



HEALTHIER, LONGER,
BETTER LIVES

THE ENVIRONMENT AND OUR HEALTH

A summary of the evidence and scientific literature
linking human health and the environment



Contents

Summary	3
Introduction	5
NCDs – from 4490 to 5590+	6
Climate change	7
Health impacts	7
Air pollution	8
Health impacts	8
Agriculture and food production	9
Health impacts	9
EAT-Lancet Commission.....	10
Urbanisation and the built environment	11
Health impacts	11
Urban design and transport.....	12
Natural environments	12
Opportunities for change	13
Shifting behaviours for impact.....	13
Government action	14
AIA Australia’s actions	15
References	16

Summary

There is an inextricable link between our health and the environment, which is becoming increasingly evident.

The nature of the relationship is two-way; that is, our behaviours impact environmental health, which in turn impacts human health. For humans to thrive, a healthy environment is essential, and in the same way, the environment needs healthy human behaviour to thrive.

Globally, almost a quarter of all annual deaths (12 million) are linked to the environment, and nearly two-thirds of these deaths are due to non-communicable diseases (**NCDs**).

NCDs can be affected by risk factors that originate in the environment, or by risk factors that are influenced by the environment. Concerningly, the overall impact of the environment on human health is escalating.

AIA Australia has incorporated these insights into its strategy to curb the rising rates of NCDs through health promotion and prevention. AIA Australia published its 5590+ insight in 2021, which highlighted the five main modifiable behavioural risk factors – physical inactivity, poor nutrition, smoking, excess alcohol intake and our interaction with the environment – that lead to the five main NCDs – cancer, diabetes, respiratory disease, heart disease and mental health conditions and disorders, which are responsible for more than 90% of deaths in Australia.

Climate change

Climate change is the greatest global health threat of this century. It plays a crucial role in human health and wellbeing, in two ways:

- Directly: through storms, droughts, floods, heatwaves, temperature changes and wildfires
- Indirectly: through water quality, air quality, land-use change and ecological change.

The risk of NCDs increases as a direct result of climate change, such as an increased risk of cardiovascular disease due to air pollution and extreme temperatures. In addition, NCDs are indirectly impacted by climate change, for example through changes to food availability.

The consequences of climate change can cause significant mental distress, as well as exacerbate pre-existing mental health conditions. Direct consequences may include trauma related to extreme weather events, while climate change-related disruptions like famine and displacement may indirectly have mental health consequences. Overall, the awareness of climate change and its current and future impacts can result in long-term distress.

Tim Jarvis AM

AIA Vitality Ambassador and
Founder of the Forktree Project

Air pollution

Air pollution is second only to smoking in causing NCDs worldwide, contributing to cancers, stroke, heart disease and chronic obstructive respiratory disease.

Pollution can result from pollutants that are natural, such as from volcanic eruptions, or that are anthropogenic (manmade), such as from second-hand tobacco smoke and emissions from motorised transport, industry, and hazard reduction burns.

Agriculture and food production

Agriculture, in particular food production, is a major driver of global environmental change. It contributes to climate change, biodiversity loss, freshwater use and land-system change.

The most common environmental issues in the food system relate to food processing loss, food wastage and packaging, energy efficiency, transportation of food, water consumption and waste management. Meat and meat products have the greatest environmental impact of foods produced and processed, followed by dairy products.

Dietary patterns have shifted towards diets that are high in unhealthy, processed foods. This has resulted in an increase in diet-related diseases, such as an 80% increase in the global prevalence of diabetes. At the same time, this trend has caused environmental degradation, due to factors like an 860% increase in the global use of nitrogen fertiliser.

In contrast, foods that are associated with improving health, such as whole grains, fruit, vegetables, nuts and legumes, often have a low impact on the environment.

Urbanisation and the built environment

Urbanisation and the built environment can significantly influence physical and mental health – both positively and negatively. Well-planned cities and built environments have the potential to promote health and wellbeing and therefore reduce the incidence of NCDs.

For example, a city can be intentionally designed to encourage positive healthy behaviours like increased physical activity, via walking and cycling paths, green spaces (e.g. parks), recreational facilities and sports infrastructure. In contrast, cities have historically been designed in ways that discourage physical activity and encourage sedentary behaviour, such as through transport systems dominated by motorised vehicles and limited facilities and spaces that allow for physical activity.

Green spaces are increasingly associated with improved human health (physical and mental), and reduced mortality. At the same time, green spaces result in environmental health benefits.

Blue space, which refers to visible, outdoor, natural surface waters, also has the potential to promote human health and wellbeing. Research shows that investment in blue spaces can improve mental health.

Opportunities for change

Policies and programs that consider both the environment and the causes of NCDs – for example, those focused on reducing air pollution and designing healthy urban spaces – are an important upstream preventative approach that has mutual benefits for communities and the planet.

At an individual level, everyone can take small steps to shift their behaviour towards reducing their risks of NCDs, while incidentally improving the health of the environment. For example, choosing to follow a planet-friendly diet can increase nutrient intake while reducing the impact on food production and processing. Choosing public transport can reduce air pollution by reducing vehicle emissions and provides opportunities for active transport between rides.

AIA Australia's purpose is to make a difference in people's lives. We realise that it is critical that we encourage a healthy interaction with the environment to improve planetary health, and to help Australians live healthier, longer, better lives. To achieve this, our wellbeing strategy focuses on healthy behaviours highlighted in the 5590+ framework: being more active, eating well, not smoking, avoiding excessive alcohol intake, and improving our individual interaction with the environment.

The AIA Vitality health and wellbeing program provides a platform that integrates scientific evidence with behavioural economics to shift behaviours by rewarding healthier choices. As members improve their behaviours, they reduce their risk of NCDs and their impact on the environment.

