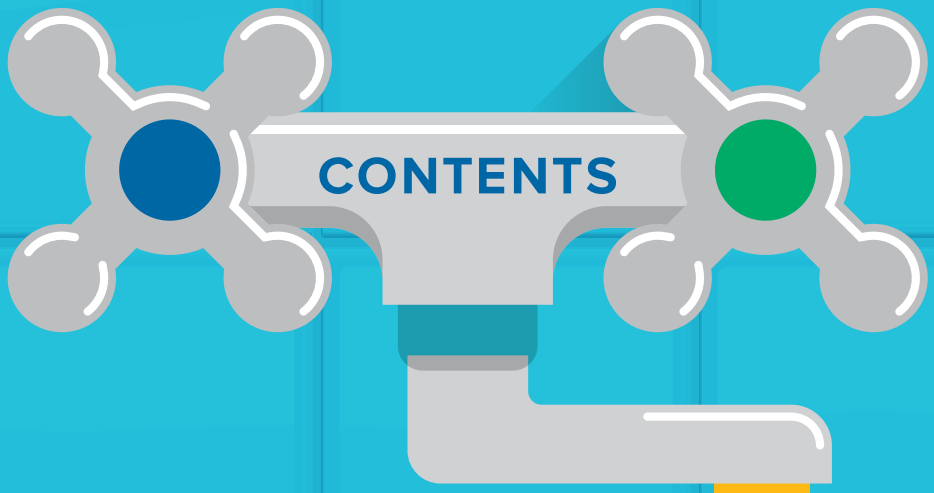
New Zealand Water Consumer Survey 2017

REPORT

water NEW ZEALAND

The New Zealand Water & Wastes Association Waiora Aotearoa



ARUP

water NEW ZEALAND
The New Zealand Water & Wastes Association Wai ora Aotearoa

Message from Water New Zealand

The New Zealand Water Consumer Survey is the first nationwide examination of what New Zealanders think about critical issues associated with water.

John Pfahlert,
CEO, Water New Zealand

This independent survey by Arup provides an accurate gauge of New Zealanders' attitudes towards water and will assist water utilities, councils and government to develop a deeper understanding of customers' views. This insight will enable them to develop relevant and sustainable policies around water and to continue the transition to a customer-centric focus.

We have produced a robust survey, delving into the many aspects of water, from drinking water supply, to issues around water pricing, to how customers rate the service from their supplier. This is with thanks particularly to the support received from our member organisations in distributing the survey to water customers.

The result was that more than 4,500 people responded – well in excess of our original target and nearly five times the response rate that pollsters base political opinion surveys on. And we've all heard plenty of discussion about those in recent months!

You'll find some very interesting results in the following pages. It may not be so surprising that people are concerned about the future of water in this country, or that a majority of people think there should be a cost for taking water from the environment for bottling or for agriculture. The survey also reveals that in general, New Zealanders have a high level of confidence in the quality of water they receive from their supplier despite concerns around water security in general.

What also makes this survey particularly valuable is the development of a complementary user-friendly data visualisation tool, allowing online viewers to delve into various sub-sets of respondent data based on gender, age, geographical location and other metrics. This will be particularly useful for more in-depth analysis of findings. Go to the Water New Zealand website www.waternz.org.nz/watersurvey to access the tool.

I am very confident that the findings of this survey will provide valuable insights into the views of New Zealand's water consumers.

- Are New Zealanders concerned about the availability and quality of water? Does this vary between urban, regional and rural areas?
- What motivates people to save water at home?
- Who should pay for water; and how should we be charged for it?
- Do consumers think that they receive good service from their water supplier?
- How concerned are Kiwis about the health of our waterways?
- Are we confident that the future of our water is in good hands?

Executive summary

Do consumers care about saving water? Should there be a cost to abstract water from the environment? How should we be paying for our water? Are water suppliers adequately prepared for the future? What do consumers think about water quality?

New Zealand has a relative abundance of fresh water and some of the most beautiful waterways and scenery in the world. Despite this, there are a number of pressing challenges facing water in New Zealand.

