enHEALTH

Environmental Health Standing Committee (enHealth) of the
Australian Health Protection Principal Committee

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of the Australian Health Protection Principal Committee

Strategic Plan

2020-2023

VERSION HISTORY

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1   INTRODUCTION

The Environmental Health Standing Committee (enHealth) is established under the Australian Health Protection Principal Committee (AHPPC) as the primary structure for the delivery of environmental health advice and national leadership in Australia.

The purpose of this document is to set out the strategic priorities of enHealth for the period 2020 to 2023. The intended audience for this plan is enHealth, the AHPPC, Australian Government personnel, state and territory health authorities, and other stakeholders.

This document should be read in conjunction with the AHPPC Strategic Plan 2019-2023, Operating Guidelines, and Terms of Reference, as well as the enHealth Terms of Reference, Strategic Priorities, Work Plan, Operating Guidelines, and Publications and Communications Policy.

1.1   Environmental health and environmental public health

Environmental health is defined by the World Health Organisation (WHO) as all the physical, chemical and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. This definition excludes behaviour not related to environment, as well as behaviour related to the social and cultural environment, and genetics.[1]

Over the years, estimates have been made of the portions of human mortality and morbidity that can be attributed to environmental factors. Air quality, drinking water quality, food safety, chemical use, and soil and groundwater contamination all contribute to these adverse health outcomes.[2] In 2006, the WHO estimated that environmental factors accounted for 24 per cent of the global disease burden and 23 per cent of all deaths.[3] This is an approximate estimate because our understanding of the links between our environment and health, and how to mitigate the risks to health, is far from complete. Further research therefore needs to cover a wide range of investigations from the evaluation of risks associated with environmental exposures, through mechanisms for prevention, to ways of incorporating these measures into the delivery of policy and services. The solutions that reduce environmental health risks will come from both within the health sector and beyond it.[4]

Environmental public health (also termed environmental health) is a term commonly used in the United States and the United Kingdom to describe public health work and includes the surveillance, investigation, control and prevention of non-communicable environmental hazards and their associated health effects (especially chemicals, radiation, and physical hazards). Environmental public health also embraces work relating to the wider impact of environmental determinants on human health.[5][6]

Environmental public health sits within the broader scope of health protection functions, which seek to reduce the likelihood and minimise the consequences of both known and unknown risks that arise, either directly or indirectly, from hazards such as infectious diseases, chemicals, radiological agents, natural disasters and other mass casualty events (including acts of terrorism). Health protection encompasses

[1] World Health Organization, 2019, *Environmental Health.* Online at http://origin.searo.who.int/topics/environmental_health/en/

[2] Smith K. R., Corvalan C., Kjellstrom T. *How Much Global Ill Health Is Attributable to Environmental Factors?* Epidemiology. 1999; 10: 573–84.

[3] Prüss-Üstün A, Corvalán C. *Preventing disease through healthy environments. Towards an estimate of the environmental burden of disease.* Geneva, World Health Organization, 2006.

[4] *The world health report 2013: research for universal health coverage*. Online at https://www.who.int/whr/2013/report/en/

[5] United States Government, Centers for Disease Control and Prevention and Department of Health and Human Services 2003, *A National Strategy to Revitalize Environmental Public Health Services*. Online at www.cdc.gov/nceh/ehs/publications/strategy.htm

[6] UK Government, Public Health England 2019, *Environmental public health surveillance system (EPHSS)*. Online at https://www.gov.uk/government/publications/environmental-public-health-surveillance-system/environmental-public-health-surveillance-system-ephss

all health hazards and associated risks that require a range of prevention, preparedness, response and recovery programs and other risk management treatments.

1.2 Environmental health in Australia

The Australian Government Department of Health adopts the WHO definition of environmental health. It further states that environmental health involves those aspects of public health concerned with factors, circumstances, and conditions in the environment or surroundings of humans that can exert an influence on health and well-being. In this way, environmental health provides the basis of public health, with improvements in sanitation, drinking water quality, food safety, disease control, and housing conditions central to the significant improvement in quality of life and longevity experienced over the past hundred years. Environmental health practice, therefore, addresses emerging health risks arising from the pressures that human development places on the environment.[7]

Environmental public health programs are located in all state and territory health departments around Australia. Environmental public health is a core discipline within the public health portfolio, overseen by Chief Health Officers (or equivalent) in each jurisdiction. This public health protection function plays a key advisory role to state, territory and national governments, working together with environmental health practitioners and their respective Chief Health Officers to ensure public health is protected from hazards in the environment.

The work of environmental public health programs predominantly focuses on understanding community concerns about health and wellbeing in a societal context, i.e. recognising that the environment is one component of many interacting dimensions that affect health. In this context, the potential risks to public health are determined and actions, including population health interventions, are proposed to manage these public health risks. The management of environmental public health risks is centred around the provision of advice to communities on protective actions that can be taken to reduce or remove potential exposure to environmental hazards, and control of risks through policy and regulation.

Environmental health efforts focus on preserving the health of the Australian community by reducing the likelihood and minimising the consequences of risks that arise, either directly or indirectly, from environmental health hazards. This approach encompasses all environmental health hazards and associated risks that require prevention, preparedness, response and recovery programs.

Health protection, including environmental health, is also inherently linked to broader national security with most, if not all, large-scale emergencies and disasters having the potential to cause adverse impacts on the health of affected communities and populations through environmental factors. For this reason, environmental health's involvement in emergency preparedness and planning are essential to minimise the impacts of these threats on the public.

Health protection efforts in Australia also consider the broader regional and global context. As a state party to the *International Health Regulations (2005)[8]*, Australia is required to meet a range of obligations, which contribute to international health security, as elaborated on in *Australia's National Action Plan for Health Security 2019-2023* (NAPHS).[9] Collaboration across jurisdictions, with research institutions, non-government stakeholders and international bodies is critical to ensure Australia is well prepared to plan for, mitigate and manage a range of threats, including environmental health hazards.

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[7] Australian Government Department of Health 2019, *Overview of environmental Health*. Online at https://www1.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-envhlth-index.htm.
[8] World Health Organization, 2005, *International Health Regulations*. Online at https://www.who.int/ihr/publications/9789241580496/en/
[9] Australian Government Department of Health 2019, *Australia's National Action Plan for Health Security 2019-2023*. Online at https://extranet.who.int/sph/docs/file/2458

1.3   Governance arrangements

The management of health protection, including environmental health, in Australia is governed through a complex set of cross-jurisdictional relationships and underpinned by the principle of shared responsibility.