As part of the AIA Group's overarching Environmental, Social and Governance (ESG) strategy, AIA has committed to achieving net-zero greenhouse gas emissions by 2050. AIA has also committed to the Science Based Targets initiative (SBTi), a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science.

Based on the estimation that planting one trillion trees globally could arrest the effects of climate change, combined with emerging evidence of the positive health impacts of nature, we have also incorporated tree planting into our local ESG strategy, as an impactful and cost-effective intervention.

Introduction

There is an inextricable link between population health and the environment¹; significant evidence of the interplay between environments and human health and wellbeing exists. Human behaviours have an impact on the environment and the environment in turn impacts people in many ways, resulting in a clear bidirectional relationship. Without a healthy environment, people cannot thrive⁵.

Broadly, the environment includes everything external to people, including the physical, natural, social and behavioral environments. Environmental health is a branch of public health that focuses on preventing or controlling disease, injury, and disability related to the interactions between people and their environment².

Globally, 23% of all deaths (about 12.6 million deaths per year) are linked to the environment⁷ and nearly two-thirds of these are due to non-communicable diseases (NCDs)⁷. Many NCD risk factors are environmental in origin or may be influenced by the environment¹²⁸ and evidence of the impact of the environment on NCDs is increasing^{25, 27, 28, 29}.

For the purposes of this paper, “human health” will incorporate physical and mental health, while “environmental health” will incorporate the natural and the built environment.

NCDs – from 4490 to 5590+

Until recently, it was accepted that four modifiable behaviours – physical inactivity, poor nutrition, smoking and excess alcohol – led to four major NCDs – cancer, diabetes, respiratory and heart diseases. Each year these NCDs are responsible for 90% of deaths in Australia.

AIA Australia referred to this health insight as 4490 – that is, four modifiable behavioural risk factors leading to four NCDs that caused 90% of Australian deaths. 4490 provided the foundation for AIA Australia's purpose-driven focus on life, health and wellbeing.

In keeping with the latest evidence and data on global disease, AIA Australia has updated 4490 to 5590+. This revision includes a fifth NCD: mental health conditions and disorders, and a fifth modifiable behavioural risk factor: our interaction with the environment. Combined with the 4490 inputs, these now lead to more than 90% of deaths in Australia.

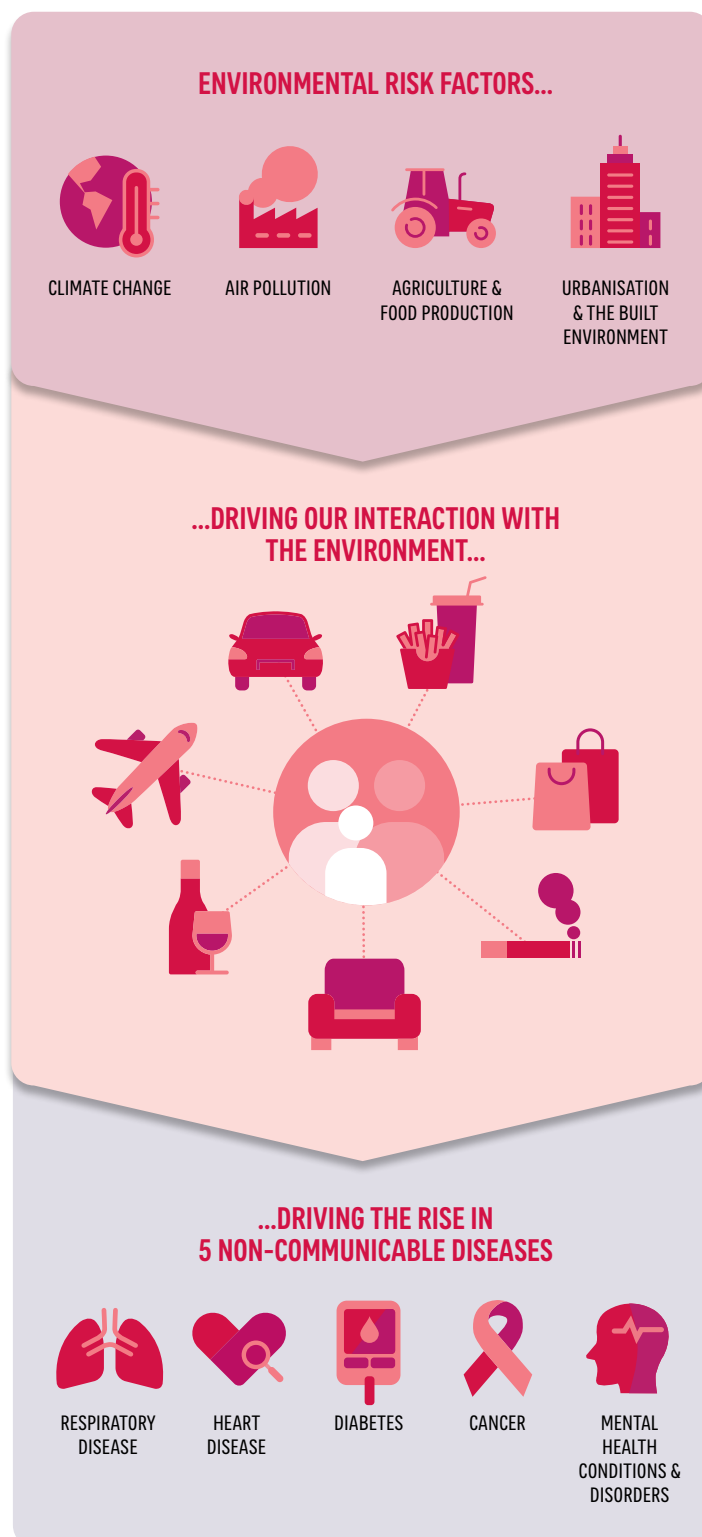
The case for investing in health promotion and prevention of NCDs is now stronger than ever. NCDs are the main cause of death and disability worldwide, and yet they are largely preventable.