Rapidly growing population and urbanisation is demanding significant resource management. Severe impacts of climate change will impact regions in different ways. Water pricing is attracting strong opinions, with a push for transparency in pricing, and a growing desire to instil a cost to abstract water from the environment. There is growing consumer expectation regarding water services and the interactions and transactions encountered. There is an uncertainty in the future of water, with digital disruption and rapidly changing trends set to change the nature of the water industry. There is increasing concern regarding the quality of waterways, especially combined sewer and stormwater infrastructure resulting in sewer overflows.

When understanding such challenges and how best to approach them, it is imperative to understand consumer attitudes. Asking the broader questions allows an insight into trends and variances of perceptions nationally.

The New Zealand Water Consumer Survey 2017 was undertaken in order to understand consumer perspectives on issues facing the water industry. The Survey was conducted online between 1 May and 16 June 2017 and received more than 4,500 responses. This report was published and released on 20 September, 2017. It provides an insight into consumers' needs and how water utilities can best service their customers. It also informs the best way forward and provides a basis for further community-based policy debate.

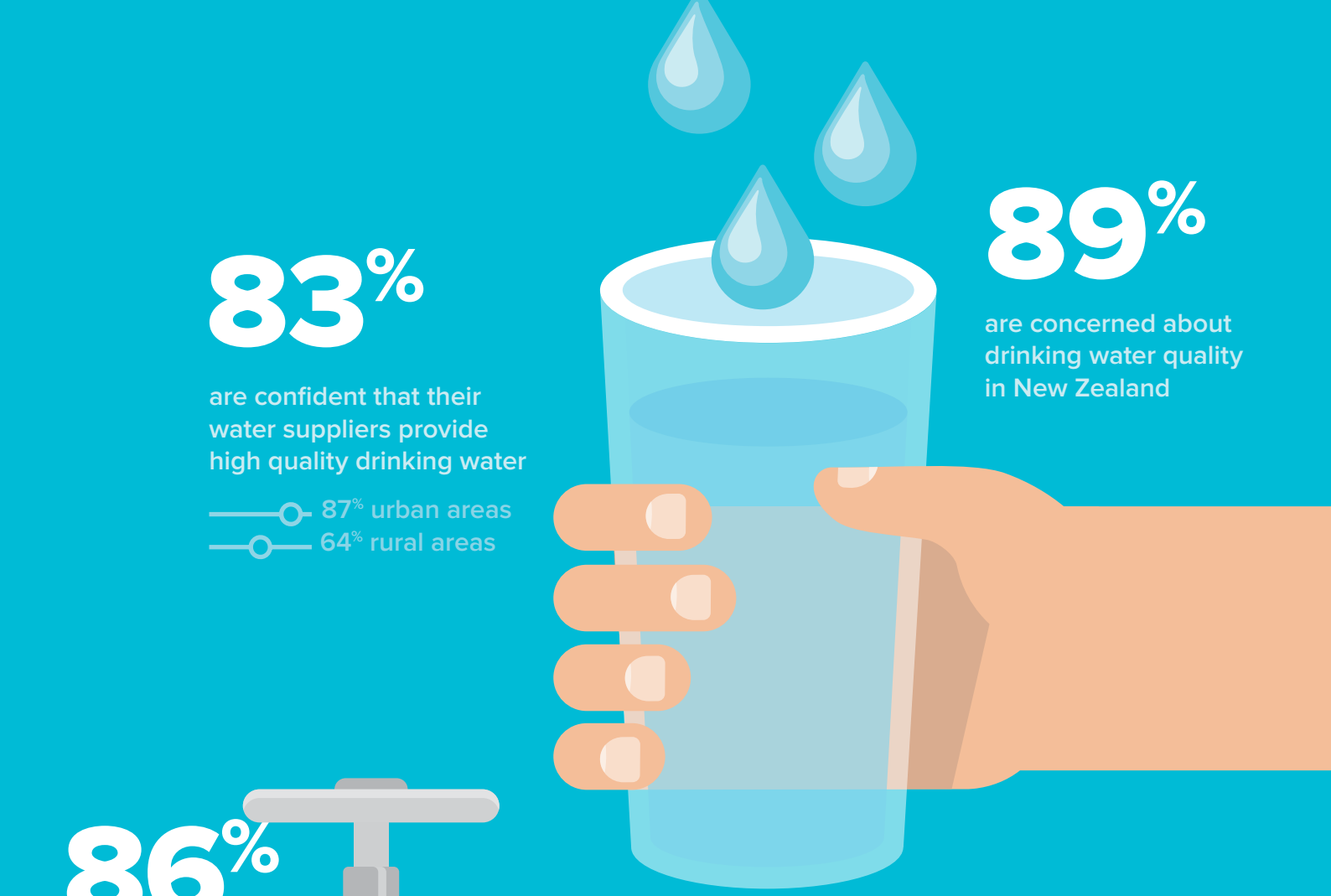
83%

are confident that their water suppliers provide high quality drinking water

- 87% urban areas
- 64% rural areas

89%

are concerned about drinking water quality in New Zealand

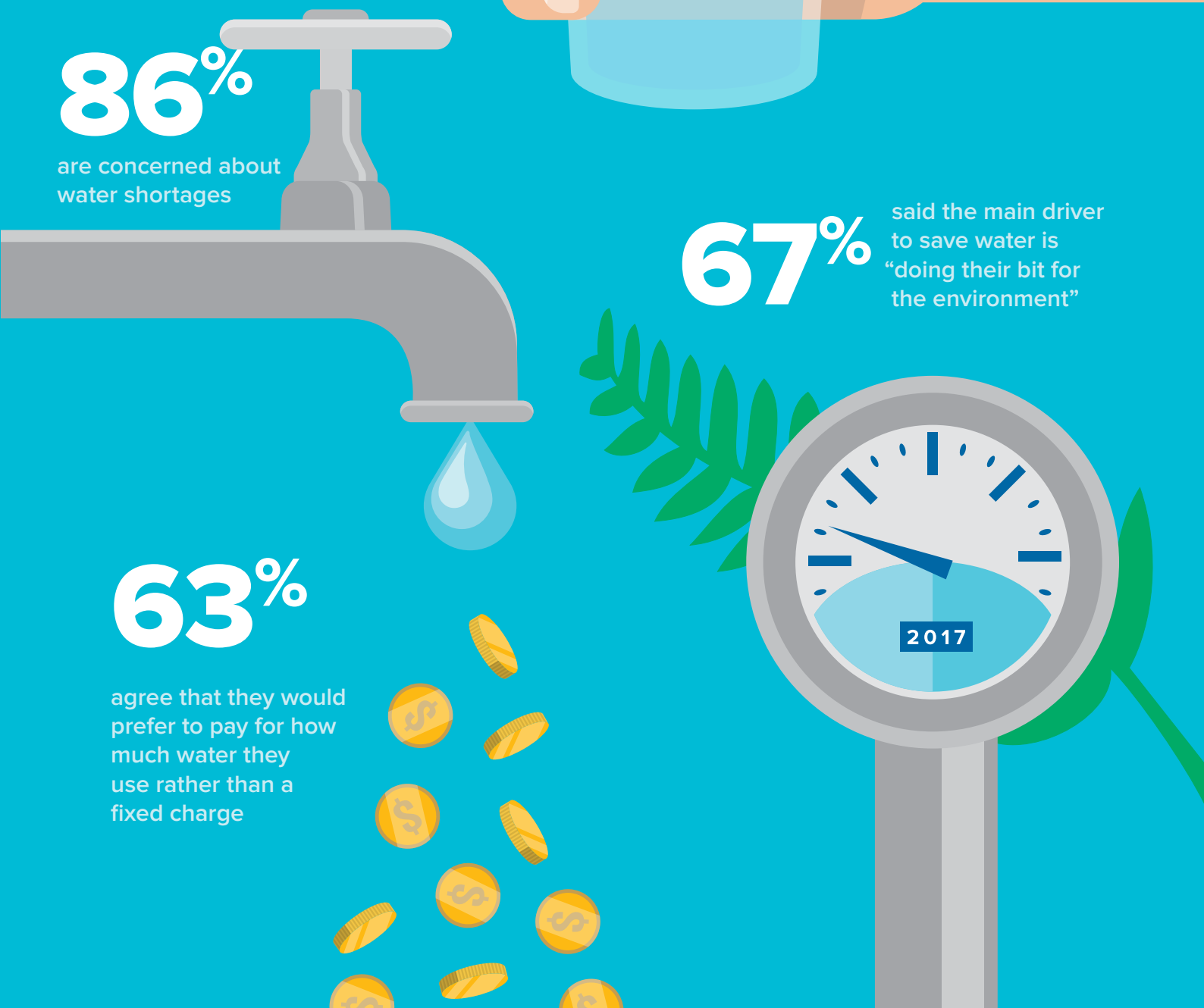


86%

are concerned about water shortages

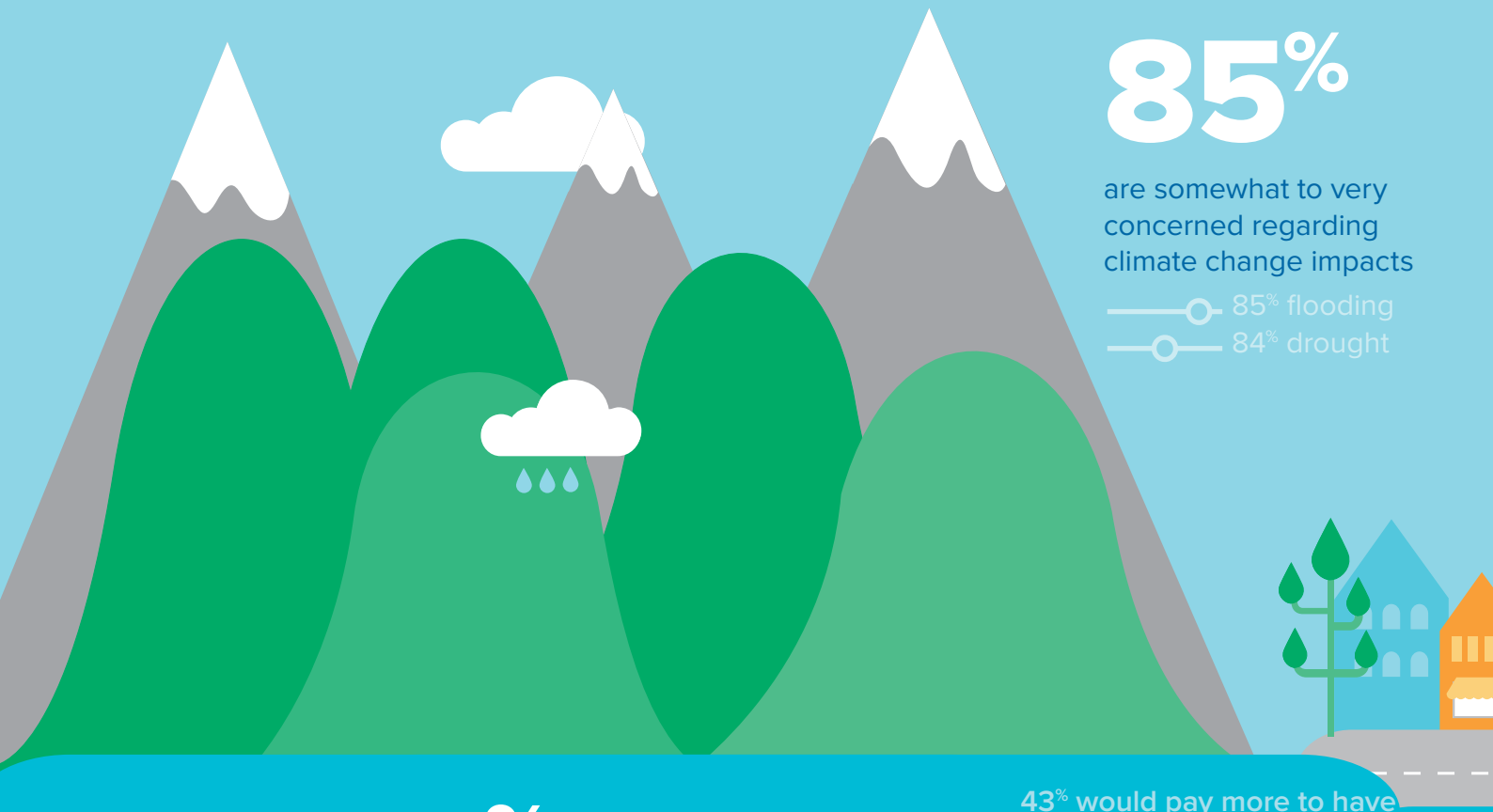
67%

said the main driver to save water is "doing their bit for the environment"