The **Australian Health Protection Principal Committee** (AHPPC) provides overarching national leadership through cross-jurisdictional collaboration on health protection matters in a context of prevention, preparedness, response and recovery. The AHPPC is comprised of senior officials from the Australian Government Department of Health, each state and territory health authority, New Zealand Ministry of Health, Australian Government departments responsible for emergency management, and subject matter experts. The Commonwealth Chief Medical Officer (CMO) chairs the AHPPC. The work of the AHPPC is supported through five expert standing committees, including enHealth (see **Figure 1**).
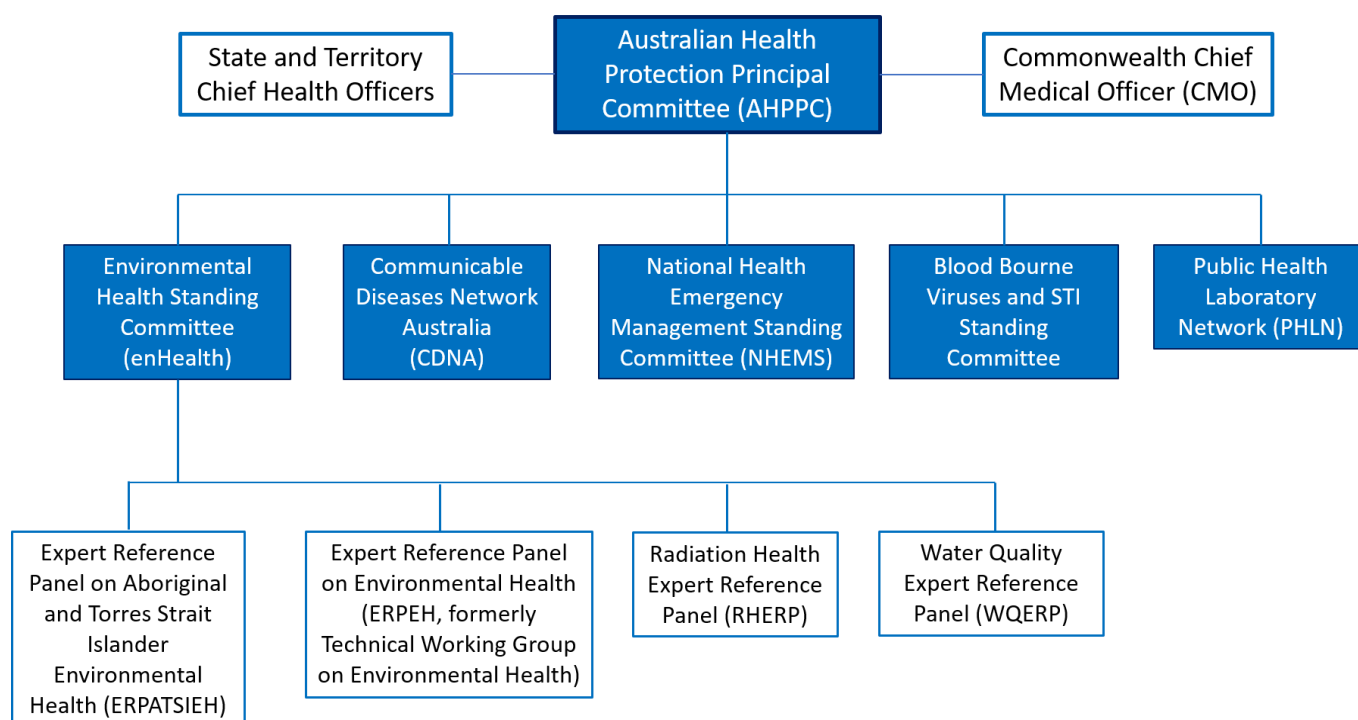

Figure 1. Governance framework for health protection in Australia. It reflects the importance of separate roles for the Commonwealth and states and territories.

2   ENVIRONMENTAL HEALTH STANDING COMMITTEE

The **Environmental Health Standing Committee** (enHealth) supports the work of the AHPPC. enHealth provides policy advice, coordination of national responses to environmental health issues, and guides the development and coordination of research, information and resources on environmental health matters, as well as coordinating health input into environmental standards.

enHealth is especially committed to addressing inequalities in health status due to environmental factors, particularly in Aboriginal and Torres Strait Islander communities, and safeguarding the health of populations that are particularly vulnerable to certain environmental hazards, such as children, the elderly, and people with disabilities.

enHealth provides a national focus on maintaining and improving the health of Australians by promoting a healthy environment and by preventing premature death, avoidable illness and disability caused by non-infectious, non-occupational environmental and related factors.

2.1   Managing environmental health risks in Australia

Environmental health risks are largely managed by an array of complementary national, state and territory agencies, all of whom contribute to a national system of health protection. In general, risks are managed through regulatory frameworks administered by health and other agencies at the state and territory level. These regulatory frameworks operate within a context of nationally coordinated policy and standard setting. The Australian Government, through its own legislation, manages those environmental health risks associated with services and facilities it manages.
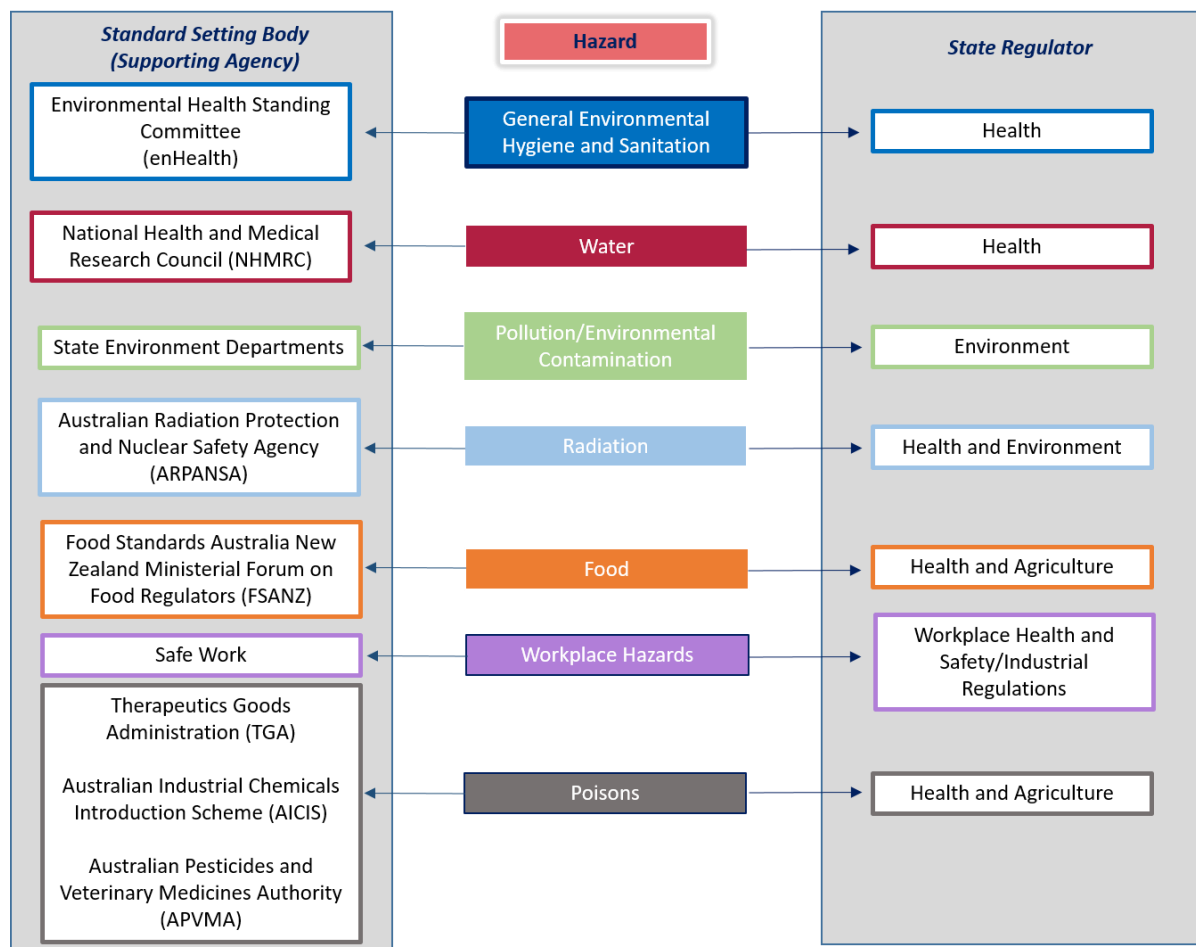