AIA Australia is contributing to the critically important work of improving Australia's health outcomes and helping Australians live healthier, longer, better lives, through the prevention of these conditions – and a focus on the modifiable behavioural risks that underpin these.

This paper will focus on the link between health and the following environmental factors that impact NCDs:

- Climate change, which was recognized as the biggest global health threat of the 21st century by The Lancet in 2009¹⁷
- Air pollution, which is the second leading cause of global NCDs, second only to smoking tobacco
- Agriculture and food production which is a major cause of global environmental change⁸⁶
- Urbanisation and the built environment, with urban planning now recognised as part of a comprehensive solution to tackling adverse health outcomes¹⁰¹.

FIGURE 1: KEY ENVIRONMENTAL AND HUMAN HEALTH INTERACTIONS



Climate change

The earth's changing climate is evidenced by increased temperatures (atmosphere and oceans), rising sea levels and shifting weather and wind patterns¹⁸. Human activities, such as the extraction and burning of fossil fuels, deforestation, and industrial and agricultural activities, produce greenhouse gases (GHGs), such as carbon dioxide, black carbon, and methane. These gases concentrate in the atmosphere and stop heat from escaping¹⁹ with the resulting warming effect impacting people, plants, wildlife and ecosystems²⁰.

Health impacts

Climate plays an important role in human health and wellbeing, especially where climates are extreme and variable¹⁶. NCDs are exacerbated by climate change²⁵.

Climate change impacts human health directly (e.g. storms, droughts, floods, heatwaves, temperature changes and wildfires) and indirectly (e.g. water quality, air quality, land use change and ecological change)⁸.

Groups who tend to be the most affected by the mental and physical health implications of climate change include Indigenous peoples, children, seniors, women, people with low socioeconomic status, outdoor labourers, and people with pre-existing health conditions^{17, 40, 49, 50, 53, 60, 61, 62, 63}.

Climate change is however strongly mediated by environmental, public and social health determinants.

Mental health

Direct, indirect and overarching consequences of climate change can create significant mental stress and exacerbate pre-existing mental health problems.

Direct psychosocial consequences of climate change include trauma related to extreme weather events, like floods, hurricanes, wildfires, and heat waves^{42, 74}. Growing research on climate change and mental health provides increasing evidence that extreme weather events can trigger post-traumatic stress disorder (PTSD), major depressive disorder (MDD), anxiety, depression and a variety of other mental health concerns^{40–53}.

Indirect mental health consequences of climate change occur through social, economic, and environmental disruptions (e.g. famine, civil conflict, displacement, and migration) related to climate change^{15, 37}.

Overarching psychosocial consequences of climate change relate to the long-term emotional distress caused by

awareness of the threats and impacts of climate change on the current and future wellbeing of the earth and its people. The multi-dimensional climate change and mental health pathway leads to a variety of unequal psychosocial consequences⁷³. The threat of a changing climate can also incite despair and hopelessness, as actions to address climate change seem intangible or insignificant in comparison to the scale and magnitude of the threats⁵⁷.

Respiratory health

As temperatures rise and air pollution increases, there are also increases in the incidences of allergic respiratory disease, asthma, and other health conditions²¹. Ozone pollution, which increases with rising temperatures, is linked to asthma, bronchitis, and emphysema²³.

Cardiorespiratory disease and death

Forest fires produce air pollutants, such as carcinogens and fine particulate matter which is linked to cardiorespiratory disease and death²².

Cancers

Exposure to ultraviolet radiation is recognized as a risk factor in the three most common types of skin cancer: basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and malignant melanoma (MM). Approximately 90% of skin cancers are non-melanocytic BCCs¹⁹⁹.



Air pollution

Air pollution was featured on the global agenda almost twenty years ago in the WHO's Global Action Plan for the Prevention and Control of NCDs 2013-2020²⁶.

Sources of air pollution can be natural or man-made (anthropogenic). Natural sources include bushfires, volcanic eruptions and dust storms, while anthropogenic sources of air pollution include emissions from power stations, factories, motor vehicles and hazard reduction burns⁸. Anthropogenic sources are more of a concern for air quality as they tend to be more controllable than natural sources.

Air pollution and climate change have a bidirectional relationship through complex interactions in the atmosphere. For example, increased gas emissions increase air pollution, which can lead to increased temperatures, which causes changes to the chemical composition of the atmosphere. Therefore, policies to address climate change and air pollution can be mutually beneficial. Combining local air pollution and global climate change mitigation policies provides a win-win situation whereby medium-term efforts to control air pollution will support long-term strategies that aim to curb climate change²⁰⁰.

Health impacts

Several meta-analyses and reviews show a relationship between air pollution exposure and health impacts, including NCDs and their risk factors¹⁰²:

- incidence and prevalence of childhood asthma and wheeze¹³⁵
- asthma exacerbation¹³⁶

- impaired lung function¹³⁷
- cardiovascular mortality and morbidity^{137, 138}
- all-cause mortality^{136, 137}
- hospital admissions¹³⁷
- restricted physical activity¹³⁷.

