CHAPTER 2

People, places and pressures

on sustainability

This chapter sets the scene for the rest of this document. It discusses the people of this country and the pressures that New Zealand's population is placing on sustainability. Although many people value living in a 'clean and green' environment, there are ongoing threats to the quality of this environment. On a global scale New Zealanders are also contributing to increasingly unsustainable practices. Education is highlighted as a key response for dealing with some of these pressures and as a way to work towards a better future.

> **If you would like a better understanding of what education for sustainability is before you read this chapter, you may wish to jump to chapter 3.**

2.1 People in Aotearoa New Zealand

Enormous changes have occurred in Aotearoa New Zealand since humans landed on its shores around a thousand years ago. From the arrival of the first Polynesians, through to European colonisation and the immigration of many other ethnic groups, people have significantly altered the shape of this land. Places within this country have also shaped people and the ways they interact with their environment.

Shifting relationships between people and their environments

The first people to settle in Aotearoa came from central Polynesia.[1] They would have encountered a land teeming with birdlife and marine mammals such as seals and sea lions. These provided people with an abundant source of food and enabled the population to grow rapidly. Over time, however, hunting and harvesting contributed to the decline of many food sources. The most vulnerable animals became extinct from hunting and the loss of habitat due to fires. Many irreversible changes were made to the environment.

Like other people encountering a new land, the early settlers had to learn how to sustain themselves in the world around them. Gradually they began to adapt. Through the accumulated experiences of each generation, iwi and hapu developed many different mechanisms for protecting food sources and significant sites. For example, some sites such as burial grounds were rendered tapu, while various species and gathering sites were subject to rahui. This contributed to a more stable relationship between people and their environment. Over time, "environmental learning brought about the sort of adaptive change that is today often taken – by Maori and non-Maori alike – as somehow inherent to Maori culture".[2]

During this process tangata whenua began to weave a rich tapestry of narratives to teach and pass on their accumulated knowledge. These often embod-

ied ecological messages and environmental ethics.[3] They explained the interconnectedness of people with Ranginui and Papatuanuku and all the elements of the world. Identity became tied to whakapapa and a worldview developed with a strong sense of custodial occupation (kaitiakitanga) – a belief that the environment should be maintained in a fit state for future generations.[4] By the time the next wave of human settlers began to break, tangata whenua had therefore developed a close affinity with their environments in the different regions where they lived.

Europeans, predominantly British, began arriving at the end of the eighteenth century. They brought with them their own cultural values and assumptions and different kinds of knowledge. Early sealers and whalers plundered what was left of the marine mammal populations. They were followed by more permanent colonists, enticed by advertisements in England that emphasised the beauty and fertility of the natural environment and its ability to sustain English land use practices.[5] Upon their arrival, however, these people had to wrestle meaning from an 'alien' landscape that they had no connection with.[6] As Samuel Butler wrote in 1863, "A mountain here is only beautiful if it has good grass on it, if it is good for sheep".[7]

These settlers altered the environment to establish the same agricultural systems that were developed over many centuries in Europe. Sometimes they also wanted to make the landscapes look more like the ones that they had left behind. Phrases such as 'breaking in the land' surfaced, signifying a sense of aggression towards an environment that was regarded as an adversary that the settlers pitted themselves against.[8]

Forests were often seen as an obstacle to agriculture or as an inexhaustible source of timber, while 'swamps' were drained for pastures. Acclimatisation societies also introduced plants and animals as a source of game and to make the place more like home, leaving a legacy of pests for future generations to deal with. Many more species soon became extinct. Although some settlers raised concerns about the need to protect New Zealand's environment, their voices were often not heard.[9] Like the first people in the land, they began to leave a scene of environmental damage in their wake – although the impact from the second wave of migrants was much more substantial than that from the first.