Figure 2. Environmental health systems in Australia - illustrating relevant environmental health related decision-making, advisory and regulatory agencies.

2.2 The role of health agencies in environmental health

Environmental health functions within health agencies play a pivotal role in the multi-agency health protection system in Australia. As noted above and shown in **Figure 2**, a range of agencies have responsibility for regulating environmental factors. However, when environmental health-specific risks emerge, the community expects health agencies to provide specific guidance informed by a clinical perspective.

Historically, all these functions were located in health agencies. More recently, as the community required a greater investment in these risks, agencies with a specific focus on certain parts of the environmental health system were established. Certain high-risk hazards continue to be regulated by health agencies, particularly in partnership with local government. States and territories vary to the extent to which certain environmental hazards continue to be managed by health or other agencies.

Nevertheless, certain core health responsibilities will always remain with health agencies consistent with their role as being an agency whose primary and sole accountability is the health of the community. This role is unencumbered by the associated responsibilities for industry development.

Health agencies, therefore, are the primary advisors to national, state and territory governments on whether a particular hazard constitutes a risk to health. Once codified into standards or guidelines, other non-health agencies are able to administer regulatory schemes to achieve those standards. More recently, health agencies have shifted their focus to situations that are more complex and to those hazards that are emerging, uncommon or novel (e.g., *development of environmental health standards is required*; emergencies; and the investigation of non-communicable disease clusters). Importantly, the advisory capacity of environmental public health programs to public health physicians, including Chief Health Officers, informs and enables robust medical judgement about public health risks to the community.

Environmental public health work is carried out by a range of individuals with qualifications and expertise in the fields of public health, environmental science, environmental health, human health toxicology, chemistry, biology, physics, nuclear medicine, public health medicine, epidemiology, risk communication, and community engagement. Environmental public health is a related but distinct field from the practice of environment protection, which includes a core focus on regulatory tools and compliance with environmental standards to protect the community from pollution and waste, including legacy contamination of the environment.

2.3 About enHealth

The **Environmental Health Standing Committee (enHealth)** is comprised of senior environment health officials from the Australian Government Department of Health, state and territory environmental health authorities, the New Zealand Ministry of Health, and the National Health and Medical Research Council (NHMRC). As such, it draws on a wealth of environmental health expertise from across the nation. It is responsible for providing agreed environmental health policy advice, national coordination and support for responding to environmental health issues, consultation with key stakeholders, developing and coordinating research, information and practical resources on environmental health matters at a national level, and coordinating health input into environmental standards. enHealth frequently invites experts, observers and other stakeholders to present and provide advice at meetings. A list of major enHealth stakeholders is provided in **Appendix 1**.

The development of national advice by enHealth is based on significant collaboration and consultation with state, territory and local government agencies, departments, and organisations that deal with environmental health matters. enHealth's authoritative technical guidance is widely used by

environmental health practitioners, government departments and agencies, industry and the community to manage environmental health risks practically and effectively.

enHealth operates within the governance framework for health, established as one of five expert standing committees that support the AHPPC.

enHealth supports and is supported by the work of other standing committees reporting to the Australian Health Protection Principal Committee as follows:

- The **Communicable Disease Network Australia (CDNA**) is responsible for advising on national coordination of communicable disease surveillance, prevention and control, coordinating the investigation and control of outbreaks of communicable disease, and providing public health response advice in a pandemic or national communicable disease emergency. Environmental factors, such as water or food, may be the source of communicable disease outbreaks.

- The **Public Health Laboratory Network (PHLN)** advises on laboratory testing associated with environmental health risk factors.

- The **National Health Emergency Management Standing Committee (NHEMS)** addresses the operational aspects of disaster medicine and health emergency management in an all hazards context with a focus on preparedness and response.

2.4 Terms of Reference

Australian Health Protection Principal Committee (AHPPC) standing committees manage AHPPC's business and provide advice to AHPPC.

enHealth is responsible for providing agreed environmental health policy advice, implementing its Strategic Plan and Work Plan, consultation with key stakeholders, and the developing and coordinating of research, information and practical resources on environmental health matters at a national level. The development of national advice by enHealth is based on significant collaboration and consultation with Commonwealth, state and territory agencies, departments and organisations that deal with environmental health matters.

enHealth achieves its objectives through regular engagement with other government departments and agencies. The committee also works with Australian local government associations, professional bodies, universities and non-government organisations.

The role of the Environmental Health Standing Committee (enHealth) is to:

- provide nationally agreed environmental health policy advice, based on the best available evidence and expertise, to the AHPPC;

- coordinate implementation of nationally agreed environmental health policies and approaches;

- provide environmental health expertise and support for AHPPC's emergency management role;

- keep the AHPPC informed of developments in environmental policy with significant health implications and provide expert, and where nationally agreed, health advice in environmental policy forums;

- consult with consumers and other stakeholders, as appropriate, in developing environmental health policy advice and implementing environmental health policies;

- contribute, through the Commonwealth, to international collaboration on environmental health issues;

- coordinate research, share information and develop practical environmental health resources, including through expert and/or nationally agreed publications as guided by the AHPPC.

In delivering its role, enHealth will:

- advise and make recommendations to AHPPC on environmental health matters; to mitigate emerging health threats related to environmental health in the context of prevention, preparedness, response and recovery;

- advise on national environmental health priorities and the allocation of resources to these priorities;

- provide national coordination of environmental health responses to disasters and environmental health issues of national significance;

- enable development and adoption by states and territories of national environmental health policies, guidelines and standards;

- give strategic direction to and support the work of its Expert Reference Panels and Project Reference Groups including; Expert Reference Panel on Aboriginal and Torres Strait Islander Environmental Health (ERPATSIEH), Expert Reference Panel on Environmental Health (ERPEH), Radiation Health Expert Reference Panel (RHERP) and Water Quality Expert Reference Panel (WQERP);

- consult and negotiate with other relevant agencies and committees, including other standing committees and relevant expert committees, on environmental health matters related to the development of national public health emergency planning, coordination and control, communicable diseases, public health laboratories, environmental health and other health protection priorities and strategies;

- promote the alignment of jurisdictional strategic plans and activities with agreed national priorities;

- consider the role of environmental health in the context of Aboriginal and Torres Strait Islander health outcomes; and

- oversee national activities that strengthen environmental health infrastructure and capacity.

