



Clean Air and Urban Landscapes Hub

National **Environmental Science** Programme

Submission to the consultation draft of the Clean Air for NSW
Consultation Paper on behalf of the National Environmental
Science Programme's Clean Air and Urban Landscapes
(CAUL) Hub

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CAUL endorses the overall thrust of the *Clean Air for NSW Consultation Paper* (referred to here as “*the Plan*”) with one important exception. The Plan captures the main challenges and explores the priority actions for the NSW government to improve air quality across NSW over the next 10 years. We commend in particular the commitment to integrated activity across several levels of government.

1. The most important gap in the Plan is its near silence on indoor air quality. Were the government to follow the suggestion of the Plan and implement a population-weighted and health-based metric for exposure it would become clear that exposure to indoor pollutants in the workplace and home was a major component. Recent research has highlighted one aspect of this (fragrance products) [Steinemann, 2016], but there is a large body of research on others. We recommend a review of the impacts of indoor air quality and of the state government’s ability to act, for example by introducing best practice within its own workplaces.
2. We endorse the idea of using cost-benefit analysis suggested on page 10 and the use of a population weighted clean air metric (CAM) for measuring the success of improving air quality. We note that a CAM naturally encompasses the current understanding of the science that there is no safe threshold for PM2.5 exposure, as mentioned on page 10. Since everyone has a right to clean air, we note the continued importance of baseline standards. Metrics that include both the population-weighted approach and an assessment of how frequently standards are exceeded are needed. Given the importance of the metric, its definition is a critical research task. We recommend that expert advice be solicited from the health and research communities to support this process.
3. On page 16 it is noted that there is evidence for adverse effects from both short-term (24 hours) and long-term (annual) exposure to air pollutants. This again emphasises the need for both the CAM and metrics of exceedances of standards.
4. On page 21, it is noted that within Sydney about half the annual fine particle concentrations arise from secondary formation (as opposed to direct emissions). This underlines the importance of controlling emissions of precursor pollutants where possible.
5. We endorse the comments about the importance of public transport and planning on page 18.
6. We agree that changes in urban density will impact future air quality; however, we also note that changing urban form may play a significant role and that very little is known about this. What will the impact of increases in high-rise living be? Will the air quality typically be better on the 12th floor than the first? What impact should this have on building regulation?
7. We endorse the prioritising of major pollution sources and actions with the most cost-effective outcomes and the consideration of climate/energy co-benefits.

8. The wood-smoke action program outlined on page 35 is weak. The case for much tougher regulation on domestic wood-heaters is strong. In particular, given the longevity of housing stock, plans that affect only new heaters will take decades to improve air quality. While realizing the sensitivity of the issue, the government should explore tightening regulation on existing installations with enough lead time to avoid onerous impact on owners.
9. We fully endorse the planned action to reduce the impact of hazard reduction burning on urban air quality (page 36). We note with regret that the new National Environment Protection Measure (NEPM) excludes poor air quality episodes caused by hazard reduction burn episodes, and recommend that this is reconsidered. Hazard reduction burning might benefit from full risk analysis to determine how much burning, when, and under what conditions, is best for overall health and safety outcomes.
10. We endorse the proposed air quality monitoring review, noting that the principles of air pollution as a health problem should guide its design.
11. We endorse the efforts for improved air quality modelling proposed, but note that NSW going alone on improved forecasting is not cost-effective. We believe that there is a strong case for a national approach to air quality forecasting (as suggested in the National Clean Air Agreement). The Bureau of Meteorology is best-placed to handle this task cost-effectively.
12. The major incident response work has been very good and is well thought out (page 39). We also note that the capacity is used elsewhere for research and background testing, delivering value for money, and that the collaboration with researchers is strong.
13. We commend the report for noting the interaction of energy use and pollution and believe this should be reflected in policy. We note innovative taxation schemes (such as those implemented in Chile), where emissions are taxed according to both the carbon footprint and the population-weighted exposure to air pollutants.
14. We endorse the comments around integrated planning (page 41-8), which are very well articulated, as are the comments on individual actions.
15. We are fully supportive of the proposed Western Sydney Community Air Project and we welcome further collaboration on it in future (page 51).
16. We also endorse the ongoing Sydney Air Quality Study (page 55) and support long-term monitoring from specialist agencies like ANSTO (page 56) and research into understanding multi-factor impacts on health (e.g., the interaction of climate change and air quality).
17. We note the success of the community participation component of the Lower Hunter study (page 57). Our own community consultation has highlighted scepticism of actions and reporting by government agencies on local air quality in western Sydney. Co-development of research is required to support community acceptance of the findings.

Finally, we would like to acknowledge the enormous contribution to the efforts to understand and combat poor air quality events in Australia made by the NSW Environment Protection Authority and the Office of Environment and Heritage.

Reference:

Steinemann, A. (2016), Fragranced consumer products: exposures and effects from emissions, *Air Qual. Atmos. Health*, 9(8), 861-866, doi:10.1007/s11869-016-0442-z.