Position Statement: Transforming public health education in Australasia to meet the triple planetary crisis

November 2026

About CAPHIA

The Council of Academic Public Health Institutions Australasia (CAPHIA) is the peak advocacy body that represents universities and aligned organisations that educate, research and develop the Australasian public health workforce. CAPHIA advances excellence in academic standards in the education and development of public health practitioners, researchers and students across Australia, Aotearoa New Zealand and the Pacific.

Summary

Key messages

Public health education must continually evolve to equip the public health and health management workforce with contemporary knowledge, skills and teaching and learning scholarship. The triple planetary crisis of climate change, pollution and biodiversity loss is a global mega-trend already having a myriad of damaging impacts on physical and mental health due to increasingly frequent extreme weather events, the disruption of food and water systems, societal dislocation and disruption, and increases in zoonoses (diseases transmittable from animals to humans), food, water and vector-borne diseases[1]. Public health educators, tertiary education institutions, and their peak representative body CAPHIA must play a leading role in defining the knowledge, skills, and competencies required for our public health and health management workforce to navigate these growing challenges. We must also seize opportunities to foster climate-resilient communities and support just transitions towards a low carbon economy.

Key policy positions

Guided by the CAPHIA competencies area "Climate, Place and Health" we call for immediate, coordinated action to ensure public health education equips our current and future workforce for the realities of a future impacted by the triple planetary crisis. This includes:

1. Ensuring every public health graduate leaves their training with sufficient knowledge, skills and competencies about how climate change and related environmental crises intersect with shifts in disease burden and population health needs.
2. Ensuring every public health graduate leaves their training equipped to contribute to climate and health action and solutions using approaches attuned to health equity, climate justice, intergenerational justice and health co-benefits.
3. Centring Indigenous and Pacific Nations leadership and knowledges in health and climate education, policy, practice and research.
4. Preparing the public health workforce to lead just transitions, building climate resilient and low carbon health systems, and contribute to wider 'health in all policies' initiatives that foster transition to a low-emission society.
5. Collaborating in three directions between public health educators; their students, who are the future public health workforce; and current public health practitioners, health system managers and policymakers – to ensure real-world translation of public health competencies for addressing the health challenges posed by climate change.

Audience

CAPHIA members, universities, public health educators and practitioners, and allied organisations that develop curricula for and educate the Australasian public health workforce
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Background

This position statement is a vital step towards re-orienting public health curricula in Australasia to be fit for our climate-impacted future. People with training in public health (and its related movements and disciplines) are uniquely placed to think, lead and collaborate at the nexus of health and interrelated environmental crises, and lead movements to promote flourishing in a climate-impacted world. A stable ecosystem and sustainable resources are a prerequisite for health[2]. Therefore, public health must be part of the transition towards net zero emissions, which requires deep structural and societal shifts to mitigate climate change and redesign the ways in which we live, work, learn, play and love. Public health education is a vital pre-condition of this transition, as it is through education that our workforce attains the knowledge, skills, competencies and values to guide these shifts in health and health-determining sectors.

We declare that the triple planetary crisis of climate change, pollution and biodiversity loss[3] must be integrated into the core curricula of all public health-related training programs and considered a mainstream part of curriculum. These intersecting global challenges, along with the skills for how to respond to more extreme weather events and climate-related health emergencies require more prominence in public health training[4]. Many public health students now enter their training with knowledge and vocabulary about climate change and related environmental degradation, and have lived experience of climate related health emergencies or disasters. Therefore, pedagogical approaches that are trauma-informed, and actively foster self-care, hope and possibility must be considered when developing curricula.

Key Concepts

Climate Action refers to a series of whole-of-society strategies and efforts to combat climate change and its impacts (including health impacts). Climate action includes ***Climate Change Mitigation*** which is action to reduce or prevent heat-trapping greenhouse gas emissions from human activities[5]. Globally, the goal is to achieve net-zero emissions and reduce greenhouse gas emissions – therefore avoiding the most severe impacts of global warming[6]. ***Climate Adaptation*** is the process of adjustment to actual or expected climate and its effects. Multiple outcomes may result from climate adaptation processes, including harmful and unintended consequences[5]. As part of the net zero transition, public health practitioners, and those involved in re-orienting health services must be effective in work that simultaneously mitigates and adapts to the impacts of climate change, based on local health needs and priorities. It is acknowledged that in some low-emitting, yet highly impacted settings such as the Pacific Islands, adaptation takes priority over mitigation.