2.5 Work plan

enHealth achieves its objectives imbedded in its Terms of Reference through projects, activities, publications, workshops and conferences, and regular stakeholder engagement. enHealth works with Australian, state and territory government departments and agencies, local governments, local government associations, professional bodies, universities and a range of other non-government organisations. This strategic plan outlines the strategic initiatives that will contribute to the achievement of enHealth's objectives. These are elaborated through the *enHealth Work Plan 2020-2023*.

2.6 Expert Reference Panels

enHealth delivers its work plan with the support of multiple expert reference panels:
- Expert Reference Panel on Aboriginal and Torres Strait Islander Environmental Health;
- Expert Reference Panel on Environmental Health (ERPEH);
- Water Quality Expert Reference Panel (WQERP); and
- Radiation Health Expert Reference Panel (RHERP).

The Terms of Reference for these Expert Reference Panels are provided in **Appendix 2**.

3   STRATEGIC OVERVIEW

The *enHealth Strategic Plan 2020-2023* builds on the framework established by the *AHPPC Strategic Plan 2019-2023* and previous national environmental health strategies to identify the Australian environmental health sector's role in developing and supporting health protection.

The AHPPC has identified seven strategic priorities to guide its work in the period 2019 to 2023, which reflect the committee's core mandate and includes two emerging issues of public health significance – antimicrobial resistance and climate change.

Work under each of the strategic priorities will be guided by assessed health protection risks and vulnerabilities, as well as emerging risks identified through horizon scanning, within the all hazards prevention, preparedness, response and recovery (PPRR) framework. In progressing work under the priorities, it is recognised that the AHPPC may need to plan for risks that fall outside the scope of individual standing committees, and that the health protection responsibilities managed by AHPPC intersect with the responsibilities of other Commonwealth entities. The seven strategic priorities of the AHPPC are:

1.   Blood borne viruses and sexually transmitted infections;

2.   Communicable diseases;

3.   Emergency management;

4.   Environmental health;

5.   Public health laboratories;

6.   Antimicrobial resistance; and

7.   Climate change.

The AHPPC currently has five standing committees tasked with dealing with the first five strategic priorities as listed above, with enHealth focusing on AHPPC's fourth strategic priority, environmental health. However, climate change and antimicrobial resistance fall outside the single scope of any particular standing committee and will require management of the intersection of responsibilities, including linkages to the work of enHealth. Climate change is particularly relevant to the work of enHealth, while a supporting role could be expected on the environmental aspects of antimicrobial resistance. AHPPC defines the environmental health, climate change and antimicrobial resistance strategic priorities as follows:

Environmental health

Environmental health encompasses the assessment and control of physical, chemical and biological factors in the environment that potentially could, or currently have, an impact on health. Improvements in environmental determinants of health such as water quality and food safety, and control of other environmentally-determined diseases are critical to reducing morbidity and mortality. Australia has a robust system for the management of environmental health, however, must continue to be responsive as globalisation, varying land-use patterns and changing environmental conditions all have the potential to accelerate the emergence or re-emergence of threats and risks.

Antimicrobial resistance

The rise of antimicrobial resistance (AMR) represents a serious threat to population health in Australia and globally. In 2018, the COAG Health Council reaffirmed AMR as a significant population health and patient safety issue that required a coordinated national response across all levels of government. Australia has one of the highest antibiotic prescribing rates in the world and despite concerted effort,

AMR rates continue to increase. The emergence of multi-drug resistant organisms also represents a significant challenge in health care, aged care, community and environmental settings. The environment plays a key role in the development and transmission of antimicrobial resistance for example through food production, source and wastewater, and solid waste. The health of the environment should be considered alongside human and animal health as part of the 'One Health' approach.

Climate change

The AHPPC has identified climate change as an emerging priority, noting the intersection between health protection risk factors and climate change. Increasing numbers of natural disasters, rising temperatures, sea-level rise and altered rainfall patterns all have the potential to adversely impact health. The direct impacts of climate change on health include heat-related morbidity and mortality, increased respiratory illnesses and rising injuries and fatalities due to extreme weather events. Changing patterns of vectors, water- or food-borne infectious diseases and reduced nutritional value of foods may also indirectly impact population health outcomes.

3.1 Principles

All hazards approach – health protection work led by the AHPPC and aided in delivery by enHealth needs to account for all health protection threats and hazards.

Risk based approach – management of health protection issues follows a standardised approach to the classification, identification and management of environmental health risks, with clear delineation of risk mitigation responsibilities.

Principle of prevention – to the extent possible, emergent environmental health risks and threats are better mitigated through hazard minimisation and exposure reduction strategies – requiring a commensurate focus on prevention as well as preparedness, response and recovery.

Shared responsibility – environmental health is managed across jurisdictions, other agencies, and between the state and national division of responsibility, with an emphasis on the importance of inter-dependencies to deliver improved environmental health protection outcomes for all Australians.

Improving Aboriginal and Torres Strait Islander health – this principle highlights a focus of enHealth on promoting improved environmental health conditions and outcomes for Aboriginal and Torres Strait Islander communities within the scope of enHealth's Terms of Reference, including through the Expert Reference Panel on Aboriginal and Torres Strait Islander Environmental Health (ERPATSIEH).

3.2 Objectives

enHealth seeks to provide strategic direction to the management of environmental health matters in Australia across the spectrum of prevention, preparedness, response and recovery (the 'PPRR' framework). In doing so, enHealth leads and promotes coordination across jurisdictions to deliver national consistency in approaches to environmental health matters.

3.3 Enablers

Within each of the strategic priorities, six enablers will guide specific and outcome-focused activities. It is recognised that within each of the strategic priorities there will be different issues and gaps to be addressed. For this reason, it is envisaged that the enablers will be applied on an as needs basis.

1. **Strong governance and leadership** – enHealth will support strengthening the alignment of planning through AHPPC and its standing committees, and between the Commonwealth and jurisdictions to facilitate nationally consistent approaches to environmental health threats and risks.

2. **Collaborative partnerships** – enHealth will focus on strengthening engagement with environmental health stakeholders, both within and outside of government, to facilitate the timely sharing of information and resources.

3. **Effective communications** – enHealth will support national coordination of messaging to ensure consistent, timely and evidence-informed communication around environmental health issues, tailored to diverse community and professional groups. In addition, enHealth will support effective communication between jurisdictions and with non-government stakeholders, including multilateral agencies.

4. **Coordinated and timely response** – enHealth will work with the Commonwealth and jurisdictions to strengthen procedures and protocols for responding to environmental health threats and risks, for known and unknown issues. This will include horizon scanning to identify emerging risks and regular review and updating of existing advice and publications.

5. **Strengthening research capacity** – enHealth will contribute to research and intelligence on environmental health through the provision of advice and guidance on the direction of research and data needs.

