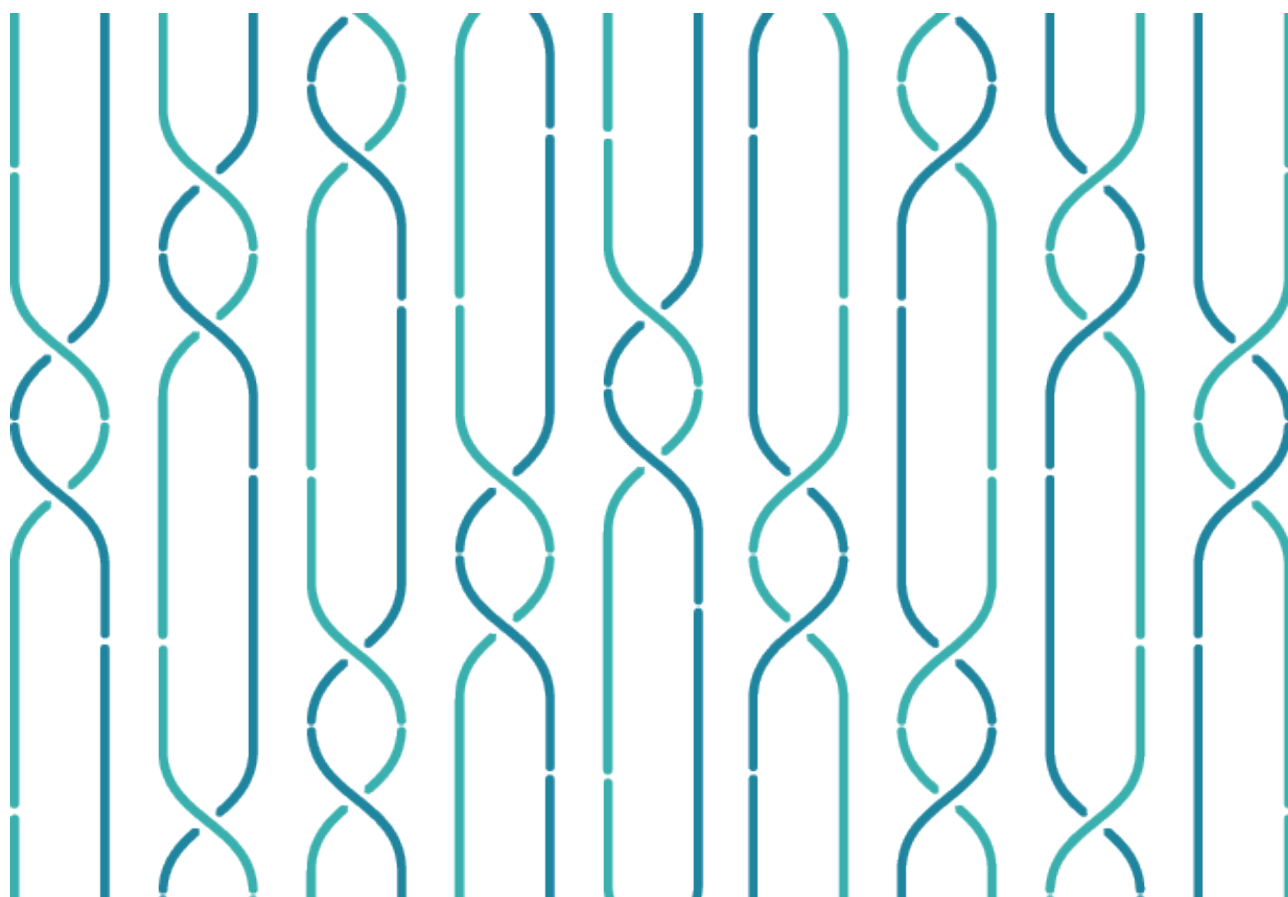


PRINCIPLES FOR HEALTHY URBAN DEVELOPMENT

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Principles for Healthy Urban Development

The urban environment is a determinant of health and wellbeing (see Appendix 1). Our vision for healthy urban development is pae ora – healthy futures for all. We have identified four inter-related principles to consider in urban development processes to achieve pae ora and achieve thriving outcomes for our communities.¹ The principles are:

- healthy, safe and resilient communities
- wai ora – healthy environments
- equity
- mitigating and adapting to climate change.