Climate Justice refers to the need for climate action and adaptation measures to be attuned to inequities and to protect the rights of highly affected groups, who often have longstanding histories of social injustice[6]. From a more holistic health perspective (e.g. planetary health perspective, see below), the concept of equity is extended to the health of nature and all living beings[7]. The interdependence of all natural ecosystems and human communities is acknowledged in this framework, as is justice that safeguards the rights of both people and natural entities when addressing climate change. Crucially, climate justice reframes climate change as not only a cause of unjust health outcomes, but as a symptom of unjust systems. ***Intergenerational Equity*** refers to the concept of equity in the distribution of resources, opportunities and health burden across generations[8]. Younger generations will unfairly bear more severe and frequent impacts of climate change for a longer period of their life. Global burden of disease can also be considered from an intergenerational perspective (e.g. the elderly and very young are more likely to suffer health issues from the effects of extreme heat). Public health action for a flourishing future therefore needs to take a longer term, intergenerational view that considers the impacts of action today on different generations, particularly generations to come.

Health Co-Benefits and Nature-Based Solutions

Health Co-benefits are the positive health gains that result from climate mitigation and adaptation actions[5]. For example, active transport (cycling and walking instead of driving) simultaneously reduces greenhouse gas emissions and improves cardiovascular health, reduces obesity and lowers road trauma. Urban greening reduces the heat island effect and improves mental health. These co-benefits make the case for climate action as a health investment, not just an environmental obligation. ***Nature-Based Solutions*** protect, restore or sustainably manage natural ecosystems through actions that address societal challenges while delivering human wellbeing and biodiversity benefits[9]. Examples include coastal wetland restoration that reduces flood risk and improves food security. Public health graduates must be able to identify, evaluate and advocate for co-benefit-rich climate solutions.

Just Transitions refers to the need for systemic shifts towards a low-emissions economy to occur in a way that is fair and inclusive[5]. Health services must do their part to support society-wide, cross-sectoral efforts towards the net zero transition by developing health systems and models of care that are low-emissions and have lower environmental impact[10]. A just transitions approach requires such transitions to take place in a way that does not exacerbate, and preferably helps to alleviate health inequities (see co-benefits). It is imperative that those training in public health and health service management have the knowledge and skills to provide the leadership for just transitions of health services – and to support 'health in all policies'.

Shared Territory Between Health Disciplines: Frameworks and Principles for Addressing Climate Change and Health

Within the health sciences, there are several movements and disciplines concerned with the confluence between population health, the natural environment and social equity. This can create points of confusion between public health practitioners and academics alike. Despite some key differences in focus, all work in solidarity for the purpose of protecting the health of people and planet. Some (but not all) of these include:

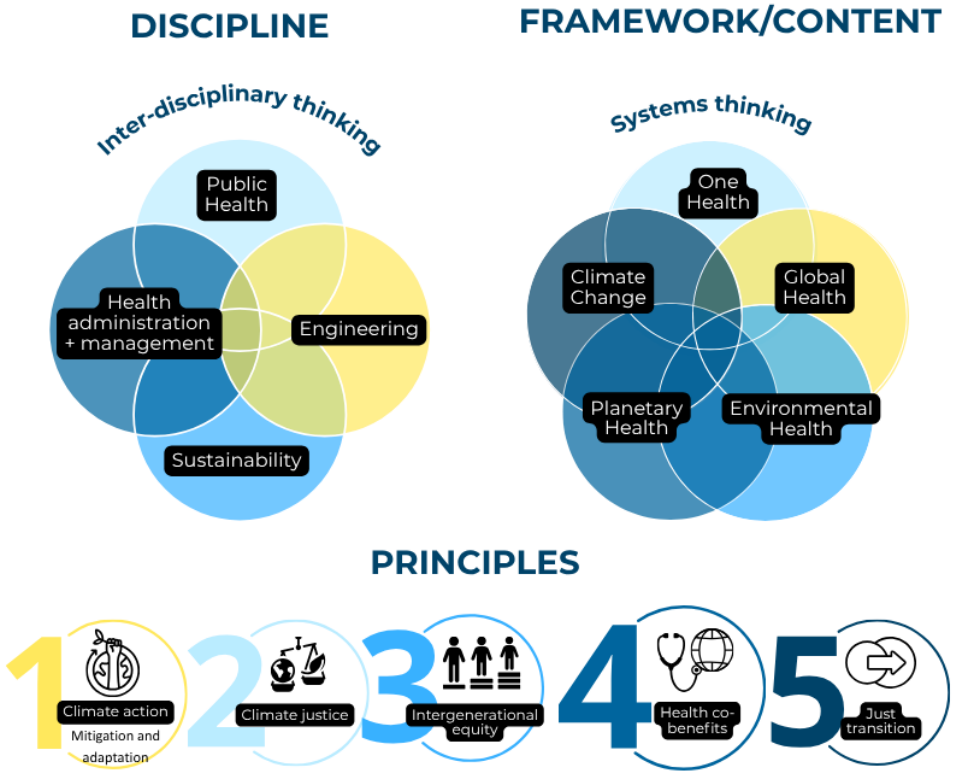
Environmental Health: Environmental health encompasses all physical, chemical, and biological factors external to a person and all related factors impacting behaviors, aiming to prevent disease and create health-supportive environments by assessing and controlling these external factors. It addresses aspects like clean air, water, sanitation, safe housing, and stable ecosystems, recognizing that a healthy environment is crucial for preventing disease and promoting well-being[12].

One Health aims to balance the health of people, animals and ecosystems. It recognises that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent[13].

Global Health as a distinct area of study was defined as "An area for study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide"[13].

Planetary Health *is* a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth[14].

In addition to these sub-disciplines within public health, we acknowledge the need for transdisciplinary approaches, including Heath in All Policies. This may include engaging disciplines such as engineering, health administration, and broader sector agendas working on climate adaptation and sustainability. The figure below outlines some of the disciplines that must collaborate for health and climate co-benefits (Left), and the sub-disciplinary content and frameworks that fall within public health (Right).