6. **Skilled workforce** – enHealth will focus on addressing critical gaps in the environmental health workforce including, but not limited to, access to expertise, training opportunities and workforce capability and capacity.

3.4 Approach

The work of enHealth covers the full spectrum of identification, management and mitigation of environmental health threats and risks using the PPRR framework:

- **Prevention** – activities necessary to remove or reduce the risk of environmental health threats and hazards materialising, for example: supporting Commonwealth efforts to mitigate emerging environmental health issues; and data gathering through human biomonitoring and surveillance.

- **Preparedness** – activities necessary to mitigate the impact and consequence of environmental health threats and hazards proactively, before they materialise, for example: identification, testing and support of preparedness capability; maintaining workforce capacity; and incident preparedness.

- **Response** – activities necessary to address and manage active or emerging environmental health hazards, environmental health emergencies and incidents, and manage threats of further escalation.

- **Recovery** – activities necessary to lead the national environmental health sector's role in supporting recovery operations, for example, review of environmental health response outcomes.

Within this context, environmental health risks are not necessarily treated with equal weighting within the framework, nor are they necessarily treated across all elements of the framework.

enHealth also recognise the importance of resilience in the approach to the diverse challenges and interlinked uncertainties that issues such as globalisation and climate change present in the environmental health context:

- **Resilience** – activities necessary for societies to become more and more flexible to withstand crises, reinventing themselves in resilient, integrated, sustainable, multi-dimensional and inclusive ways. The approach to environmental health matters will need to consider resilience.

This approach is reflected in the United Nations Agenda 2030 for Sustainable Development[10], which recognises the importance of transforming societies through sustainable, resilient and inclusive paths, encompassed by the interlinked and universal Sustainable Development Goals (SDGs).

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[10] United Nations 2015, *Transforming our world: The 2030 Agenda for Sustainable Development*. Online at
https://sustainabledevelopment.un.org/post2015/transformingourworld/publication

The SDGs are a set of 17 goals and 169 targets, which outline a plan of action to support people, the planet and prosperity. Goal 3 (Good health and wellbeing) is the guiding goal for improving health and wellbeing. However, environmental health is a key aspect to all of the other goals (see **Figure 3**).

Figure 3. Sustainable Development Goals and environmental health risks and links.[11]

3.5   Opportunities, Challenges and Threats

In December 2019, enHealth members identified opportunities and challenges to help inform their key focus areas and strategies for 2020-2023. Key focus areas included addressing climate change and health, the emerging priority of antimicrobial resistance with consideration of an environmental health perspective and issues in air quality, water quality, soil quality, emerging contaminants and waste.

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[11] Prüss-Üstün, A; Wolf, J; Corvalán, CF; Bos, R; Neira, MP, *Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks*. World Health Organization, 2016.

The following were identified as challenges:

- The huge scope and broad role of enHealth's/environmental health's work and projects.
- Improving the identity and reputation of enHealth.
- The prioritisation, focus and time of the committee already in busy working roles.
- Strengthening research and data capacity.
- Landing and translating research and data to have meaningful impact in health protection.
- Workforce, funding and resourcing issues.

The opportunities are grouped below under enabler-based categories.

3.5.1 Strong governance and leadership

Environmental health action protects the community from environmental risks to their health every day. The representatives on enHealth, in their roles as regulators and advisors to governments, provide the capacity to translate evidence into action to prevent health problems occurring or to tackle them when they do.

- enHealth seeks to ensure it provides coordinated and consistent guidance within the federated model of government.
- enHealth will endeavour to increase the visibility of environmental health issues with Chief Health Officers (CHOs) and Government.
- Stakeholders should view enHealth not only as the holders of expertise and knowledge, but also as decision makers and therefore capable drivers and influencers of systemic change.
- enHealth will continue to establish an identity and reputation as a source of reliable guidance on environmental health issues, provided through a trusted and authoritative voice.
- enHealth will undertake evaluation of what we do and how we do it to ensure meaningful outcomes and positive real world change to systems and processes.

3.5.2 Collaborative partnerships

enHealth provides one of the key opportunities for harmonising environmental health approaches between jurisdictions and for regulating industries to ensure public health protection. Environmental health necessarily works with and through sectors outside of health to ensure public health protection. enHealth has a wide range of connections with other public and private sector entities, including environment, utilities, Aboriginal communities, local government and universities, that makes it an effective broker between these sectors and the health sector.

- enHealth will engage with stakeholders to a greater extent by increasing the visibility of environmental health and collaborating with other relevant organisations and groups, including through informed advocacy.
- enHealth will work to address health inequity by being advocates for the most vulnerable, including utilising the recently formed links with the ATSI Health Plan Implementation Plan Advisory Group (IPAG).

3.5.3 Effective communications

Much of enHealth's work (on behalf of AHPPC) is of high public exposure and therefore subject to significant scrutiny. The guidance and advice provided on environmental health issues such as asbestos, per- and poly-fluoroalkyl substances (PFAS) and legionella have been well received. enHealth has established a reputation as a source of well communicated, pragmatic, and evidence-based advice on dealing with environmental health issues affecting the nation.

- enHealth will continue to utilise available and developing stakeholder resources in the environmental health space, and identify gaps which require further communication and resource materials.

- enHealth will conduct risk communication and community engagement work, to addressing how communities interact with risks and individual responsibility.

3.5.4 Coordinated and timely response

Environmental health activities often take the traditional approach of responding to environmental threats to health as they emerge, without necessarily developing integrated responses or addressing threats beyond the currently observable. This may function well for issues such as asbestos contamination but for emerging global environmental health threats, such as climate change, a different response is required. The nature of emerging and gradual threats implies that the response needs to be anticipatory, integrated, and requires the consideration of higher level determinants and indirect pathways.

An anticipatory response requires actions to minimise expected climate change induced risks and impacts. An integrated approach requires an understanding of the interrelations between risk factors, which have climate change as a main driver. Higher level determinants, and their complex pathways to health, are often outside the scope of action of the health sector but they need to be identified to promote action, and would include, for example, social determinants of health (e.g. vulnerable communities); relevant policies (such as those in energy, transport and industry); and demographic and social changes

- enHealth will prioritise anticipatory and integrated response actions, where possible.
- enHealth will maintain currency of its advice.
- enHealth recognise environmental health's role in social and environmental determinants of health. enHealth will use science, technology and the built environment to address this, and positively influence disease and mental health issues.

3.5.5 Strengthening research capacity

Environmental health's multidisciplinary nature means that it can bring a range of expertise to bear on environmental health issues, helping better characterise problems and develop solutions. enHealth is uniquely positioned to utilise expertise from across Australia and New Zealand ranging from engineering to entomology, unified by a focus on protecting the health of the community. As emergent public and environmental health issues grow in complexity, it is essential to maintain access to the diverse expertise required to effectively manage them. Additionally, it is vital to ensure there is an appropriate and contemporary evidence base from which to draw information.

- enHealth will influence the research agenda, research priorities and research funders to ensure relevant evidence is available.

- enHealth will advocate for, and where appropriate progress, the implementation of big data projects. This includes national environmental health tracking and surveillance, as well as national human biomonitoring.