In this paper, we discuss the principles for healthy urban development and its connections with health, wellbeing and equity. We also describe how good urban design can protect and promote health, and improve health, equity and disability outcomes.

With around 84 percent of New Zealanders living in urban areas, our urban environments are where most of us also work, learn and play (EHINZ 2021; WHO 2021b). We thrive when these environments support our health, safety and wellbeing. The recent COVID-19 pandemic has highlighted how the environment is connected to human health and wellbeing.

Urban development that supports health, wellbeing and equity gives people equitable access to healthy housing, safe and active transport choices, good-quality air and water, natural environments and essential services like education, health care, food security, retail, employment opportunities and recreational facilities. Māori communities thrive when they are supported to continue their traditions and culture, including through their access to mahinga kai, māra and maramataka, and mātauranga Māori approaches to planning and design.

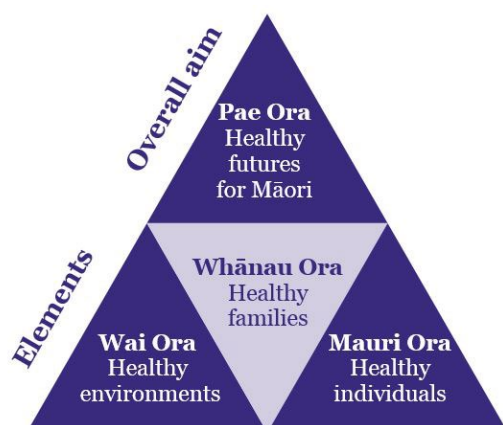
¹ <https://www.health.govt.nz/our-work/environmental-health/built-environment/urban-development>



Pae ora – healthy futures for all

Our vision for healthy urban development is pae ora² – healthy futures for all. Pae ora is a holistic concept that includes three interconnected elements: mauri ora (healthy individuals), whānau ora (healthy families) and wai ora (healthy environments) (Figure 1). These three elements are mutually reinforcing and strengthen improvements in health outcomes over time.

Figure 1: He Korowai Oranga framework



Source: Ministry of Health (2019b)

Achieving pae ora in the urban context requires a multi-agency approach so that all urban development policies and processes support communities to thrive, and provide people with equitable access to environments that protect and improve their health and wellbeing.

To achieve pae ora, we also need to take into account potential changes in our communities that will impact our urban environments and demands on services. For example, demographic changes, such as an ageing population or a population shift to a different geographic area, will impact health services and other social and commercial services, including in terms of people's access to and the accessibility of housing, transport, education and retail services. Part of adapting to climate change may be to manage retreat from areas that will be impacted by sea-level rise or extreme weather events. By recognising likely patterns and requirements of future communities, we can use planning and development can to anticipate and respond to the health, wellbeing and equity needs of Aotearoa populations in the most effective way.

² <https://www.health.govt.nz/our-work/populations/maori-health/he-korowai-oranga/pae-ora-healthy-futures>



Te Tiriti o Waitangi

Te Tiriti o Waitangi (Te Tiriti) provides a framework to protect Māori health and wellbeing and uphold Māori aspirations. Work to achieve these outcomes includes contributing to good urban development practices.

The Ministry of Health's **Te Tiriti o Waitangi Framework**³ acknowledges that the Crown must meet its obligations under Te Tiriti in order to achieve equitable outcomes for Māori. The principles of Te Tiriti provide a framework for how we will meet our obligations under Te Tiriti in our day-to-day work. These principles include tino rangatiratanga, equity, active protection, options and partnership.