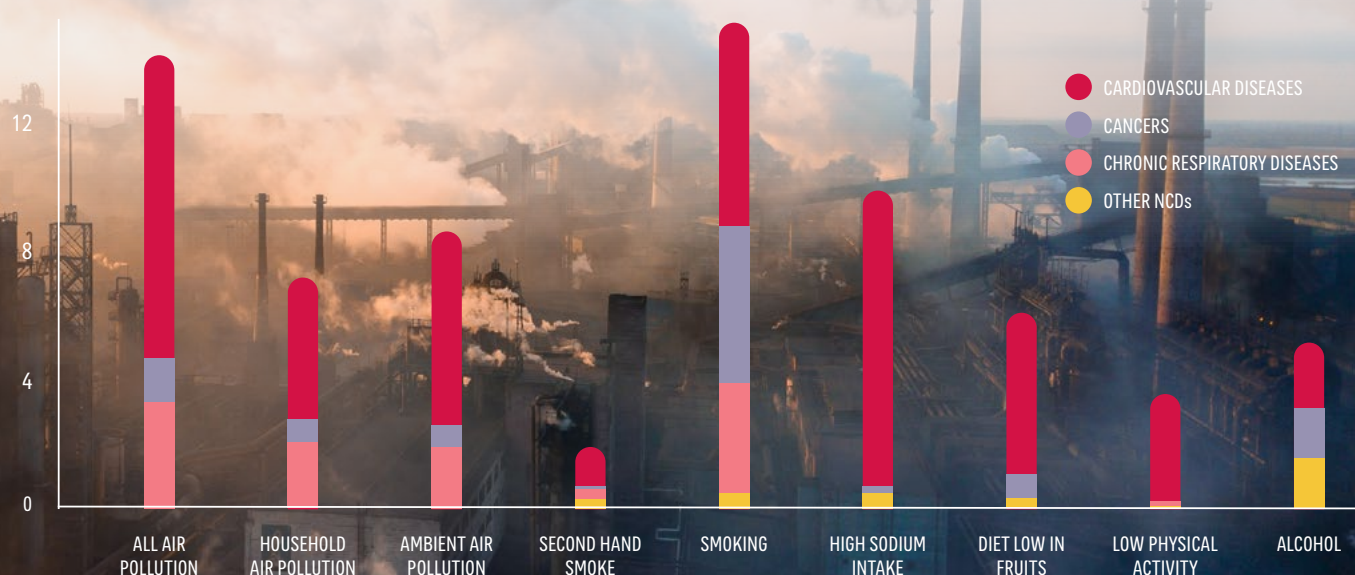
The carcinogenic effects of air pollution have been increasingly recognised^{9, 10}.

The Global Health Observatory has stated that in 2016, ambient and household air pollution together caused 24% of cases of stroke, 25% of ischaemic heart disease, 29% of lung cancer, and 43% of chronic obstructive respiratory disease.

Globally, almost one-third of cardiovascular disease burden is attributable to household air pollution (17%), ambient air pollution (13%), second-hand tobacco smoke (3%) and exposure to lead (2%)⁷. Chronic obstructive respiratory disease deaths are attributable to household air pollution (29%), ambient air pollution (8%) and workplaces (11%)⁷. Research also indicates that air pollution reduces the quality of life for people with chronic respiratory disease⁸.

In Figure 2, all air pollution can clearly be seen a major risk factor for NCDs with only smoking causing more NCDs.

FIGURE 2: ATTRIBUTABLE FRACTION OF NCDs FOR SELECTED RISK FACTORS BY DISEASE GROUP, 2016^{25, 32, 33}



Agriculture and food production

Strong evidence indicates that agriculture is a major driver of global environmental change, while food production specifically is the largest. Research demonstrates that food production contributes to climate change, biodiversity loss, freshwater use, interference with the global nitrogen and phosphorus cycles, chemical pollution and land-system change⁷⁶.

Agricultural food production emits approximately 30% of global GHGs^{115, 116}; occupies approximately 40% of land globally¹¹⁷; causes nutrient pollution that profoundly alters ecosystems and water quality¹¹⁸; and accounts for approximately 70% of Earth's freshwater withdrawals from rivers, reservoirs, and ground water¹¹⁹; among other negative environmental effects^{120, 121}.

Food systems outstrip the planet's natural resources, while dietary patterns are unhealthy, unaffordable and unsustainable.

Eating patterns impact the environment, but the environment can also impact dietary choice (e.g. loss of food biodiversity impacts the availability of micronutrients)⁹⁹.

Swinburn et al defined the food environment as the "collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food and beverage choices and nutritional status"¹³⁹.

Food environments can be framed as the 'interface' or 'link' between food systems and diets¹⁴⁰ and comprise the foods available to people in their surroundings as they go about their everyday lives, and the nutritional quality, safety, price, convenience, labelling and promotion of these foods^{140, 141}.

Diets link environmental and human health. Rising incomes and urbanisation are driving a global dietary transition in which traditional diets are replaced by diets higher in refined sugars, refined fats, oils and meats¹¹¹. These dietary shifts are driving increases in diet-related diseases and are also causing environmental degradation¹⁸⁹.

Health impacts

Obesity and diet-related NCDs are mainly driven by unhealthy diets^{143, 144}. Unhealthy diets, in turn, are driven by unhealthy food environments¹⁴⁵.

If these dietary trends continue, by 2050 they will be a major contributor to an estimated 80% increase in global agricultural GHG emissions from food production, and a cause of global land clearing¹¹¹. Moreover, these dietary shifts are greatly increasing the incidence of type II diabetes, coronary heart disease and other chronic NCDs that lower global life expectancies¹¹¹.

Recent dietary shifts have contributed to an increase in diet-related health and environmental impacts, including an 80% increase in global diabetes prevalence and an 860% increase in global nitrogen fertilizer use¹⁸⁹.

This diet–environment–health trilemma is both a global challenge and an opportunity. Developing solutions to this trilemma is therefore of great environmental and public health importance^{111, 189}.