- enHealth will improve links between research, researchers and developing research priorities in the environmental health and related fields.

- enHealth will undertake data science intelligence gathering and link this information to environmental health horizon scanning.

3.5.6 Skilled workforce

The environmental health workforce is limited. It is insufficient to cover current environmental health problems and unprepared to tackle emerging issues. Action is needed to attract students to the profession, and to provide them with the knowledge to respond to current and emerging issues. Awareness of the public health value of environmental health officers and the need to build and maintain these skills is required across all levels of government. The shortage of Aboriginal and Torres Strait Islander environmental health professionals needs special attention.

- enHealth will contribute to addressing the resourcing and training issues in environmental health, and develop the workforce and delivery of on the ground outcomes. This may entail activities such as advocating within jurisdictions for increased funding for Environmental Health officers.
- enHealth will lead work to meet the challenge of developing, recruiting and retaining a sufficient and skilled workforce.

4 KEY FOCUS AREAS

The strategic overview and priorities in the previous section have been used to develop eight key focus areas for enHealth. The work directly contributes to the AHPPC's objectives and strategic priorities, through actions across the following key focus areas:

A. Timely, coordinated, and evidence-based response to emerging environmental health issues of national concern.

B. Nationally consistent evidence base for risk assessment, communication and management of significant environmental health issues of concern to the community.

C. Provision of national science policy and practice frameworks for environmental health.

D. Sufficient and appropriately skilled workforce to address environmental health challenges.

E. Promoting improved environmental health conditions and outcomes for Aboriginal and Torres Strait Islander communities (refer also to the ERPATSIEH Action Plan 2019-2023).

F. Nationally consistent frameworks for public and environmental health regulation.

G. Effective networking and partnerships with stakeholders to ensure a coordinated approach to addressing environmental risks to health.

H. Strengthened research and data capacity, to assist translation of research and data to environmental health policy and interventions.

The key focus areas are elaborated on below and have some associated strategies as tabled in **Appendix 3**. These form the basis of the expanded key focus area plans including 'how we do this' and how we measure success' in the *enHealth Work Plan 2020-2023*. The work plan should be read in conjunction with this strategic plan and provides an associated prioritisation of tasks, activities and projects in an ambitious forward work plan of actions for enHealth from 2020-2023. Each task, activity and project to be undertaken by enHealth has specific leads and timeframes and is linked to the relevant enablers and key focus areas.

A. Timely, coordinated, evidence-based response to emerging environmental health issues of national concern

States and territories have recognised the challenges of managing environmental health issues that are prevalent nationally. Variable response across jurisdictions can undermine effective control and communication of risk. For example, there is increasing debate on environmental health issues such as asbestos risk in bushfires, coal seam gas, contamination from pesticide use, fluoride fortification of public water supplies, and environmental health risk communication, which can impact public perceptions considerably.

This creates a compelling argument for a strong and effective approach to national communication, particularly as enHealth is the most "outward facing" or community-connected standing committee under the AHPPC. This focus area includes improved responsiveness to short-term challenges that require national leadership and, hence, communication, through to input to longer-term public debate.

enHealth coordinates the gathering of intelligence and data to inform timely, coordinated and evidence-based responses to emerging environmental health issues of national concern. By doing so, enHealth enhances communication and community confidence that environmental health risks are managed through the development of advisory statements, guidelines and protocols.

A. Timely, coordinated, and evidence-based response to emerging environmental health issues of national concern.
A.1 Ensure that enHealth and AHPPC governance mechanisms are flexible enough to ensure that enHealth's advice can be developed and approved rapidly to ensure relevance.
A.2 Ensure that enHealth and AHPPC are seen as Australia's definitive source of information on environmental health issues.
A.3 Maintain timely, coordinated and evidence-based responses to environmental health issues of national relevance and concern.
A.4 Ensure that enHealth is involved in meeting international obligations related to environmental health issues.

B. Nationally consistent evidence base for risk assessment, management and communication of significant environmental health issues of concern to the community.

Ensuring that environmental health issues are effectively managed is dependent on the assessment of the evidence and the provision of clear advice. Environmental health practitioners, other agencies, industry and the community rely on up-to-date advice to support their efforts in controlling risks and enHealth plays an important role in the provision of guidelines on particular environmental hazards.

B. Nationally consistent evidence base for risk assessment, communication and management of significant environmental health issues of concern to the community.
B.1 Develop and maintain a suite of practical and evidence-based guidelines to support nationally consistent risk assessment, communication and management of common and significant environmental health issues of concern.
B.2 Regular review of enHealth publications to ensure an up-to-date and relevant evidence base.

C. Provision of national science policy and practice frameworks for environmental health.

One of the most critical issues faced by health agencies in their role of provision of advice to the community and stakeholders on the health risks associated with particular environmental hazards is determining how to assess the evidence. Risk assessors in government, and in the private sector require guidance on what are appropriate assumptions to make to take into account Australian conditions.

enHealth's *Environmental Health Risk Assessment Guidelines* is the cornerstone framework for this work in Australia and is widely used and cited across government agencies and by industry and the community. enHealth supports these guidelines through the maintenance of a range of documents to support risk assessment practice, including the *Health Impact Assessment Guidelines* and *Australian Exposure Factor Guide*.

Effective management of community engagement and risk communication is also supported through the development of related and relevant policy and practice frameworks.

C. Provision of national science policy and practice frameworks for environmental health.
C.1 Promote valid and consistent environmental health decision making on novel risks.

C. Provision of national science policy and practice frameworks for environmental health.
C.2 Support effective management of community engagement and risk communication due to environmental health incidents, issues and community concerns.

D. Sufficient and appropriately skilled workforce to address environmental health challenges.

The current environment is characterised by rapidly increasing pressures on the environmental health workforce and ongoing constraints on the education sector to deliver the skills and knowledge required to effectively manage contemporary and emerging environmental health issues. This particularly applies across the environmental health workforce spectrum, especially to the availability of Environmental Health Officers in local government authorities servicing rural and remote settings, regulatory scientists and high end epidemiological and toxicological expertise within parts of the environmental health sector.

While enHealth has limited direct control in this focus area, its strategic priorities are focussed on targeting and influencing outcomes across education, industry and professional sectors that influence the environmental health workforce. Key considerations involve both capacity and capability leading to a better skilled workforce across environmental health. These considerations shape the strategies below.

D. Sufficient and appropriately skilled workforce to address environmental health challenges.
D.1 Protect the health of the Australian community by building the capacity of a sufficient and appropriately skilled environmental health workforce.
D.2 Support the effective deployment of environmental health technical capacity across Australia to protect the health of the community.

E. Promoting improved environmental health conditions and outcomes for Aboriginal and Torres Strait Islander communities

The contribution of environmental health to closing the gap in health status between Aboriginal and Torres Strait Islander people is best expressed in the following policy principles endorsed by Health Ministers in 2010:

1. Good environmental health conditions are an essential requirement for maintaining and improving the health of Aboriginal and Torres Strait Islander communities.