The Ministry of Health is the kaitiaki of the health and disability system in Aotearoa. In this role, it provides advice on the implications of urban development for Māori health, wellbeing and equity. Recognising and applying the principles for healthy urban development (particularly wai ora and equity) can help us to meet our obligations under Te Tiriti.

He Korowai Oranga (the Māori Health Strategy) has set the overarching strategy that guides the Government and the health and disability sector to achieve the best health outcomes for Māori (Ministry of Health 2019b). It provides the Government's vision for Māori health, which sees all Māori thriving and living with good health and wellbeing.

Whakamaua: Māori Health Action Plan 2020–2025 (Ministry of Health 2020) drives the journey toward pae ora. Te Tiriti emphasises Māori health outcomes are a shared responsibility, in which all government strategies and plans have a role in contributing to the achievement of pae ora.

³ <https://www.health.govt.nz/our-work/populations/maori-health/te-tiriti-o-waitangi>



Healthy, safe and resilient communities

Communities can be healthy, safe and resilient when all government plans adequately consider and address the socioeconomic determinants of health and wellbeing (Appendix 1). Healthy and resilient communities rely on built environments that are accessible and safe for everyone. 'Everyone' includes Māori, Pacific peoples and all other ethnicities, women, children, parents and caregivers, older people and people with disabilities.

Healthy, safe and resilient communities enable and provide healthy housing, accessible connectivity and services that everyone has equal access to, safe surroundings, economic opportunities and opportunities for leisure. Health-promoting urban environments encourage positive social interaction, especially for people who are socially vulnerable. They provide access to education, employment, recreation, healthy housing, food security and health care. They also support people to be physically active and move between the places they live, work and play by using active and public transport modes. People can access locations of community, cultural and environmental significance. Health-promoting urban environments minimise harmful impacts of noise and air pollution.

Resilient communities are flexible and able to adapt and change to meet the needs of the community over time, including during challenging events such as climate change.



Wai ora – healthy environments

The concept of wai ora (healthy environments) provides a useful way of understanding how environments interact with individuals and how this interaction impacts on health and wellbeing outcomes (Ministry of Health 2020). Wai ora brings together the natural environment (te ao hurihuri) and built environment (te ao tūroa), framed by te ao Māori and mātauranga Māori.

Wai ora encompasses different components and intersections of urban development and environmental health, including the sustainable management of air, land and water, food security and cultural identity. In particular, it:

- supports the quality of air and water
- maintains the value of amenities such as cultural and natural environments, public spaces and recreational spaces
- provides for appropriate land use, zoning and urban form
- manages risks from environmental hazards such as environmental noise and contaminated land
- provides essential infrastructure and sanitary works such as drinking-water supplies, sewage disposal and waste management.

Wai ora also provides an opportunity for the urban environment to reflect cultural references and practices and, through that, to improve the mental, social and cultural wellbeing of indigenous and other ethnic populations. For example, applying wai ora can enhance a sense of place and tūrangawaewae and enable people to understand and experience connectedness through whakapapa.

Equity

Our urban environments influence how the socioeconomic determinants of health and wellbeing are distributed across population groups. Good urban development can promote equity and prevent inequity. As a result, environments do not disadvantage particular groups and so those groups do not in turn experience an unfair burden of the determinants that contribute to poor health.

Equity, as one of the principles of Te Tiriti o Waitangi,⁴ requires the Crown to commit to achieving equitable outcomes for Māori. To honour this commitment, the Crown must address and eliminate the inequities in the determinants of health and wellbeing for iwi, hapū, whānau and Māori communities.