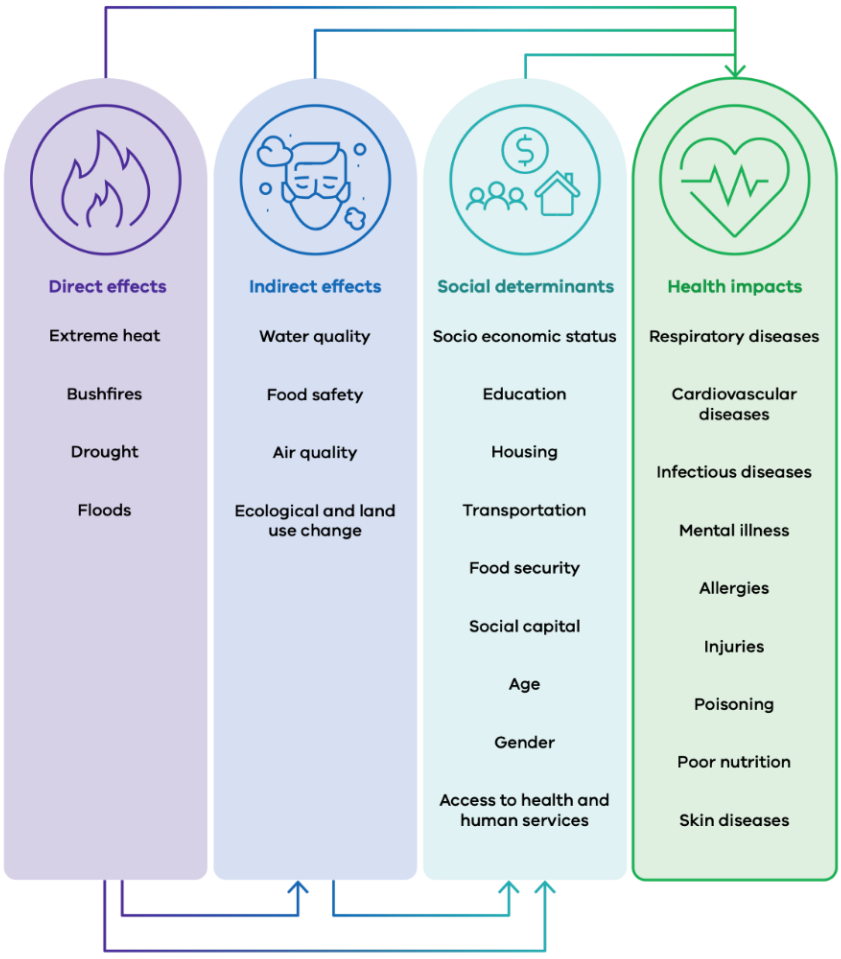


The CAPHIA 2025 Position Statement on the role of public health in meeting local and global challenges has identified the central role of the public health workforce in addressing interconnected global challenges such as climate change[15]. Therefore, it is our position that CAPHIA should be leading action to ensure that climate change and related crises are not only the business of interested sub-disciplines but part of core curriculum within the field of public health and health services management. The CAPHIA competency area of "climate, place and health" provides knowledge areas to guide incorporation into curricula.

Evidence

Climate change, pollution and biodiversity loss are the defining health challenges of our time, and are collectively referred to as the Triple Planetary Crisis[3]. They are already, and will continue to affect the world in which the next generation of public health practitioners live, work, learn, play and love. The health impacts of climate change are not isolated environmental phenomena but arise from complex interactions between energy systems, land use, urban development, transportation, economic activities, and social determinants of health[16]. The triple planetary crisis is already having a myriad of damaging impacts on physical and mental health due to: increasingly frequent extreme weather events, the disruption of food and water systems, societal dislocation and disruption, and increases in zoonoses (diseases transmittable from animals to humans), food, water and vector-borne diseases[1]. Traditional approaches that examine climate-related health outcomes in isolation may fail to identify the underlying drivers that create vulnerability and perpetuate health inequities[17]. Just some of the health impacts of climate change are outlined in the diagram below:

Direct and Indirect Impacts of Climate Change on Health



Source: Victorian Department of Health (2024), *Tackling climate change and its impacts on health through municipal public health and wellbeing planning: Guidance for local government* [website].
Accessed 10 July 2025 from https://www.health.vic.gov.au/publications/tackling-climate-change-impacts-health-municipal-public-health-wellbeing-planning

The following sections outline the evidence for why climate change and related environmental crises should be included in core aspects of public health curricula. Evidence of links with international public health education movements, and the climate adaptation priorities of sectors vital to health and wellbeing have been provided by the members of CPHEN:

1. Indigenous people's leadership and knowledges

Addressing the health impacts of climate and environmental change requires more than technical solutions; it requires genuine leadership by and the inclusion of Indigenous people's knowledges in public health decision-making. Indigenous communities and traditional knowledge holders from across our region have maintained sophisticated systems of environmental stewardship, governance, and health knowledge for millennia. These knowledges offer important insights into the interconnections between human health, ecosystems, culture, and Country[13]. Across Australia, Aotearoa New Zealand and the Pacific, Indigenous communities are responding to climate change with knowledge, leadership and innovation – as guardians, knowledge holders, and architects of flourishing futures[4].

Indigenous people's leadership should be embedded across public health research, policy, education, and practice. This includes supporting self-determination, strengthening Indigenous governance, and ensuring that responses to climate and health challenges are developed in partnership with communities most affected by environmental change. Indigenous-led approaches recognise that health is inseparable from relationships with land, sea, culture, community, and future generations[18]. Public health institutions have an important role in listening to, learning from, and acting alongside Indigenous peoples. Respecting Indigenous people's knowledges is not only a matter of equity and justice; it strengthens the capacity of public health systems to respond to complex planetary health challenges and supports more sustainable, culturally informed, and effective health outcomes[19].