2. Policy and services development and implementation for Aboriginal and Torres Strait Islander Environmental Health must involve cross portfolio consultation and engagement, where appropriate, acknowledging that environmental health outcomes require co-ordinated input and support from many areas.

3. Each Aboriginal and Torres Strait Islander community should benefit from the services of an Aboriginal and Torres Strait Islander environmental health program.

4. The employment of trained Indigenous environmental health practitioners, or access to an equivalent appropriate and skilled environmental health program, is the minimum essential prerequisite for communities to effectively manage their own environmental health conditions and to comply with their public health responsibilities.

5. Indigenous environmental health practitioners should be adequately resourced and supported, and recompensed commensurate with their skills and experience.

6. Training for Indigenous environmental health practitioners should be provided at a level consistent with the national Population Health Qualifications and competency standards including Indigenous Environmental Health qualifications and competencies.

enHealth's focus is on supporting the indigenous environmental health workforce and intelligence gathering. Health agencies' collection of data using the Healthy Communities Assessment Tool (HCAT) uniquely places them as a reliable source of information on environmental health risks challenging Aboriginal and Torres Strait Island communities. Refer also to the *ERPATSIEH Action Plan 2019-2023*.

E. Promoting improved environmental health conditions and outcomes for Aboriginal and Torres Strait Islander communities.
E.1 Improve networking and professional development of the indigenous environmental health workforce.
E.2 Enhance environmental health conditions for Aboriginal and Torres Strait Islander communities.
E.3 Provide intelligence on environmental health conditions in communities.

F. Nationally consistent frameworks for public and environmental health regulation.

Health agencies across Australia are also responsible for regulating certain sectors. While regulation occurs at the jurisdictional level, enHealth considers that there are benefits in working together to assess the effectiveness of these regulatory arrangements while seeking to promote greater consistency in the regulation of those sectors.

F. Nationally consistent frameworks for public and environmental health regulation.
F.1 Setting best practice standards in key environmental health areas.
F.2 Nationally consistent regulation of key environmental health matters across jurisdictions.
F.3 Development of national uniformity in radiation protection and nuclear safety in Australia.
F.4 Improve public health regulatory practice and build capacity.

G. Effective networking and partnerships with stakeholders to ensure a coordinated approach to addressing environmental risks to health.

Environmental health in Australia is reliant on strong partnerships in working towards better sharing of resources and information, and collaborative approaches to health protection. Harnessing the support of local government is pivotal in this endeavour. Overlapping issues such as responses to food-borne illness outbreaks need to be addressed in alignment with these entities in a way that applies the guiding principles consistently. With such considerable overlap of interest, priority needs to be given to maintaining or strengthening the value of effective partnerships and networks.

G. Effective networking and partnerships with stakeholders to ensure a coordinated approach to addressing environmental risks to health.
G.1 Support local government's role as a key provider of environmental health services.
G.2 Improve links with other key committees and agencies, including strategic policy bodies and research institutions.
G.3 Evaluate effectiveness and use of guidelines by stakeholders.

G. Effective networking and partnerships with stakeholders to ensure a coordinated approach to addressing environmental risks to health.
G.4 Contribute and link to climate change and health work and priorities from an environmental health perspective.
G.5 Identify and exploit opportunities for national leadership of stakeholders in areas of environmental health importance.

H. Strengthened research and data capacity, to assist translation of research and data to environmental health policy and interventions.

Ensuring that environmental health issues are effectively managed is dependent on the availability of research and data to support the provision of clear advice and interventions. Environmental health practitioners, other agencies, industry and the community rely on up-to-date and evidence-based advice to support their efforts in controlling risks and enHealth plays an important role in strengthening the research and data capacity of the sector, including supporting the translation of environmental health research and data to effective policy and interventions. Development of a national human biomonitoring program and national environmental health tracking and surveillance systems would help inform this evidence-based practice. Technological capability to support these has developed and enHealth advocates for the progression, including necessary funding support, towards realisation of these initiatives in Australia to meet international best practice in environmental health.

H. Strengthened research and data capacity, to assist translation of research and data to environmental health policy and interventions.
H.1 Contribute to the setting of the national agenda in applied environmental health research.
H.2 Facilitating the collection of data and analysis to support environmental health decision making.
H.3 Advocate for necessary funding to support the development and implementation of big data projects in environmental health nationally.

5 ACCOUNTABILITY AND REPORTING

enHealth will report to the AHPPC as required, on the progress of its work and that of the enHealth Expert Reference Panels. As enHealth and AHPPC are funded through the Australian Health Ministers' Advisory Council (AHMAC) cost-shared budget, comprised of contributions from the Commonwealth, and state and territory governments, the committee will also report regularly on its use of the funds.

enHealth will develop a work plan, reflecting the strategic priorities and enablers identified in the enHealth and AHPPC strategic plans, as well as priorities tasked to the committee through the AHPPC. The work plan will articulate specific deliverables and responsibilities, with progress to be reviewed regularly in light of current and emerging environmental health matters.

Each of the enHealth Expert Reference Panels is expected to develop a work plan reflecting the priorities identified by enHealth and the AHPPC, if applicable, and report regularly on the progress of implementation.

6   GLOSSARY OF KEY TERMS

Term/Acronym	Meaning
AHMAC	Australian Health Ministers' Advisory Council
AHPPC	Australian Health Protection Principal Committee
AMR	Antimicrobial Resistance
CDNA	Communicable Diseases Network Australia
BBVSTI	Blood Borne Viruses and Sexually Transmitted Infections
COAG	Council of Australian Governments
6.1.1 enHealth	Environmental Health Standing Committee
ERPEH	Expert Reference Panel on Environmental Health (formerly Technical Working Group on Environmental Health)
ERPATSIEH	Expert Reference Panel on Aboriginal and Torres Strait Islander Environmental Health
6.1.2 Health	Shortened name for the Australian Government Department of Health
NHEMS	National Health Emergency Management Standing Committee
NHMRC	The National Health and Medical Research Council
PFAS	Per- and poly-fluoroalkyl substances
PHLN	Public Health Laboratories Network
RHERP	Radiation Health Expert Reference Panel
WHO	World Health Organization
WQERP	Water Quality Expert Reference Panel