In the New Zealand context, the population groups more likely to experience inequitable health outcomes include Māori, Pacific peoples, communities with lower socioeconomic status and marginalised groups. Other groups to experience inequities are people with disabilities and people across certain age groups, geographic locations, gender identities and sexual orientations (LGBTQIA+). Each of these groups contains people with their own unique circumstances and all of them can experience layers of disadvantage. For this reason, we need to use an intersectional lens when attempting to understand and promote health equity in the urban context.

Equity and the urban environment

The spatial aspect of equity is linked across all the principles for healthy urban development. Spatial equity – which considers accessibility, needs, fairness and justice in the way we distribute public service facilities in communities – is fundamental to creating thriving communities.

The healthiest, safest and most resilient communities tend to be the wealthiest ones. For example, the wealthiest communities tend to have lower crime rates than low-income communities. Conversely, low-income communities are more likely to experience health risks due to their immediate environments. As just one example, residents in areas near motorways are more likely to be of lower socioeconomic status and living in these areas increases their exposure to adverse health effects from vehicle emissions and transport noise. Similarly, people on low incomes are more likely to buy low-quality housing – which is linked with poorer health outcomes – because it is more affordable than housing that exceeds minimum standards.

⁴ <https://www.health.govt.nz/our-work/populations/maori-health/te-tiriti-o-waitangi>



Healthy urban development practices provide opportunities to improve equity for Māori communities. The migration of Māori from rural to urban areas in the 20th century has resulted in significant disadvantages for them, including lack of employment, inadequate housing, and discrimination (Ryks et al 2014). These processes continue to have negative intergenerational impacts on Māori equity and wellbeing.

However, we can use urban development to offer a new vision of urban environments. If that process includes the participation of Māori communities in urban planning and decision-making, that development can better meet their needs and aspirations.

Urban development also provides opportunities for improving equity among other population groups, such as people with disabilities. For example, Article 9 of the 2016 United Nations Convention on the Rights of Persons with Disabilities⁵ identifies that the physical environment should respond to a variety of disability access needs, including transportation, buildings, information and communications systems and technologies, and other facilities open to the public. Addressing the physical needs of the disability community is also likely to enhance the wellbeing and equity of other population groups, such as women, parents and caregivers, and older people.

By addressing spatial equity across the full spectrum of the urban environment, we will put into practice the equity principle of urban development.

⁵ <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-9-accessibility.html>

Mitigating and adapting to climate change

Climate change is the biggest health threat facing humanity (WHO 2021b). It will affect the health, equity and livelihoods of our communities and change the environment we live in. The 2021 report of the Intergovernmental Panel on Climate Change (IPCC) predicts the global surface temperature will continue to increase until at least the middle of this century, which will inevitably lead to an increase in the frequency and intensity of heat extremes, marine heatwaves, heavy rainfall, air pollution, droughts, sea-level rise and tropical cyclones (IPCC 2021).

In New Zealand, direct health impacts may arise from injuries, illness and deaths associated with extreme weather events such as flooding and storms, fires, extreme temperatures, sea-level rise and exposure to ultraviolet radiation. Indirect health impacts associated with climate change include increased risk related to water quality, air pollution, land use changes and ecological changes (Bolton 2018; Royal Society of New Zealand 2017; Watts et al 2015).

Climate change and the urban environment

Climate change, health and urban development intersect in many ways. The design of our communities can play an important role in both mitigating the effects of climate change and helping us adapt to its effects.

While climate change places time-sensitive pressures on healthy urban development, it also presents an opportunity to leverage the co-benefits of urban development. Many climate change mitigation and adaptation actions also lead to health benefits for our communities and so have the potential to improve equity and health outcomes. For example, improving walking and cycling infrastructure increases physical activity within our communities while also reducing greenhouse gas emissions, improving air quality and increasing opportunities for alternative transport modes (equitable access).