The most common environmental issues in the food industry are related to food processing loss, food wastage and packaging; energy efficiency; transportation of foods; water consumption and waste management⁹⁹. Among the foods produced and processed, meat and meat products have the greatest environmental impact, followed by dairy products⁹⁹.

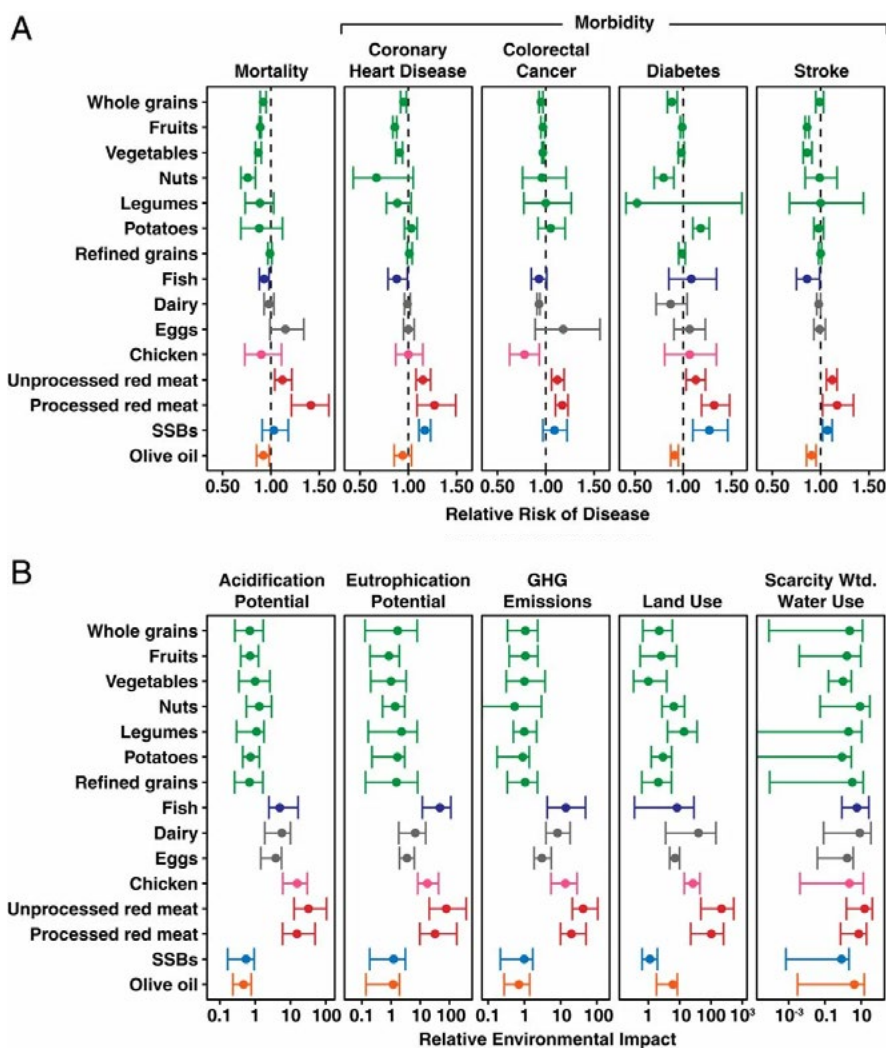
Research has found that foods associated with improved adult health also often have low environmental impacts, indicating that the same dietary transitions that would lower incidences of NCDs would also help meet environmental sustainability targets¹¹².



Of the foods associated with improved health (whole grain cereals, fruits, vegetables, legumes, nuts, olive oil, and fish), all except fish have among the lowest environmental impacts. Fish, when compared with red and processed meats, also has markedly lower impacts. Foods associated with the largest negative environmental impacts – such as red meat – are consistently associated with the largest increases in disease risk¹¹².

The relative risks of food, diseases and the environment can be seen in Figure 3 below. Graph A shows the relative risks of disease per serving of food, while B shows the relative environmental impact per serving of food produced.

FIGURE 3: RELATIVE RISKS OF FOOD, DISEASE AND ENVIRONMENT



Source: pnas.org

Win-win diets are diets that are healthy and environmentally sustainable⁸⁶. Lose-lose diets are unhealthy and environmentally unsustainable diets, which are often characterised as being high in calories, added sugars, saturated fats, processed foods, and red meats⁸⁶. In addition, environmental degradation resulting from lose-lose diets might further exacerbate poor health.

EAT-Lancet Commission

The EAT-Lancet Commission was convened to develop global scientific targets for healthy diets and sustainable food production⁷⁵. The Commission developed a “universal healthy reference diet” to provide a basis for estimating the health

and environmental effects of adopting an alternative diet, as compared with current standard diets, many of which are high in unhealthy foods⁷⁶.

The healthy reference diet largely consists of vegetables, fruits, whole grains, legumes, nuts, and unsaturated oils. It includes a low to moderate amount of seafood and poultry, and little-to-no red meat, processed meat, added sugar, refined grains, and starchy vegetables.

The global average intake of healthy foods is substantially lower than the healthy reference diet, and overconsumption of unhealthy foods is increasing⁷⁶. The Commission found with a high level of certainty that global adoption of the reference diet would provide major overall health benefits, including a large reduction in total mortality⁷⁶. It is considered that dietary changes from current diets to healthy diets are likely to substantially benefit human health, averting about 10.8-11.6 million deaths per year – a reduction of 19.0–23.6%⁷⁶.

Urbanisation and the built environment

Urbanisation is the process of the population shifting from rural to urban areas within countries¹⁸¹. Urbanisation is seen by many as a double-edged sword: while its beneficial economic effects are widely acknowledged, it is commonly seen as creating adverse side effects for NCD-related health outcomes¹⁸¹.

