of the group, with a biodiversity loss of 5-10%^{xi}. Our precious forests need protection and to be conserved, not to be burned for electricity generation when non-combustion renewables are a proven option.

Wood harvesting and collection is directly linked to biodiversity losses as flora and fauna and insects are reliant on both living and dead trees for food and habitat; the decomposition of debris on the forest floor is critical to soil nutrient and overall forest health.

(Figure) ^{xii}

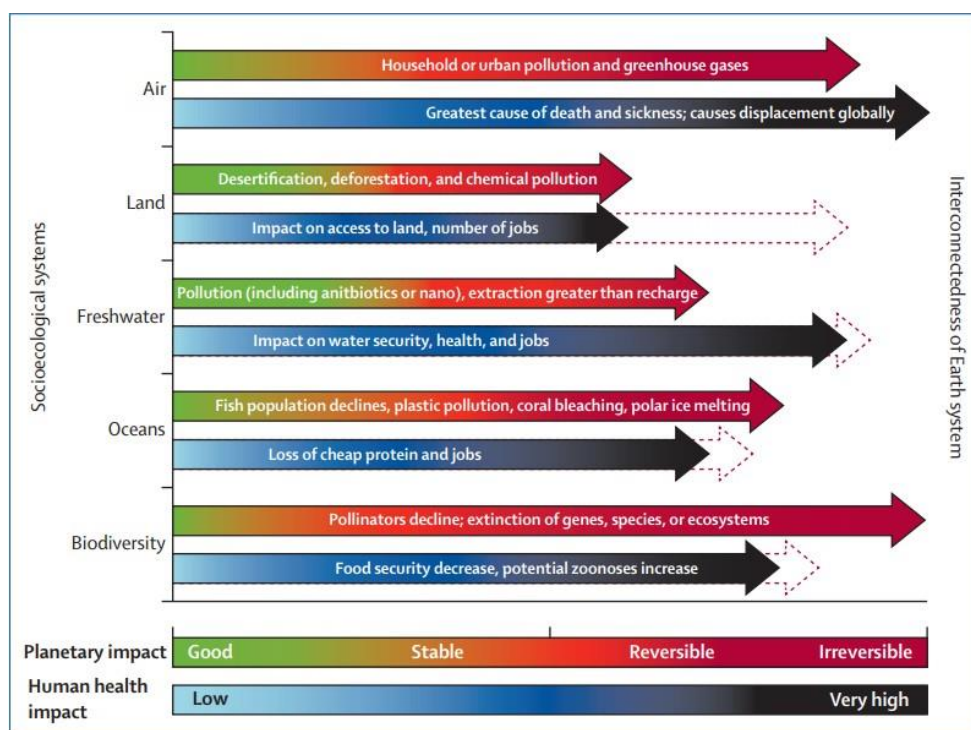
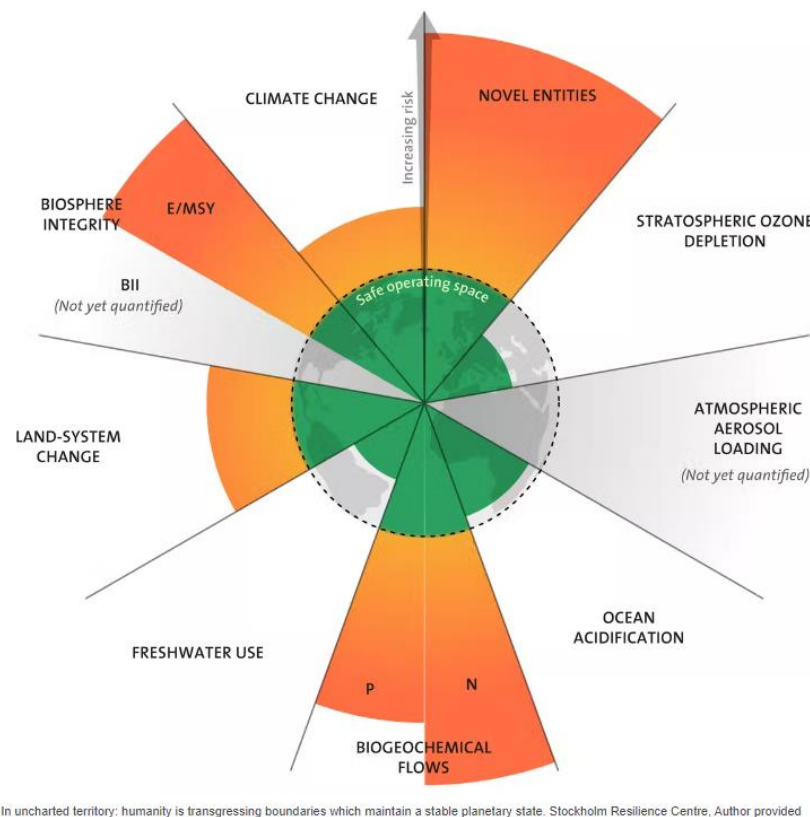


Figure: Global impacts on health of the planet and human health, 2018–50

Length of bars indicates severity of impact on the planet or humans: the worse the impact, the longer the bar. Dotted lines reflect the cumulative nature of a locally occurring problem and its effects on the most vulnerable, showing that these effects might be more serious in some areas than others shown by the solid bar.

In Victoria's Flora and Fauna Guarantee (FFG) Act 1988^{xiii}, "loss of coarse woody debris from Victorian native forests and woodlands" is listed as a "Potentially Threatening Process". There are at least 17 animal species listed under the FFG Act which are threatened by firewood collection from native forests and woodlands. We need to treasure our forests in all states of Australia, allowing them to grow old and be spared destruction for fuel purposes.

8. Consideration of exceedances of planetary boundaries^{xiv} for safe limits for humanity



The boundaries for the safe limits for human existence are being exceeded at a rapid rate and this *calls on us to do all we can to protect health, environment and climate.*

The pollution load on our planet has reached unsafe levels, and the biosphere integrity has been catastrophically compromised, so preserving and restoring our forests is critical. Using forests as a fuel source removes the extraordinary benefits they offer and pollutes our environment in the process.

On a residential level, this calls on us to eliminate all emissions from domestic settings, both indoor and outdoor solid fuel/biomass combustion, for protection of health, environment and climate.

Conclusion

Given our planet is facing multiple existential environmental crises, the business-as-usual approach must be urgently replaced with policies and actions that fully address preventable air pollution and climate emissions, which are both global and local public health emergencies.

We call on NSW EPA to show bold and visionary leadership, guiding and influencing the NSW government and other agencies to come together to create coherent and comprehensive policies and actions that include **the phase out of residential and industrial solid fuel/biomass combustion sources of air pollution and climate emissions.**

These policies and actions will ensure that homes and industry are fuelled only by electricity based on clean non-combustion renewables, with our natural forest ecosystems preserved and restored - for a true **zero-emissions** scenario, which is required urgently for genuine climate action.

ENDNOTE REFERENCES

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