2. Climate justice and health equity

Climate change compounds the effects of the wider determinants of health, particularly for those already experiencing poverty, exclusion and poor health[20]. Whilst the world's high and upper-middle income countries are responsible for the most carbon emissions, climate impacts are inequitably weathered by populations in Small Island Developing States (SIDS), Indigenous peoples, low-income countries and young and future generations[1,21]. Other populations at elevated risk of the health impacts of climate change include rural communities, migrants and displaced people, children, the elderly, those with pre-existing health conditions, sexual and gender minorities, and pregnant women[17,18] . Climate change disproportionately impacts women and girls due to structural inequities in access to resources, power, and opportunities, and climate change, education, and gender inequity are closely entwined[24]. Gender inequity can limit access to education about climate change, which shapes who understands, benefits from, and contributes to climate action, governance and decision making[20,21]. It is crucial to include women's knowledge and lived experiences in climate change and health education to promote a diversity of solutions[24,25,26].

3. Community Engagement and Advocacy

We require a workforce equipped to lead, advocate and influence the policies, systems and societal transitions needed to create healthy, equitable, climate-resilient and sustainable societies[27]. Without justice-oriented action, the accelerating effects of climate change and related environmental crises will compound existing health inequities[21]. Graduates must have leadership and advocacy capabilities alongside climate and health knowledge.

Community engagement in the context of climate justice requires close partnerships between organisations, policy makers and communities[28]. Graduates must be able to apply skills including communication with diverse audiences, facilitation and partnership development, and a commitment to centring local knowledges and Indigenous people knowledges, for the co-creation of solutions which are contextual and inclusive[29.30]. They must be capable of engaging communities and decision-makers, working collaboratively and build partnerships across sectors, support movement building, and navigate political processes[31,32]. These capabilities enable graduates to identify opportunities to address climate change within and beyond the health sector, and to advocate for evidence-informed policies and practices that advance health, equity and planetary health.

4. Mental health consequences of climate change

Climate change is increasingly recognised as a significant megatrend threatening population mental health[33]. Extreme weather events such as bushfires, floods, heatwaves and storms are associated with increased risks of psychological distress, anxiety, depression, post-traumatic stress disorder (PTSD), and climate-related anxiety[16,34]. These impacts can persist long after the immediate physical dangers have passed, affecting individuals, families and communities and placing additional demands on health and social support systems[34]. As climate-related disasters become more frequent and severe, public health practitioners require the knowledge and skills to recognise, prevent and respond to the mental health consequences of environmental change. As health professionals are simultaneously living and working in climate change, curricula can also give attention to the mental health impacts of workforce eco-anxiety, distress and wellbeing through trauma-informed healthcare leadership. Integrating climate-related mental health literacy into public health education will strengthen workforce preparedness and support resilient, evidence-informed and community-centred responses to the health challenges posed by a climate-impacted future[31,32].

5. Health systems management and transformations to address climate change

Health systems transformation is essential to addressing the climate crisis while maintaining equitable care across the life course[36]. As Australia's population ages and demand for healthcare grows, health systems should support transparent carbon accounting and sustainability measures[37]. However, healthcare sustainability must extend beyond emissions reduction alone to include health system resilience and preparedness for climate-related impacts[38]. According to Australia's National Climate Risk Assessment, current risks to the "health and social support system" are "moderate-high" but are expected to reach "severe" by 2050[37]. Therefore, the vision for health system transformation must consider health-adjacent sectors which provide social infrastructure to support health and wellbeing such as housing, food, family and domestic violence, aged care, early childhood education, and disability support[39]. The national peak body's blueprint framework for "fair, fast and inclusive climate action this decade" calls for reform in 12 strategic policy areas including the promotion of good health and wellbeing[38]. This sets the stage for collaborative efforts between the health and community services.