It is estimated that the world's population will reach 10 billion people by 2050, and 75% of this population will live in cities¹⁰¹. Urban spaces are increasingly being recognised as important social determinants for health with the potential for both negative and positive effects on physical and mental health¹²⁹.

The built environment is defined as the part of the physical environment that is constructed or modified by human activity¹⁴⁶. It includes homes, schools, workplaces, parks or recreation areas, green-ways, business areas and transportation systems.

Leading global agencies recognise that city planning and management decisions affect the liveability of cities¹⁰³ and, ultimately, the health and wellbeing of residents.

Health impacts

Mental health

Positive mental health is related to mental and psychological wellbeing, and there is growing interest in the potential role that the built environment has on mental health¹⁵⁷. While research into the role of the built environment on mental health is relatively new, causal pathways connecting both constructs are starting to emerge¹⁵⁷.

Studies of the relationship between built environments and mental health have reported that the quality of public utilities, walking distance to public spaces, access to transport, and level of infrastructure^{158, 159-164} contribute to a state of wellbeing, positive responses to stress factors, ability to work productively, and community participation.

Physical activity

Physical inactivity is one of the largest contributors to the development of NCDs, and much of the evidence on city planning and health has focused on this¹⁰². Levels of physical activity are impacted by the environment via mode of transport, design of cities, and green space access^{25, 35, 36, 37}.

The environment is integral to encouraging and enabling physical activity¹⁴⁸. Town planning can facilitate people meeting the recommended levels of daily physical activity due to incidental exercise completed as part of everyday life. Even though individual and social factors can affect physical activity¹⁵⁰, research has shown that well-designed environments can provide an important positive influence^{151, 152, 153}.

Physical activity can be classified into the four domains of life where people largely spend their time: recreational, occupational, transport and household activities. Recreational and transport physical activities are relevant to, and are driven by, features of the built environment. This provides further opportunity for strategic planning to positively influence health and wellbeing outcomes in this space¹⁵⁴.

Features of the built environment that are hypothesised to impact recreational and transport activity can be categorised as:

- Recreational resources:
 - Walking trails, biking trails, parks and open spaces, pools, playgrounds, and sport clubs
- Land use characteristics:
 - Residential and employment density
 - Land use mix (types of buildings, services and businesses in the community)



- Street connectivity (grid pattern, cul-de-sac and loopholes)
- Proximity of destinations (shops, employment and services) to residences
- Neighbourhood form characteristics:
 - Availability of sidewalks and streetlights
- Community environment:
 - Mostly contextual features of the environment such as aesthetics, cleanliness, traffic
 - Crime safety, community support or cohesion.

Physical inactivity, also called sedentary behaviour, refers to periods of prolonged inactivity, such as sitting for a long time in a vehicle, watching TV or doing desk work. Sedentary behaviour is distinct from physical activity, and has emerged as an independent risk factor for chronic disease prevention^{169, 170}. It is associated with an increased risk of type 2 diabetes, cardiovascular disease, some cancers, and all-cause mortality^{171, 172}. Prolonged periods of sitting can be associated with poorer mental health¹⁸⁶. Urban-dwelling working adults can sit for 10 hours or more per day, which increases health risks, even among those who meet physical activity guidelines^{182, 183}.

Urban design and transport

Urban and transport planning and design decisions affect NCDs, injuries, and other adverse health outcomes¹⁰². For example, motor vehicle-oriented land-use and transport policies in cities impact the rates of NCDs and road-related injuries in a city^{102, 104}. These decisions can also influence the convenience, attractiveness, and safety of walking and cycling for transport, as well as the opportunities for, and desirability of, recreational physical activity.

Well planned cities can reduce NCDs and road trauma, while promoting health and wellbeing more broadly¹⁰². Creating cities that facilitate physical activity as part of daily activities can promote health and prevent NCDs¹⁰².

Possible health-promoting interventions in cities include reducing motorised vehicles dependency, traffic exposure, pollution, noise, and urban heat-island effects. These can help to enhance mental wellbeing, mitigate climate change, and promote walking and cycling in ways that are safe, comfortable, and desirable¹⁰².

Natural environments

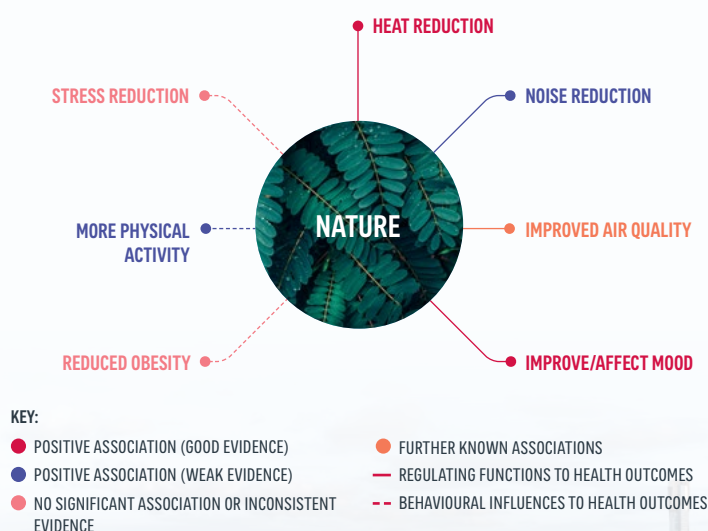
Exposure to natural environments impacts NCDs and other health outcomes through various pathways, as shown in Figure 4.

Urban green spaces, as part of a wider environmental context, have the potential to help address problems 'upstream', in a preventative way. Adopting this approach is considered to be more efficient than by simply dealing with the 'downstream' consequences of ill health¹⁸⁷.