Gradually, however, the new colonists began to develop a closer relationship with their environment. As Eggleton suggests:

> **By the end of the nineteenth century ... the eye of the settler's descendant began to**

> **contemplate the landscape around about with a certain intimacy and affection, as delicately as a gecko sipping nectar from a pohutukawa blossom.[10]**

The umbilical cord between Britain and New Zealand also began to be severed. In the words of one writer in the 1930s:

> **... it's just dawned on me that I'm a New Zealander, and surely, surely the legends of the mountains, rivers and people that we see about us should mean more to us than the legends of any country on earth.[11]**

These trends have continued until the present day. For example, Belich refers to the "modern populist engagement with the landscape", including the "the boat, the bach, the beach and the barbecue", that are symbolic of the enjoyment many New Zealanders have in the 'great outdoors'.[12] A sense of identity for many Pakeha/European New Zealanders today is not tied to British roots.[13] The landscapes of New Zealand and its unique flora and fauna have played a dominant part in the construction of national identity.[14] This is often reinforced by tourism branding, which conjures up images of a '100 percent pure' environment.

The lesson from this story is that throughout history, people have always engaged with their environments and learned from their experiences. They have developed different forms of knowledge, different ways of seeing their place in the world and various cultural, social and economic systems for supporting and sustaining their well-being. The environments in which people live are inseparable from human cultures – and these cultures have changed significantly over time.[15] The past is part of the present, and the future, while open, is tied to today.

New Zealand's population today

Over four million people live in New Zealand today. The mix of this population, and the locations where they live, have changed a lot over the last century. Two key trends include:

- a change in cultural mix
- a shift to urban centres.

The dominant narrative in the history of New Zealand usually focuses on the early Polynesian arrivals, followed by European (mainly British) colonists. Nonetheless, people from a variety of different countries and cultures have settled in New Zealand. The ethnic mix of this country is therefore diverse. According to the most recent census, almost one in five people living in New Zealand in 2001 was born overseas, although Pakeha New Zealanders make up the majority of the current population (see table 2.1).

Ethnic Group	Proportion of population
Pakeha/NZ European	75%
Maori	14.7%
Asian	6.6%
Pacific	6.5%
Other European	5%
Other	0.7%[16]

Table 2.1: Ethnic mix of New Zealand
Source: 2001 Census

The vast majority of New Zealanders now live in urban centres. This is very different from the situation a century ago. In 1901 over half the population lived in rural areas. By 2001 this had declined to 14 percent.[17] This shift to urban life has created different challenges for sustainability.[18] Urban dwellers can often be very isolated from the impacts their actions have on the environment and sustainability. For example, turning on a tap in Auckland may drain water from a complex system of costly underground pipes that carry water from the Waikato River, weaving its way from Lake Taupo and the central North Island mountains (where clouds once lingered and left their load). Compare this to a system that simply harnesses water directly from a roof-top. Many of the people we spoke with during this investigation highlighted the challenges of educating people for sustainability in an urban context.[19]

Future population trends

Looking to the future, how is New Zealand's population changing? Although future estimates are always uncertain, New Zealand's population is predicted to peak at 4.6 million people over the next 30 years. New Zealand will continue to have a mostly urban population, although the increase in population will not be distributed evenly around the country.[20] Key trends are that the population is ageing, people are becoming more mobile (i.e. they are leaving New Zealand and are being replaced by new migrants and other people returning home) and ethnic diversity is increasing.[21] For example, those who identify as European/Pakeha or 'other European' are likely to make up 69 percent of the population in 2021 – down from 79 percent in 2001.[22] Although the Maori and Pacific populations will continue to grow, migrants are continuing to arrive from an increasing range of countries.

The population is projected to grow to a peak of 4.6 million people over the next 30 years. It is then predicted to level out to 4.2 million by 2101.[23] Although a small population can place less pressure on sustainability than a larger population, the size of New Zealand's existing ecological footprint demon-

strates that population numbers are only one factor that needs to be taken into consideration (see section 2.3).