63%

agree that they would prefer to pay for how much water they use rather than a fixed charge



85%

are somewhat to very concerned regarding climate change impacts

- 85% flooding
- 84% drought

73%

are concerned about poor water quality in their waterways

- 43% would pay more to have better quality waterways
- 69% said councils should invest to improve waterway quality

58%

believe that water suppliers provide high quality customer service

- 53% regional centres
- 49% rural & small communities
- 76% Auckland

89%

agree that there should be a cost when taking water from the environment for bottled water and similar industries

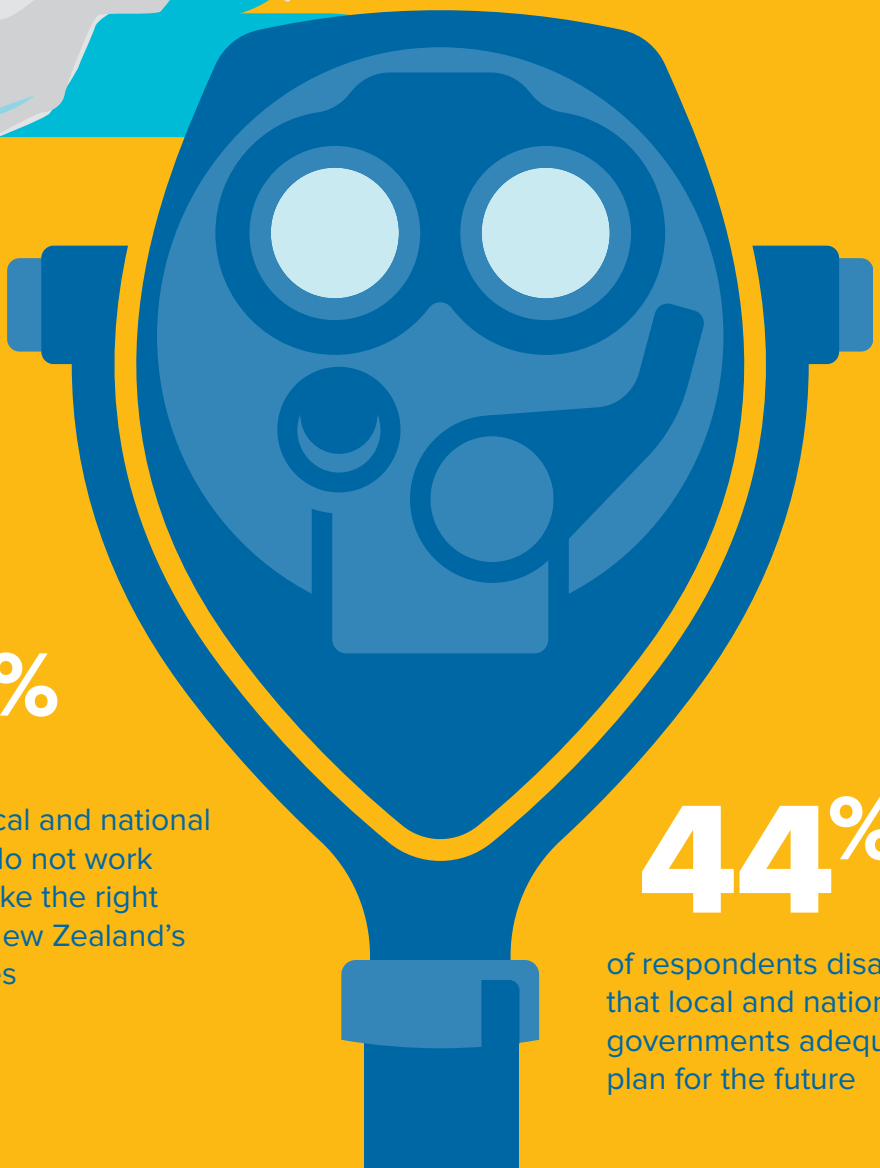
59%

believe that there should be a cost when taking water from the environment for all users

Auckland, where water and wastewater is generally charged on a volumetric basis, is the only region where the motivator of saving money is higher than environmental concern

63%

stated that litter and floating plastics were the pollutants in their local area that concerned them the most



50%

believe that local and national governments do not work together to make the right decisions for New Zealand's water resources

44%

of respondents disagree that local and national governments adequately plan for the future

"I think we need to do more to value our precious resource. Education of children is an important part of this."