Green spaces have been shown to be associated with better health outcomes and reduced mortality¹³⁰. Living near green space, particularly in urban areas, can have a positive effect on health, possibly even on blood pressure, depression, and physical activity levels¹³¹. Green space also benefits the environment and helps to combat climate change¹³².

Defined blue space is used to refer to all visible, outdoor, natural surface waters, with potential for the promotion of human health and wellbeing¹⁶⁸. In the first systematic review of the literature on blue care, Britton et al showed that mental health, especially psycho-social wellbeing, can be improved with investment in blue spaces. Future research should however focus on developing further insight into the mechanisms through which blue care can improve public health promotion.

FIGURE 4: PATHWAYS FOR PHYSIOLOGICAL OUTCOMES ASSOCIATED WITH 'EXPOSURE TO NATURAL ENVIRONMENTS'¹⁶⁷



Opportunities for change

Evidence of the interplay between the environment, human health and wellbeing is significant and increasing. Incorporating environmental factors with the well-known four NCD risk factors (smoking, harmful use of alcohol, physical inactivity and unhealthy diets) provides a more comprehensive approach to tackling NCDs.

Shifting behaviours for impact

While solving environmental challenges may seem overwhelming at an individual level, every person can make small, positive behaviour changes that can influence how they and others interact with the environment. This domino effect amplifies individual actions to a collective impact on the environment and human health.

Mindfulness

We can start by being mindful about our how we interact with the world around us – our lifestyles are the sum of regular actions or habits that leave a footprint on our ecosystem. Shifting our mindsets to this increased awareness helps to highlight potential opportunities for ways to benefit our health, as well as the planet's.

Consumption

Our consumption patterns reflect what we use, how much we consume and how often. These are key when identifying ways to reduce environmental harm. There are myriad easy but valuable ways to reduce our consumption, including using less water, conserving electricity, avoiding chemical use, and buying second-hand items.

Composting, recycling and upcycling are on the rise in Australia, which is good news for reducing environmental harm from over-consumption. Statistics show that annual recycling has significant benefits for air quality. Interestingly, recycling one plastic drink bottle saves enough energy to power a computer for 25 minutes.

Purchasing power

We can harness our purchasing power to benefit the planet. Becoming conscious consumers can help us improve where and how we shop. For example, choosing to buy locally grown foods from a farmers' market reduces the carbon footprint of food miles, while reducing packaging. Shifting our preferences towards reusable products instead of single-use products reduces environmental load, and influences purchasing patterns.

Harnessing solar energy, for example by switching to solar power at home, reduces the harmful emissions that result from generating electricity.

Dietary choices

Eating patterns that minimise damage to the environment while supporting our health and wellbeing are known as 'win-win' diets. These diets tend to be plant-based, emphasising vegetables, fruit, whole grains, legumes and nuts. As with other small changes, the cumulative effect of every individual making one change to their diet has enormous potential for influencing purchasing patterns, health and impact on the planet.



Transport

Shifting the choices we make about how we travel by using active transport (cycling or walking) and public transport versus private cars can significantly reduce air pollution via gas emissions. In addition to improved human and planetary health is the economic benefit from reduced transport costs.

While the COVID-19 pandemic has reduced air travel significantly, we can in the future look to fly less by continuing to schedule virtual meetings, holidaying locally and using trains instead of planes where possible.

Air quality

Improving indoor air quality has never been more important given the increased amount of time Australians are currently spending at home. Reducing or quitting smoking is another way to reduce air pollution for us personally, as well as those around us.

Government action

Governments play a pivotal role in protecting the environment. They are uniquely positioned to deploy large-scale measures that fundamentally impact health and wellbeing.

Governments can help to strengthen the global response to environmental challenges, by engaging with international efforts. For example, Australia is party to The Paris Agreement, which aims to respond to climate change by targeting increasing global temperature.

Effective policy design and implementation is an upstream approach that can lay the foundation for simultaneously reducing the risks of NCDs and protecting the planet. This interplay must therefore be considered upfront to ensure that win-win interventions are woven into the design.

Governments can incentivise urban design that encourages physical activity to reduce the risk of NCDs, as well as air pollution from vehicle emissions.

Governments should also consider evidence of the relationship between the built environment and mental health. The state of mental wellbeing, response to stressors, the ability to work productively, and to make contributions to the community can all be affected by factors such as the quality of public utilities, walking distance to public spaces, access to transport, and level of infrastructure.

Clearly, government policies and programs are prime opportunities to integrate design and strategies that benefit health outcomes for people and the planet as part of a comprehensive government effort to tackling NCDs.



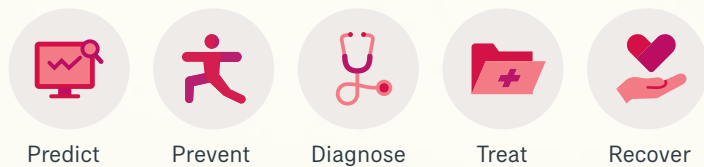
AIA Australia's actions

AIA Australia is focused on the critically important work of improving the nation's health outcomes and helping Australians live healthier, longer better lives.

Our purpose is to Make a Difference in People's Lives and we're focused on driving awareness of the importance of healthy behaviours.

This is underpinned by 5590+. That is, preventing the five major NCDs – cancer, diabetes, respiratory disease, heart disease and mental health conditions – by improving the five modifiable factors that underpin these – physical inactivity, poor nutrition, smoking, excess alcohol and our interaction with the environment.