2.2 Valuing the environment and quality of life in New Zealand

As noted above, New Zealanders have gradually developed a sense of intimacy towards the rest of the natural world in this country. This is often evident in the art, literature and narratives of people who have lived here (see section 5.5). Different people in different cultures will always value the environment in vastly different ways. Yet recent reports suggest that a majority of New Zealanders today have a growing desire to maintain the quality of the environment they live in.

The Royal Commission on Genetic Modification during 2000-01, for example, highlighted seven values that they believed were common to a majority of New Zealanders today. Two of these were:

- **The uniqueness of Aotearoa New Zealand:** recognising features such as its relatively low population density and its ecosystems, flora and fauna.
- **Sustainability:** recognising the need to sustain our unique but fragile environment for generations yet to come, and that an environment that is cherished and cared for is not just a survival mechanism; it is also for many a source of spiritual and cultural hope.[24]

Consultation for development of an Oceans Policy[25] suggested that New Zealanders value such things as:

- the natural character of New Zealand's oceans, including their beauty, power and tranquillity
- opportunities provided by the ocean for enjoyment and to support the needs of present and future generations
- the cultural and historical connections people have with the ocean as a source of national identity.

A strong conservation movement in New Zealand has also contributed to the establishment of many national parks and reserves that make up almost a third of the country, although a lot of this land was unsuitable for converting into agricultural uses. Sometimes New Zealanders have mobilised at a national level to voice their concerns about environmental issues as well. In the 1970s there were protests about the flooding of lakes for hydropower, in the 1980s people campaigned on the safety of nuclear ships, and in the 1990s there were conflicts over logging native forests. More recently, genetic modification has been a major political issue. These issues have often revolved around a sense of

concern people have about what makes living in New Zealand special and, in the case of genetic modification, about the relationship between human health and the environment. In other words, people have focused on the quality of life that many New Zealanders enjoy.

People often use the phrase 'quality of life'. It also features regularly in this report. It is difficult to define what a good quality of life is, as individuals and communities are in the best position to determine what contributes most to their well-being.[26] Nonetheless, it is important for people to discuss and debate what is most important for them in their lives. For example, increasing material affluence does not necessarily lead to a better quality of life if it damages the environment and erodes social relationships. Despite this, prosperity and progress in New Zealand are regularly defined in material terms and measured by gross domestic product (GDP). Although GDP per person has risen by over 60 percent in New Zealand since 1960, one survey suggests that the overall perception of quality of life has decreased by 40 percent during this period.[27] These issues are explored in more detail in chapter 6.

Discussions about quality of life in New Zealand are often linked to a 'clean and green' environmental image. A growing concern about the importance of this image is reflected in the way this phrase is so frequently used. People up and down the islands of this country, and even around the globe, now utter this phrase on a daily basis. It captures the heads and hearts of people who believe this image to be true, and others who wish it would be so. But to show how times have changed, it is interesting to note that this phrase did not enter circulation until after the 1960s.[28]

This discussion suggests that New Zealanders do have a reasonably strong and growing appreciation for the quality of the environment they live, work and play in. Throughout New Zealand's history, tangata whenua have also called for greater recognition of environmental values that are linked to their cultural identities.[29] As noted above, New Zealand's environment is also connected with a sense of national identity for many people in this country. Yet how deep do these values go? How high would the environment rank in most New Zealanders' list of priorities? Further research is needed in this area, but it is interesting to note that many claim they would choose to protect the environment over economic growth. Almost one in four Aucklanders in a recent survey claimed that environmental protection is more important to them than economic growth, with 70 percent saying that they are equally important.[30] Environmental concern tends to be higher in economically buoyant times. Health, education and employment appear to hold more weight during adverse economic conditions.[31] This emphasises the importance of examining environmental, social and economic issues together.