Supporting a sustainable and climate-resilient health system requires attention to workforce wellbeing and preparedness. Embedding climate change and sustainability education across health professional degrees and health system management programs provides a foundation for this transformation. Building climate literacy across the workforce equips clinicians, managers and leaders to support climate-responsive healthcare and resilient, environmentally sustainable health systems[40]. Health system management training is increasingly recognised as an essential component of climate-responsive health sector reform. As climate change intensifies pressures on health services, there is a growing imperative to ensure current and future health leaders are capable of planning, governing

and improving systems under changing environmental conditions[41]. Such training extends beyond general awareness of climate-related risks and encompasses practical competencies in strategy, financing, workforce planning, procurement, data-informed decision-making, service redesign and emergency preparedness. It also includes strengthening capabilities in cross-sector partnerships with relevant stakeholders across systems to address complex, interconnected risks. This approach is consistent with the WHO operational framework for climate-resilient and low-carbon health systems[41], which identifies governance, service delivery, information systems and workforce capability as central to effective system transformation. Within this context, health system management education can be understood as encompassing climate risk assessment, sustainability, supply-chain resilience and cross-discipline collaboration across executive development, professional learning and postgraduate curricula.

6. Climate Change Action through Systems Thinking

Systems thinking provides a valuable lens for understanding interconnected relationships by recognising that climate change and health are embedded within a broader socioecological systems characterised by feedback loops, interdependencies, and consequences[42]. Climate change-health relationships are dynamic, non-linear, and characterised by feedback loops that are not always adequately represented in traditional framework applications. Therefore, public health curriculum and praxis opportunities need to incorporate a systems-thinking perspective, such as the Driving Force–Pressure–State–Exposure–Effect–Action (DPSEEA) framework, which provides valuable tools for analysing the pathways through which climate change affects health[43]. The framework helps identify how broader drivers, including fossil fuel dependence, unsustainable urban development, consumption patterns, and economic growth models, generate environmental pressures that alter ecosystems and environmental conditions, leading to human exposures and adverse health outcomes. When the public health workforce has the knowledge to makes these causal pathways explicit, this can contribute to evidence-informed policy development, and ensure that interventions target not only immediate health impacts but also the underlying drivers of environmental change[44]. Such an approach can help shift public health practice from reactive adaptation towards proactive prevention and the promotion of sustainable, equitable, and healthy societies.

7. Artificial intelligence (AI) in healthcare and education

AI has the potential to strengthen climate-responsive public health systems through enhanced surveillance, risk prediction, decision support, and workforce education. AI-enabled tools may support identification of populations at increased risk during extreme weather events, improve forecasting, and facilitate timely responses to climate health emergencies[45]. However, the potential of AI to strengthen climate-responsive public health systems must be balanced against its risks and broader impacts, such as rapid dissemination of misinformation and disinformation, which poses a barrier to achieving climate justice[46]. Other issues include health security, protecting AI sovereignty, supporting critical appraisal of generated information, and considering carbon footprint, water consumption, and community health impacts of data centres[47]. Moreover, AI poses a substantial environmental cost through its energy use, and its greenhouse gas, water and land footprints. As AI becomes embedded in healthcare and education, graduates will require the skills to interpret, critically appraise, and responsibly use AI in public health settings, and consider legal and ethical implications[48,49,50]. Public health graduates require the skills to critically evaluate its benefits, limitations, ethical implications, and potential impacts on health equity.

8. International Initiatives for Education and Collaboration

There has been a marked expansion of climate and health education initiatives and resources at both global and regional levels in recent years. Leading international organisations have developed educational materials to support capacity building and curriculum integration, such as the One UN Climate Change Learning Partnership (UN CC:Learn), the WHO Climate and Health Toolkits, and the Planetary Health Alliance Education Resources that offer accessible frameworks, training manuals and educational materials on a range of relevant topics. In addition, the Planetary Health Report Card, a student-driven initiative, evaluates and promotes planetary health content in health professional schools, which has been expanded from medical schools to other disciplines. However, public health has notably not been evaluated.