Design initiatives that reduce the impacts of heatwaves in urban settings (the heat island effect) have other health benefits. For example, adding shading to streetscapes and playgrounds also reduces the risk of getting sunburned in these areas. Further, increasing green spaces around the city improves mental wellbeing for urban dwellers by providing opportunities for recreation, reducing stress and increasing their contact with nature. Green spaces also have the potential to act as carbon sinks and buffers against city noise (which again reduces stress) (Jorgensen and Gobster 2010; Keniger et al 2013; Konijnendijk van den Bosch et al 2013; Lee and Maheswaran 2011).

Another example of co-benefits is where flood management and weather resilience projects reconnect health and climate change thinking. Some of these projects use urban wetlands to mitigate damage from heavy rains and floods. Similar projects increase access to natural spaces in the city, improve air filtration, improve liveability and may rehabilitate ancestral land through native plants. Managed retreat will support the movement of people and buildings away from risks such as coastal erosion, rising sea levels and storm surges that come with development close to the oceanside.

Conclusion

The principles for healthy urban development highlight how much our urban environments are interconnected with population health, wellbeing and equity. Good urban development, planning and design may positively influence public health outcomes and provide opportunities for public health protection.



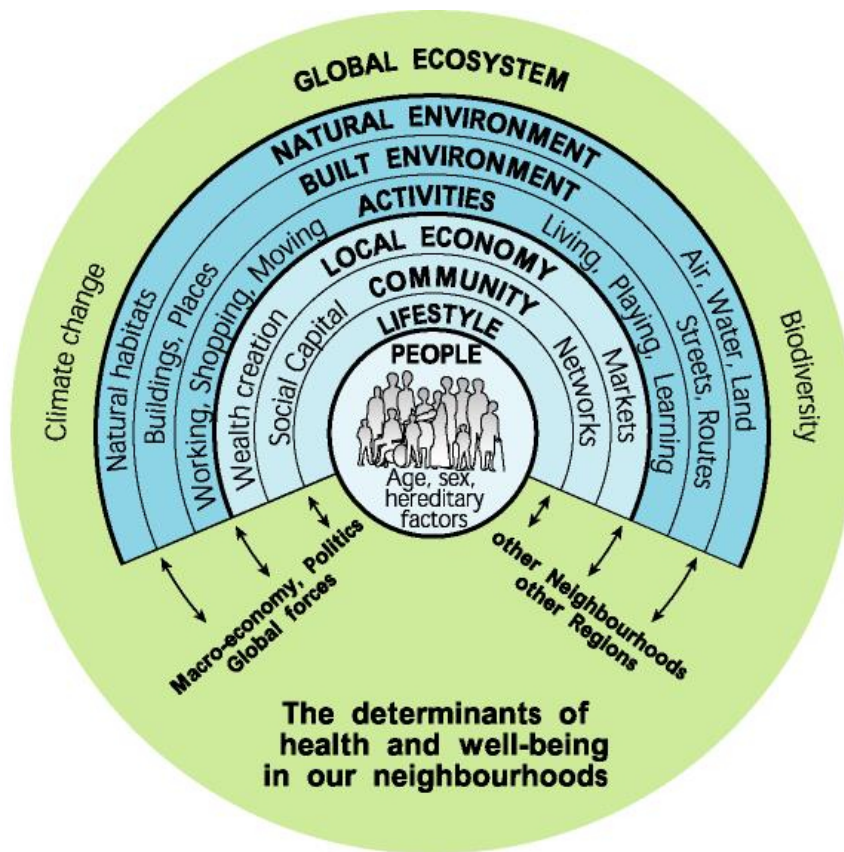
Appendix 1:

Determinants of health and wellbeing in our environments

The determinants of health are a range of personal, social, economic and environmental factors at different levels that influence health and wellbeing (Dahlgren and Whitehead 1991). They demonstrate that many different factors outside the health sector and the health system influence health and wellbeing outcomes.