People are likely to value the quality of an environment that is close to where they live. Yet how far does this sense of concern stretch? The everyday actions of people can affect the environment and the lives of other people at local, regional, national and global levels. For example, the average ecological footprint of New Zealanders is very large by international standards (see section 2.3). Even if New Zealanders are concerned about the places where they live, it is important not to lose this global context. The challenges of sustainability are not just national by nature.

Regardless of whether people have strong environmental values, it is also important to highlight how they value other things that rely on environmental quality. For example, clean air and access to clean water, food and shelter and a secure supply of energy are all linked to the health of the environment. People who care about the lives of their children, and their children's children, are also likely to be concerned about the future world that they will live in. There is also a growing appreciation of the economic value of New Zealand's environmental image. This image, which could be worth billions of dollars a year[32], is particularly important for the primary production and tourism sectors that market 'Brand New Zealand' to the world. Many businesspeople are becoming increasingly concerned that this image, and the quality of the environment on which it is based, needs to be maintained.

Nonetheless, just because people value something does not mean that they will always take good care of it. In the case of the environment this is often true, as the impact of a person's actions can affect the quality of the environment in a distant time or place far from view. Sometimes other priorities simply take over. For example, a recent study suggested that there had been a slight overall decline in how far people are willing to go to protect the environment.[33] This may suggest that many people are not prepared to live in a way that is consistent with what they truly value. Alternatively, environmental values in New Zealand may not be as deep as many people think. It is also likely that many people lack an understanding of the pressures their society is placing on sustainability.

2.3 Pressures on sustainability

Problems with the quality of New Zealand's environment have been well documented elsewhere.[34] As noted above, successive waves of people have already left a significant environmental legacy. Many resources have been 'quarried' out of existence (depleted from over-exploitation or because they were non-renewable).[35] Farming activities that rely on healthy soil and water have often proved unsustainable because of the excessive pressures they have placed on the environment.[36] Pollutants from human activities have also taken their toll on the health of the environment and people within it.[37] It is possible to identify many ways that New Zealanders treat the environment in a non-

sustainable manner. This report looks at the theme of waste in chapter 6, so some recent trends in solid waste and energy usage are highlighted here as examples.[38] Both these issues can be examined in local and global contexts.

Over the last two decades New Zealand's population grew by almost 20 percent. During the same period, however, solid waste production in the Auckland area swelled by over 130 percent. Energy use across the country has grown by three times as much as the increase in population.[39] A growing population is therefore having a disproportionate impact on the growth in waste production and energy usage.

Solid waste is usually an issue at a local level because of the demand it creates for landfills. Rubbish dumps are usually difficult to site—no one wants a dump in their backyard—and they are very costly to maintain. They can also contribute to the pollution of waterways. As rubbish breaks down it can also produce methane—a very potent greenhouse gas that contributes to climate change. Furthermore, the waste that ends up in landfills is usually only the tip of the iceberg. Vast amounts of materials and energy are usually required to produce the goods that are eventually dumped (see below). New Zealanders now throw away enough rubbish every day to fill 1000 buses.[40] This enormous waste, about half of which comes from businesses, adds up to about 900kg of waste per person per year.[41] Although it is difficult to compare this data with waste statistics from overseas, New Zealand's waste problem is large and growing.[42]

Energy is a fundamental issue for sustainability because it touches every aspect of human society. It provides people with essential services such as heating and lighting and gives people the ability to travel and to transport materials or goods. It also drives the industries that process resources and manufacture consumer goods. Human beings cannot create energy – they can only harness it from various sources. These resources may be renewable, such as water and wind used to generate electricity, or non-renewable, such as oil and coal. Energy sources are usually very expensive to develop and all developments have local and/or global impacts on sustainability. Non-renewable energy sources, which are in limited supply, need to be used particularly wisely. If they become depleted, then future generations will not be able to access them. Burning non-renewable fossil fuels also contributes to climate change.