CONSUMER

Consumers are concerned for the environment, including water shortages and climate change. Their concern for the environment is driving a significant proportion of consumers to undertake water saving initiatives. This trend will result in consumers holding water suppliers accountable for being environmentally responsible, undertaking more water saving measures and tackling climate change. Further, consumers will also expect industrial and agricultural water users to do their bit to save water and adequately pay for usage.

Consumers believe that water suppliers generally provide high quality customer service, however they are uncertain that water providers are adequately planning for the future. There also appears to be a lack of understanding amongst most respondents regarding the structure of water governance. This can lead to a lack of trust in the planning and efficient management of water. There is an opportunity for water suppliers to undertake more community engagement and knowledge sharing.

Consumers would prefer to pay for how much water they use. Consumers also believe that there should be a cost when taking water from the environment, particularly when it is for a commercial use. This requires water suppliers to reassess water pricing and increase transparency and accountability.

The majority of respondents are concerned about poor water quality in their waterways, particularly litter and floating plastics, as well as sewer overflows. Consumers believe councils should be investing more in waterway quality. New and innovative ways to manage stormwater and pollutants can be explored, to take pressure off the sewer network. This is an opportunity for water suppliers and councils to work in partnership and take responsibility for the waterway network and the impact of excess stormwater.

The New Zealand Water Consumer Survey

Understanding consumer attitudes, priorities and perceptions are critical to developing a comprehensive and robust sustainable water policy for New Zealand.

This report presents the findings of the first New Zealand Water Consumer Survey, developed and facilitated by Water New Zealand, in collaboration with a number of its member organisations, and Arup.

The survey has been undertaken to provide an insight into consumers' views on the challenges and opportunities facing the New Zealand water industry.

An additional aim of the survey was to encourage more conversations around water and to raise the importance of water to New Zealanders.

More than 4,500 people took part in the online survey, which was open for a period of seven weeks. Capturing the thoughts of New Zealanders across a broad range of demographics, including age, gender, geographical location and living arrangement, was identified as a critical success factor. Deliberate efforts were made to ensure the survey reached a representative sample of the New Zealand population. This was achieved, with both the regional distribution and proportion of urban vs rural respondents closely matching census data.

This report is structured as follows:

Consumer Outlook

Section 1 Water use and efficiency

Section 2 Price of water

Section 3 Customer experience

Section 4 Future of water

Section 5 Healthy waterways

The report provides some contextual information whilst remaining primarily factual and data-driven. The results of the survey provide a basis for community-informed policy debate and will enable Water New Zealand and Arup to work with the water sector to ensure the alignment of interests to drive a sustainable water future.

Readers should note that percentages in the charts may not always add up to 100% due to rounding.

Waiwera Beach, North Auckland © Nazphotos

Consumer outlook

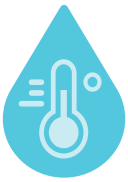
What do New Zealanders think about the water industry? How confident are they in their water suppliers? Where can water suppliers improve?

The survey sought to understand consumer perceptions on the water industry in New Zealand, particularly what they want to see in the future and where water suppliers can improve.

The key areas of care and concern of consumers, and what this means for water suppliers, are discussed below.

LEADERSHIP IN SAVING WATER AND TACKLING CLIMATE CHANGE

Consumers care about the environment, are concerned about climate change and many want to do their bit to save water.



More than four out of every five respondents (87%) were somewhat to very concerned for water shortage across New Zealand and 85% of respondents are somewhat to very concerned regarding climate change impacts. Across the nation environmental factors are the major motivator for respondents to save water. Respondents want to see those taking advantage of the environment, such as abstracting water at no charge for commercial uses, charged for the privilege.

This trend results in consumers holding water suppliers accountable for tackling environmental challenges. However, consumers do not currently believe that their water suppliers are being environmentally responsible or doing enough to help them become more water efficient. There appears to be a lack of trust in water suppliers, possibly partly due to a lack of understanding around the governance of water supply. Consumers are generally not confident in the investment from water suppliers into flooding protection or earthquakes.