As a life, health and wellbeing insurer, AIA Australia has invested heavily in developing programs that support Australians to maintain and improve their health throughout their lives. To help people be healthier for longer and improve their overall wellbeing, AIA Australia has built an ecosystem of products, services and partners through five stages:



Our shared-value approach means we put our efforts into projects and interventions that benefit not only our customers and business but society more broadly.

Where to from here?

AIA Australia is inspired by the opportunity to improve our environmental impact, as well as empower our customers and all Australians to try to make a difference

AIA's global scale positions our organisation in an extremely powerful position to be able to amplify even small changes for significant impact. We embrace this privilege and responsibility as we unwaveringly innovate to deliver solutions for our people and our planet.

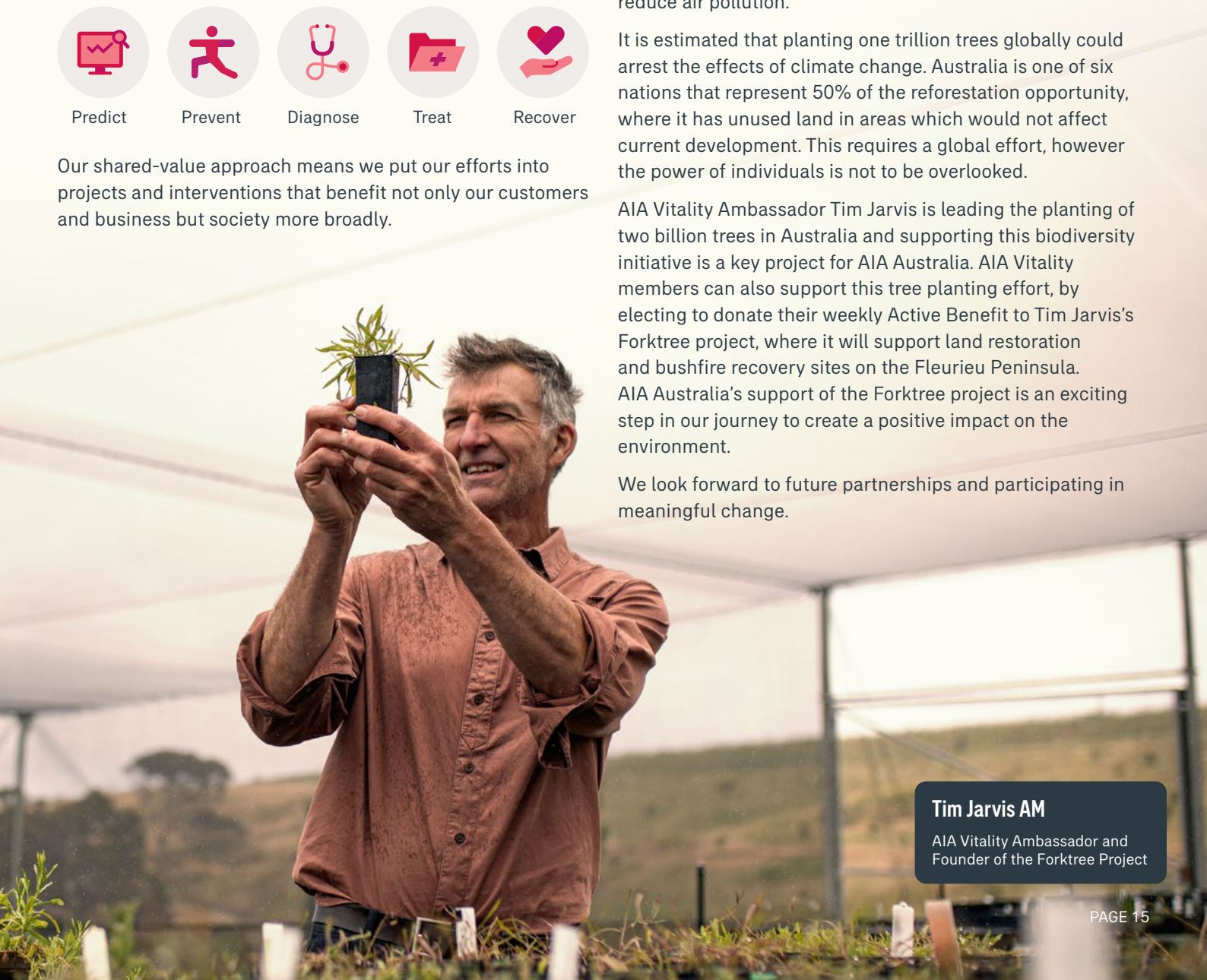
As part of the AIA Group's overarching Environmental, Social and Governance (ESG) strategy, AIA has committed to achieving net-zero GHG emissions by 2050. AIA has also committed to the Science Based Targets initiative (SBTi), a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science.

We believe that by planting trees we can help to improve the environment in which we live. Trees draw carbon dioxide out of the environment, they are critical in controlling regional rainfall, they sustain the animal ecosystem responsible for food sources, and in urban areas, they help to cool and to reduce air pollution.

It is estimated that planting one trillion trees globally could arrest the effects of climate change. Australia is one of six nations that represent 50% of the reforestation opportunity, where it has unused land in areas which would not affect current development. This requires a global effort, however the power of individuals is not to be overlooked.

AIA Vitality Ambassador Tim Jarvis is leading the planting of two billion trees in Australia and supporting this biodiversity initiative is a key project for AIA Australia. AIA Vitality members can also support this tree planting effort, by electing to donate their weekly Active Benefit to Tim Jarvis's Forktree project, where it will support land restoration and bushfire recovery sites on the Fleurieu Peninsula. AIA Australia's support of the Forktree project is an exciting step in our journey to create a positive impact on the environment.

We look forward to future partnerships and participating in meaningful change.



Tim Jarvis AM

AIA Vitality Ambassador and Founder of the Forktree Project

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