New Zealanders currently use more than 750 petajoules of energy a year. This is about the same amount of energy that 32 million workhorses – eight for every person in this country – could produce if they never stopped to rest.[43] Over a third of this energy is 'lost' during conversion processes, such as when gas is converted into electricity, and during transmission, for example when electricity is carried long distances. Although energy use per person is slightly below the average for other developed countries, it is increasing.[44] New Zealand is also one of the most inefficient users of energy in the developed world.[45]

Two thirds of New Zealand's energy comes from non-renewable sources such as oil, coal and gas. Although New Zealand's small population contributes less than one percent of the world's greenhouse gases, greenhouse gas emissions per person are amongst the highest in the developed world.[46] Even though most of these emissions come from methane emissions in agriculture, New Zealand is a relatively high user of fossil fuels. Between 1990 and 2000 carbon dioxide emissions increased by 22 percent – the second highest increase among members of the OECD.[47]

Over 40 percent of energy used in New Zealand is for domestic transport.[48] During the last 20 years the number of cars on New Zealand roads has increased by more than three times the growth in population.[49] New Zealand has one of the highest levels of car ownership in the world, second only to the United States.[50] A growing dependence on cars for moving people and goods around cities is also contributing to air pollution. For example, a study commissioned by the Ministry of Transport suggests that almost 400 New Zealanders aged 30 and over die prematurely each year from exposure to dangerous particles released by vehicles.[51] In comparison, 454 people died in 2001 from road accidents, 243 of them aged 30 years and over. Car imports can also pose a biosecurity risk by bringing with them pests such as the Asian gypsy moth. Many of these cars are eventually scrapped, creating further problems for waste management. Over 200,000 cars are de-registered in New Zealand every year (mostly because they have reached the end of their expected lives). If these cars were placed bumper-to-bumper on State Highway One they would stretch all the way from Auckland to Wellington.[52]

These are just some of the current trends in New Zealand that highlight major pressures on sustainability.[53] Although the quality of New Zealand's environment is still very good in many areas, this is mainly due to its small population and not because New Zealanders have learned to live in sustainable ways.[54] New Zealand often trades on its 'clean and green' image. Many businesses, especially those that are linked to the primary production and tourism sectors, rely on this image for competitive advantage. If environmental realities do not meet the perceptions of overseas consumers and tourists, then economic interests in New Zealand may not be able to sustain their share of many high value markets.

So far, the small size of the New Zealand population and the relatively large land area and water resources at our disposal have allowed us to have our environmental cake and eat it too. In effect, the environment, particularly the indigenous wildlife, has partly subsidised our economic development by providing a succession of quarried resources and plentiful energy resources to use, and abundant land, water and fresh air to absorb our wastes. However, those subsidies cannot be sustained indefinitely and will eventually be withdrawn if we cannot manage our activities sustainably.[55]

– Ministry for the Environment

New Zealand in the world

> **Already 20% of the world's population consumes 86% of its total resources, while the poorest 20% consume only 1.3% of these same resources. Another striking fact is that a child born in an industrialised country will consume thirty to fifty times more resources than a child born in a developing country.[56]**

New Zealand is part of an intricate web of international trade and commerce. From the fertiliser on farms to the cotton in clothes, New Zealand industries rely almost entirely on resources originally imported from overseas.[57] The current lifestyles of most New Zealanders could not be sustained without the regular inflow of goods and materials across our borders.

It is important to take a global perspective. Although some environmental qualities may improve in New Zealand over time, this may not be because there has been a *reduction* in resource use. Instead, it may be because environmental damage is being *redistributed* to other parts of the globe, especially developing countries.[58] Ultimately, of course, environmental harms cannot be relocated forever, as all people live on a single planet. World-wide there are increasing pressures being placed on the ability of ecological systems to support and sustain the lives of humans.[59]