This is an opportunity for water suppliers to take leadership in saving water and demand management. Water suppliers can take steps towards encouraging consumers to be more water efficient, such as providing rebates for water efficient devices, metering their water use and educational tools. Installing water meters would allow water suppliers to know where and when water is used, to better manage

demand. Water meters can also encourage water consumers to take responsibility for their usage and save water more effectively. Water resource management strategies are imperative to successfully allocate resources in times of increasing scarcity.

Water suppliers can take the lead on climate change mitigation and adaptation. Trends in the global water industry have seen water suppliers targeting carbon neutrality by 2030, investment in resilient infrastructure and strategies for future planning.

COMMUNITY ENGAGEMENT AND KNOWLEDGE SHARING

Consumers value high quality service and knowledge of processes. Consumers believe that water suppliers are generally providing high quality customer service, however those in regional centres and rural and small communities are less confident. Consumers are uncertain that water providers are adequately planning for the future. If this planning is happening, consumers are not as informed as they would like to be.

There appears to be a lack of understanding amongst most respondents regarding the structure of water governance with 67% of respondents unsure of how many organisations are responsible for water supply in New Zealand. A large proportion of respondents are unsure what they are paying for and whether water is value for money. This can lead to a lack of trust in planning and efficient management.

There is an opportunity for water suppliers to engage more with the community, both in decision-making processes and in knowledge sharing. This is also an opportunity for regional centres and rural and small communities to invest more in customer service to provide consistency across the country.

More than one in three respondents (34%) would like more communication from their water supplier. Younger respondents prefer social media contact, as well as email, whilst older respondents prefer email and phone calls. This feedback can assist water suppliers to communicate more effectively with the wider community and tailor communication methods for each generation. For example, investing in digital tools, such as apps and web interfaces, to engage with the younger generation.

Water suppliers globally are engaging the community early in decision-making processes, to understand perceptions and feed directly into the outcomes decided for their region. Empowerment of consumers will build trust and knowledge amongst the community.

Education campaigns and knowledge sharing about water in New Zealand, including billing processes, what people pay for, governance structures and infrastructure, will build trust in the community. This could also include breaking down consumer bills into clear categories so it is clear what they are paying for, along with benchmarking pricing.

EFFICIENCY IN GOVERNANCE AND PROCESSES, WITH A FORWARD THINKING APPROACH

There is a large degree of uncertainty in the future, particularly in the water industry, with social, technological, economic, environmental and political trends likely to look unrecognisable. Efficient governance and processes are essential to manage changes and prepare for the future.

Respondents are currently unsure if water suppliers are efficiently managed or are planning for the future effectively. Half of the respondents disagree that local and national governments work together to make the right decisions for New Zealand's water resources and majority disagree that local and national governments adequately plan for the future.

Respondents also want to see more responsibility for water pricing across the country and more transparent processes. More than three in five respondents (63%) agree that they would prefer to pay for how much water they use rather than a fixed charge. New Zealanders have responded strongly to the need for a charge for abstracting water, with almost nine in ten (89%) respondents agreeing that there should be a cost when taking water from the environment for bottled water and similar industries.

The water industry can use such feedback to improve the governance of the industry and the processes in which it is being managed. Planning for the future is essential, as well as communicating this to the wider community.

"Water is our most precious resource. We need to wake up to that."

CONSUMER

There may be significant community drive to put a price on water for all users and to incentivise use in a more efficient, sustainable and less wasteful manner. This is an opportunity to implement water metering to provide greater knowledge of the volume of water being used. Such pricing and usage of smart meters could be used to drive behaviour, such as encouraging customers to use water in off-peak periods. This could help take the pressure off infrastructure. As respondents are concerned about water shortages they are likely to respond positively to being able to understand the cost of water and in pricing reflecting the value of the resource.

QUALITY OF WATER AND WATERWAYS ACROSS ALL REGIONS

New Zealanders consider the quality of their drinking water and waterways as high priority: 89% are somewhat to very concerned about drinking water quality in New Zealand and 76% somewhat to very concerned about drinking water quality in their local area. There is a high level of confidence in the water quality from water suppliers in urban or city areas. However this reduces for those in regional and rural areas. Almost half of respondents in rural or regional areas (42%) experience changes in the look, taste or smell of their drinking water.