The socioeconomic determinants of health and wellbeing also highlight how these factors are interrelated and how we can use them to address inequities in health. For example, improvements in education, housing and transport are most likely to be effective in improving health and wellbeing and reducing health inequities (Ministry of Health 2009). Barton and Grant (2006) have also applied the determinants of health and wellbeing framework to an environmental context (Figure 2).

Figure 2: Determinants of health and wellbeing in our neighbourhoods



Source: Barton and Grant (2006)



Glossary

Disability-adjusted life-years (DALY). One DALY represents the loss of the equivalent of one year of full health. DALYs for a disease or health condition are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population (WHO 2021a).

Equity. The Ministry of Health (2009, p 7) defines equity in this way: 'In Aotearoa New Zealand, people have differences in health that are not only avoidable but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes.' The World Health Organization defines equity as the absence of avoidable or remediable differences among groups of people. The concept acknowledges that not only are differences in health status unfair and unjust, but they are also the result of differential access to the resources necessary for people to lead healthy lives.⁶

Environmental health examines the interaction between the environment and our health and wellbeing. The environment can impact on our health and wellbeing both directly and indirectly.

Infectious diseases (also known as communicable diseases) are diseases that can spread from one person to another, such as the common flu and the more recent COVID-19. They are caused by micro-organisms such as bacteria, viruses, parasites and fungi. Some are transmitted through bites from insects while others are caused by ingesting contaminated water or food (WHO 2020).

Intersectionality refers to the interconnected nature of social characteristics, eg, gender, race, sexual orientation, income and education, and how these characteristics apply to a certain population group or individual.

Kaupapa Māori guarantees the validity and legitimacy of Māori ways of knowing, being and doing. Kaupapa Māori approaches to research is both a theory and method of contextual analysis of research which involves Māori, and of the approaches to research with, by and/or for Māori.

LGBTQIA+ describes people who identify as lesbian, gay, bisexual, transgender and intersex etc.

Long-term conditions, also known as non-communicable diseases or chronic diseases, are not contagious and cannot be transmitted from one person to another. Major groups of long-term conditions include: cardiovascular diseases, such as heart attacks and strokes; cancers; chronic respiratory diseases, such as chronic obstructive pulmonary disease and asthma; and diabetes.

⁶ www.health.govt.nz/our-work/populations/maori-health/he-korowai-oranga/key-threads/equity

Mātauranga Māori refers to the ancestral knowledge of the indigenous culture in a continuously changing world.

Mental wellbeing means being able to adapt and cope with life and life's challenges and feeling that your life has meaning, as well as experiencing feelings of contentment or general happiness.

Pae ora (healthy futures for Māori) is the overall aim of He Korowai Oranga, New Zealand's Māori Health Strategy, which is the framework that guides the Government and the health and disability system to achieve the best health outcomes for Māori.

Public health protects the community from health risks and threats, prevents illness and promotes health and wellbeing across the whole population or population groups. Public health focuses on groups of people rather than individuals.

Spatial equity considers accessibility, needs, fairness and justice in the geographic distribution of public service facilities in communities. For example, reserves, recreational facilities, public transport, schools and health care facilities should be allocated in an equitable manner with special consideration for the needs of population groups that have been systematically under-served.

Te ao hurihuri is the changing or evolving environment, including social development, climate change and built environments.

Te ao Māori recognises the interconnectedness of all living and non-living things. It understands our environment as a holistic ecosystem.

Te ao tūroa is the enduring natural environment that was established after the separation of Ranginui and Papatūānuku.

Tūrangawaewae is a place where one has the right to stand. It is a place of belonging through kinship and whakapapa.

Wai ora (healthy environments) is part of pae ora and provides a useful lens for understanding how environments interact with individuals and the impact this has on health and wellbeing outcomes. Wai ora reflects the significance of the lived environment and its impact on the health and wellbeing of whānau, hapū, iwi and communities (Ministry of Health 2020).

Whakapapa is commonly referred to as genealogy but the concept also includes the contemporary, historical, spiritual and mythological aspects of heritage.



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