Beneath the shiny exterior of many consumer goods purchased in New Zealand, environmental legacies are often left elsewhere in the world. Environmental and social impacts occur throughout the manufacturing process – from the extraction of raw materials and energy to the discharge of pollutants – into the air, water and land. The huge amounts of waste that end up in New Zealand landfills are therefore just the last link in a chain stretching right around the globe. For example, over 700 different materials and chemicals go into manufacturing a computer. The manufacturing process produces over 60kg of waste (including 22kg of hazardous waste). This does not include the waste generated from extracting raw materials. The manufacturing process also uses over 27,000 litres of water and about the same amount of energy that a computer uses in a year.[60] As another example, it has been calculated that the average American threw out 2kg of waste per day in 1997, but consumed around 55kg in natural resources from farms, forests and mines a day.[61] Unfortunately no similar figures have been calculated for New Zealand.

The concept of an 'ecological footprint' has been developed to illustrate the demands that people place on the environment. It measures how much land a person, or a population, needs to meet their current lifestyles. It considers their food, housing, energy, and mobility requirements and their demands for consumer goods and services. The larger the ecological footprint, the more resources are needed to sustain a given lifestyle.

Real Stories

I'm an engineer working in the water, waste and environmental areas. I really enjoy working with people and the environment. I'm also passionate about sustainability. Why? Because I'm driven by the reality that our society can do better for ourselves and future generations. We need to look after people and the environment we live in by doing things differently, being smarter, and getting more from less.

When I studied at university, I was always interested in the environmental sides of engineering. I was fascinated by its links with people and the rest of nature- but there was nowhere in my formal education where I could learn about these issues. My training was very technical, with lots of isolated subjects and little overlap between them. There were hardly ever any connections made between technical expertise and people or the environment. I've had to keep learning throughout my career to make these links myself.

Although the technical side of my education was useful, it did not prepare me for the difficulties of communicating complex information with wider groups of people. Too often, professionals work in 'silos' and don't stray from their own comfort zones. They cannot see or get involved in the bigger picture. I believe it's vital to break down these silos for a better future. We need people to communicate technical and scientific matters in an easily understood way. We also need people to appreciate different perspectives, as it's essential to look at issues in a holistic way – integrating environmental, social, cultural, and economic considerations. It's important to share experiences and insights with each other and to find some common goals. I also think it's vital to be forward looking and to question many current practices.

I believe that all engineers need to learn about sustainable development. In fact, I think that engineers involved in public infrastructure developments have a professional duty to ensure that they have a good understanding of sustainability. This has become more pertinent than ever with the Local Government Act 2002 – which requires councils to work very closely with communities and to take a sustainable development approach.

There needs to be much more widespread adoption of the principles of sustainable development in New Zealand. We need to shift attitudes and change the way we act. We need to reconnect all New Zealanders back with the rest of nature. We all have a duty to be good local stewards of the environments of our planet. Those that can communicate these issues to others can be very effective at taking other people along with them. I'm committed to working with others and to keep on learning.

Jim Bradley
Principal Public Health Engineer, MWH New Zealand Ltd

The ecological footprint for New Zealand has been calculated at over eight hectares per person.[62] This compares with a world average of 2.3 hectares per person. Like many other developed countries, New Zealand's ecological footprint per person is very large. It is five to ten times larger than the footprints of people living in India or China. Yet it is also much bigger than the footprints of most developed countries. For example, it is more than 25 percent bigger than the footprints of Germany, the United Kingdom, the Netherlands or Japan.[63]

In a world of limited resources these sorts of calculations raise serious concerns about global equity. New Zealanders are part of the 20 percent of the world's population who consume more than 80 percent of the world's resources, although there are huge inequalities in consumption within New Zealand. If everyone on Earth used resources at the same rate as New Zealanders, another three planets would be needed to support the human population. If New Zealanders care about other people in the world, and if they wish to be responsible global citizens, New Zealand's ecological footprint will need to be reduced to a more equitable level. This does not mean that New Zealand should separate itself from the international trading system. It merely means that New Zealanders will need to find different ways to meet their needs and to develop a good quality of life that is sustainable on a planetary scale.