APPENDIX 1: ENHEALTH STAKEHOLDERS

Title	Linkage issue/s
Asbestos Safety and Eradication Agency (ASEA)	Asbestos
Australian Bureau of Statistics (ABS)	Australian Health Survey and biomonitoring
Australian Building Codes Board (ABCB)	Lead in plumbing products, warm water systems, recirculating shower systems, building heat stress
Australian Industrial Chemicals Introduction Scheme	Tattoo inks, chemicals
Australian Pesticides and Veterinary Medicines Authority (APVMA)	Pesticides, agricultural chemicals
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)	National radiation and nuclear safety uniformity agenda
Bureau of Meteorology (BoM)	Heatwaves, climate and other weather events
Department of Agriculture, Water and Environment (DAWE)	Agriculture, water and environment matters
Department of Education, Skills and Employment (DoESE)	Metals in plumbing, workforce
Department of Industry, Science, Energy and Resources (DISER)	Climate change, fuel standards
Environmental Health Australia (EHA)	Workforce, guidelines, professional body for EHPs
Heads of EPAs Australia and New Zealand (HEPA)	Per- and poly-fluoroalkyl substances (PFAS)
National Association of Testing Authorities	Metals in plumbing
National Health and Medical Research Council (NHMRC)	Health-based guideline values, water quality, PFAS, fluoride
Office of Chemical Safety (OCS)	Tattoo inks, chemicals
Therapeutic Goods Administration (TGA)	Fluoride, medicines and poisons
Water Services Association of Australia (WSAA)	Water quality, metals in plumbing
Communicable Diseases Network Australia (CDNA) of AHPPC	Environmental health factors related to communicable diseases
National Health Emergency Management Standing Committee (NHEMS) of AHPPC	Environmental health emergency management, climate change and heat waves
Public Health Laboratory Network (PHLN) of AHPPC	Environmental health testing and laboratories
Australian Health Protection Principle Committee (AHPPC)	enHealth is a Standing Committee of AHPPC
Australian Health Ministers' Advisory Council (AHMAC)	AHPPC is a Principal Committee of AHMAC

APPENDIX 2: ENHEALTH EXPERT REFERENCE PANELS

Expert Reference Panel on Aboriginal and Torres Strait Islander Environmental Health (ERPATSIEH)

ERPATSIEH works under the guidance of enHealth and with reference to this strategic plan and the *ERPATSIEH Action Plan 2019-2023* acts to fulfil its terms of reference of:

1. Advising enHealth on Aboriginal and Torres Strait Islander environmental health issues.

2. Supporting the review and development of national Aboriginal and Torres Strait Islander environmental health policy.

3. Acting as a focal expert group for enHealth in promoting Aboriginal and Torres Strait Islander environmental health with relevant stakeholders.

4. Providing input and direction into the Aboriginal and Torres Strait Islander environmental health conference/workshops and other mainstream conferences relating to environmental health.

Expert Reference Panel on Environmental Health (ERPEH, formerly Technical Working Group on Environmental Health)

ERPEH acts to provide technical guidance, which is evidence-based, effective and nationally consistent and that supports the protection of public health, in particular for the assessment, management and communication of risk. It works under the direction of enHealth and the *ERPEH Work Plan 2020-23* to fulfil its objectives, including:

1. Providing technical guidance to enHealth and AHPPC on issues that concern the health effects of environmental issues.

2. Conducting and overseeing projects on environmental health issues with human health impacts.

3. Liaising with relevant agencies and organisations to provide technical advice on a range of environmental health issues.

4. Coordinating responses to enquiries about environmental health issues on behalf of enHealth and AHPPC.

Water Quality Expert Reference Panel (WQERP)

WQERP, under the guidance of enHealth and with reference to the *WQERP Work Plan 2019-2021*, this strategy and the AHPPC strategic plan, provides a forum for representatives from Australian, state and territory health agencies to manage drinking water, recycled water, wastewater and recreational water to:

1. Advise enHealth of emerging regulatory and health issues.

2. Foster a consistent approach to management of new and emerging water-related public health risks across all Australian jurisdictions.

3. Develop a shared strategic perspective on health risks from hazards in water.

4. Support nationally consistent frameworks for regulation of water quality.

5. Share key outputs from local water research and outcomes from health incident investigations.

6. Identify research gaps that could feed into new projects of interest to other jurisdictions, via partnerships with research organisations.

7. Form inter-jurisdictional working groups to develop strategies, policy and/or guidance documents intended to help address the issues identified.
8. Raise or respond to issues of national significance with the AHPPC, where appropriate.

Radiation Health Expert Reference Panel (RHERP)

RHERP works under the guidance of enHealth and with reference to the *RHERP Work Plan* and this strategic plan acts to fulfil its terms of reference of:

1. Providing expert advice on radiation protection and nuclear safety issues as directed by enHealth.
2. Developing a national strategy for uniformity of radiation protection and nuclear safety regulation in Australia.

The RHERP is a network of experts with knowledge on the issue that will be addressed. Membership comprises nominated jurisdictional representatives from the relevant regulators, ARPANSA, and external experts as appropriate.

APPENDIX 3: ENHEALTH KEY FOCUS AREA STRATEGIES

A. Timely, coordinated, and evidence-based response to emerging environmental health issues of national concern.			
A.1 Ensure that enHealth and AHPPC governance mechanisms are flexible enough to allow for enHealth's advice to be developed and approved rapidly to ensure relevance.	A.2 Ensure that enHealth and AHPPC are seen as Australia's definitive source of information on environmental health issues.	A.3 Maintain timely, coordinated and evidence-based responses to environmental health issues of national relevance and concern.	A.4 Ensure that enHealth is involved in meeting international obligations related to environmental health issues.

B. Nationally consistent evidence base for risk assessment, communication and management of significant environmental health issues of concern to the community.	
B.1 Develop and maintain a suite of practical and evidence-based guidelines to support nationally consistent risk assessment, communication and management of common and significant environmental health issues of concern.	B.2 Regular review of enHealth publications to ensure an up-to-date and relevant evidence base.

C. National science policy and practice frameworks for environmental health.	
C.1 Promote valid and consistent environmental health decision making on novel risks.	C.2 Support effective management of community engagement and risk communication due to environmental health incidents, issues and community concerns.

D. Sufficient and appropriately skilled workforce to address future environmental health challenges.	
D.1 Protect the health of the Australian community by building the capacity of a sufficient and appropriately skilled environmental health workforce.	D.2 Support the effective deployment of environmental health technical capacity across Australia to protect the health of the community.

E. Promoting improved environmental health conditions and outcomes for Aboriginal and Torres Strait Islander communities		
E.1 Improve networking and professional development of the indigenous environmental health workforce.	E.2 Enhance environmental health conditions for Aboriginal and Torres Strait Islander communities.	E.3 Provide intelligence on environmental health conditions in communities.

F. Nationally consistent frameworks for public and environmental health regulation.			
F.1 Setting best practice standards in key environmental health areas.	F.2 Nationally consistent regulation of key environmental health matters across jurisdictions.	F.3 Development of national uniformity in radiation protection and nuclear safety in Australia.	F.4 Improve public health regulatory practice and build capacity.

G. Effective networking and partnerships with stakeholders to ensure a coordinated approach to addressing environmental risks to health.				
G.1 Support local government's role as a key provider of environmental health services.	G.2 Improve links with other key committees and agencies, including strategic policy bodies and research institutions.	G.3 Evaluate effectiveness and use of guidelines by stakeholders.	G.4 Contribute and link to climate change and health work and priorities from an environmental health perspective.	G.5 Identify and exploit opportunities for national leadership of stakeholders in areas of environmental health importance.

H. Strengthened research and data capacity, to assist translation of research and data to environmental health policy and interventions.		
H.1 Contribute to the setting of the national agenda in applied environmental health research.	H.2 Facilitating the collection of data and analysis to support environmental health decision making.	H.3 Advocate for necessary funding to support the development and implementation of big data projects in environmental health.