The Global Consortium on Climate and Health Education (GCCHE) has played a leading role in advancing climate and health education globally. Its initiatives include the development of educator resources, a comprehensive Resource Bank, including resources tailored for public health education, and evidence translation to community practice. GCCHE has also established a Western Pacific Network to enhance regional collaboration and promote context-specific educational approaches. In addition, GCCHE conducted the first global survey of climate and health education in schools of public health, identifying substantial variation in curriculum integration across regions and calling for increased investment in faculty development, institutional support, and curriculum development.
Regional collaborations have also emerged to strengthen climate and health education and competencies through interdisciplinary and inter-institutional learning, such as the APRU Certificate on Global Climate Change Leadership and Universitas 21 (U21) Health Sciences International Student Challenge. Such initiatives demonstrate the value of partnerships that extend beyond individual institutions.

The WHO Alliance for Transformative Action on Climate and Health (ATACH) offers academic public health institutions a structured mechanism to act collaboratively and collectively on climate health beyond national borders. Through the ATACH constituencies, such as the Health Professional Associations constituency, institutions can align curricula, share successes and barriers, and coordinate advocacy. The result is building a cross-border coalition that individual intuitions cannot achieve in isolation[51].

For CAPHIA members, engagement with ATACH provides valuable access to partners across the world, and enables Australian, Aotearoa New Zealand and Pacific institutions with the ability to contribute to and learn from international efforts to embed climate change into public health training, and across public health education more broadly. This is particularly significant given the shared regional responsibilities of Australasian institutions with Pacific partners, many of which face acute climate and health challenges with more limited educational infrastructure. International collaboration through ATACH also strengthens the evidence base underpinning competency frameworks, which contributes to ensuring that Australasian graduates are prepared not only for domestic challenges, but with a perspective that encompasses an understanding of the global climate and health landscape.

9. Student and Early Career Perspective

Climate change is impacting the current public health workforce[52]. Students and early-career professionals are not only future contributors to the workforce, but also active advocates and innovators shaping climate and health responses today. International surveys demonstrate strong student support for integrating climate and health into core health professional curricula, while

reviews indicate growing consensus that climate competence is becoming an essential capability for the future health workforce[53,54]. As public health graduates are increasingly expected to contribute to climate action and just transitions, an education system that invests in their capacity to shape a climate-resilient and equitable future is vital. Urgent investment in the next generation of public health leaders is required[55]. Today's generation of students has already lived through climate-related health emergencies and extreme weather events[56]. Preparing students for this climate-impacted future, therefore, requires more than theoretical knowledge; it requires structured opportunities and pathways to lead, collaborate, and innovate. Applied pedagogies such as problem-based learning, case studies, and trauma-informed practice are some avenues that educators could explore[4]. Universities can also establish and support student-led climate and health clubs and initiatives as platforms for peer learning, leadership development, interdisciplinary collaboration, and civic engagement. Equally important is research funding dedicated to student-led climate health projects, to enable student and early-career professionals to contribute locally grounded evidence and community-responsive solutions.

Recommendations

1. Create expanded guidance on the CAPHIA Climate, Place and Health competency area and WHO Essential Public Health Functions relevant to climate, nature, and related environmental effects to inform curriculum development
2. Develop a roadmap of how the expanded competencies can be incorporated into public health curricula across Australasia, including a monitoring/accountability mechanism
3. Partner with sectors beyond health (including education, transport, agriculture, the environment and disaster recovery) to learn what additional skills the public health workforce needs to effectively contribute to just transitions to a low-emission society.
4. Ensure all public health and health system management training programs include explicit advocacy competencies that equip graduates to engage governments, health systems and communities on the health case for climate action.
5. Continue to strengthen partnerships between CAPHIA and other climate and health networks such as the faculty development courses such as the Global Network for Academic Public Health (GNAPH) Climate-Ready Classrooms: A Public Health Faculty Development Course on Climate Change; the Global Consortium on Climate and Health Education (GCCHE) Western Pacific Network on Climate and Health Education.
6. Continue to leverage CAPHIA's existing partnership with ATACH and its Health Professional Associations constituency to align Australasian public health curricula with international standards and enable mutual learning, particularly given shared regional responsibilities with Pacific partner institutions facing acute climate and health challenges

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Conflicts of interest

None to declare