2.4 Environmental awareness and understanding

How aware are most New Zealanders of these pressures on sustainability? Taking an environmental focus, a wide range of surveys has examined New Zealanders' understanding of environmental issues. Different studies have produced varied results depending on how they have been conducted. It is therefore difficult to form a comprehensive view. Nonetheless, an analysis of these surveys suggests that most New Zealanders believe the environment in their country is an emerging issue instead of a significant area of concern.[64] A more recent survey suggests that most people perceive the environment to be in "average to good" condition.[65]

These surveys suggest there is a growing awareness of environmental issues in New Zealand. However, most people do not sense any serious cause for concern. Participants in our investigation echoed this view.[66] They also suggested that the clean and green imagery of this country often contributes to this perception. As Bell suggests, this imagery survives "first because it is restated so often, and second, because a superficial glance out the window affirms this is so".[67] The Ministry for the Environment has also identified a growing gap between the image of New Zealand's clean and green environment and the reality of many sustainability problems.[68]

Surveys of environmental awareness among New Zealanders tend to focus on how people perceive their environment. They do not usually focus on bigger

issues in a global context, although climate change is an exception. Many New Zealanders are likely to be aware of global issues, as they are frequently fed pictures through the media of environmental catastrophes occurring right around the globe. But if most people are unaware of environmental issues in New Zealand, it is very unlikely that they will understand how unsustainable their current society is. Many people would probably be extremely surprised to make these sorts of connections. For example, research undertaken in 2000 asked people how well they thought New Zealand was performing compared to other countries in an environmental sense. Most participants expected this country to be among the best in the world. People were usually shocked when they heard otherwise.[69]

Sustainability is not just about the environment, but the environmental dimensions of sustainability are essential. There currently appears to be a fundamental lack of understanding of sustainability issues in New Zealand. Many people interviewed for *Creating our future* expressed this sentiment.[70] Other recent reports have raised similar concerns,[71] and the government has recognised a lack of awareness of sustainability issues in many recent strategies (see section 4.1). If people cannot see any problems, how can they be expected to work towards solutions? Research conducted by the Government prior to the World Summit on Sustainable Development in 2002 suggested that New Zealanders cannot currently see how they are contributing to many problems, or how they could be contributing to solutions.[72] The research also highlighted a view that is common among New Zealanders who are concerned about these issues – that education should be given a high priority to resolve these concerns.

2.5 Summary and key points

Education for sustainability is concerned with all the comments in this chapter. It is about the relationships people have with their environment and the quality of life that they enjoy. It examines what people really value about the lives of other people and the world they live in. It is also about the connections people make between their actions (and the actions of institutions in their society) and the social, cultural and economic well-being of people living now and in the future. Key points from this chapter are that:

- Relationships between people and their environment have changed significantly over time. There is a reasonably strong and growing appreciation among New Zealanders of the quality of the environment that they live, work and play in. Nonetheless, just because people value something does not mean that they will take good care of it.

- New Zealand's environment is coming under increasing pressure from its human population. On a global scale, the ecological footprint for each New Zealander is very large. It is much bigger than the footprints of most other developed countries. The size of this footprint is unsustainable and New Zealanders are consuming more than their fair share of global resources.
- Most New Zealanders do not know how they are contributing to pressures on sustainability, or how they could be contributing to solutions.

The following chapter examines the vital role of education to address these concerns. It explains how education for sustainability will require much more than just an increase in awareness. It will require a transformation in the way many people and institutions currently see themselves in the world.

It is widely agreed that education is the most effective means that society possesses for confronting the challenges of the future. Indeed, education will shape the world of tomorrow ... Education, to be certain, is not the whole answer to every problem. But education, in its broadest sense, must be a vital part of all efforts to imagine and create new relations among people and to foster greater respect for the needs of the environment.[73]

– United Nations Educational, Scientific and Cultural Organisation