Respondents are concerned for the health of the waterways, with almost three in every four people (73%) concerned about poor water quality in their waterways. There was a particularly strong response on this topic with only 2% of respondents selecting "unsure".

The most concerning contaminants for respondents are litter and floating plastics, followed by sewage overflows. Sewage overflows due to combined sewer/stormwater systems are common and have been attracting much media attention.

Sixty-nine per cent of respondents believe that councils should be investing more to improve stormwater quality and 43% would pay more to have better quality waterways.

This is a strong message to water suppliers and councils that consumers expect consistently high quality drinking water and want cleaner waterways.

It will be important for water suppliers to continue to maintain a high standard of drinking water quality. There is some work to do to ensure consistency of water quality across the whole country. Water suppliers must invest to ensure water quality in rural and regional areas meets customer expectations.

Additionally, water suppliers and councils must address the effects of sewer overflows into waterways. There are strategies already in place, including new infrastructure, however it is clear that there is plenty more work to be done. Implementation of Water Sensitive Design (WSD), including the construction of wetlands, swales and bioretention basins, is a proven means of capturing and treating stormwater at source to minimise quality and quantity impacts on receiving watercourses. Such infrastructure could separate stormwater from sewer, reducing pressure on the wastewater infrastructure. Increasing the use of gross pollutant traps could be a measure to control litter and floating plastics.

KEY INFRASTRUCTURE UPGRADES

Resilient infrastructure is essential for the successful functioning of the water industry. Consumers want to see investment in flooding prevention, earthquake resilience and sewage/stormwater management. Currently, respondents are not confident in their water supplier's ability to invest in infrastructure to meet future needs.

This is an opportunity for water suppliers to work with local and national governments to improve infrastructure investment planning and involve the wider community in these discussions. Such infrastructure plans can be produced in conjunction with climate change adaptation plans to ensure future infrastructure is resilient to climate change.

Clutha River, Otago © Simon Bradfield

Water use and efficiency

In comparison to the rest of the world, New Zealand has a relative abundance of fresh water. New Zealand is ranked as the 10th highest nation in the world for renewable internal fresh water resource per capita (The World Bank Group, 2017). Despite the abundance of water, there remains a number of growing challenges in the management of our water resources.

Demand for water is rising as a result of increased agricultural use and urbanisation. New Zealand's population is growing at a record rate. There is also a trend for citizens to move to cities from rural areas, with 86% of the population now in urban areas. New Zealand's rural districts are showing a loss in rural population (National Institute of Demographic and Economic Analysis, 2012).

In response to this, the government created the Sustainable Water Programme of Action in 2003, which is coordinated by the Ministry for the Environment and the Ministry for Primary Industries. The aim of the programme is to deal with increasing demand for water by encouraging efficient water management, working with local government and communities and developing standards.

Currently, efficiency of water usage is an ongoing discussion point amongst the community, the water industry and the government. The New Zealand Water Consumer Survey 2017 sought consumer perceptions on water availability, water efficiency and drivers for change.

WATER SOURCES AND AVAILABILITY

Context

Understanding where water is sourced from, is important if it is to be properly valued by consumers. The majority of New Zealand's potable water is obtained from three different sources: dams, rivers and groundwater. The exact proportion of water supply from each source varies daily depending on storage levels, rainfall, treatment plant capacity, maintenance requirements and transmission costs.

Whilst there is significant rainfall and fresh water, as well as a relatively small population, the water is not always where we need it to be. New Zealand is not immune to issues around water availability and the need to manage resources efficiently. These issues are specific to each region, varying significantly across the country. For example, the Kaipara district experiences severe

Huia Dam, Auckland © Nazphotos

shortages of water in the summer periods. Over six years they have experienced drought across five summers. On the other hand, only recently, in Dunedin, Christchurch, Timaru and Otago there has been 'once in 500-year' flooding events.

The impacts of climate change will likely increase the severity of such extreme conditions, impacting the water sector. For example, Auckland's Ardmore Water Treatment Plan has been affected by recent storms in the city which have significantly reduced its treatment capacity and placed significant pressure on the system.

The New Zealand Water Consumer Survey sought consumer perception on water sources. The Survey also sought information on concerns for water shortage from New Zealanders at both local and whole-of-country scale.

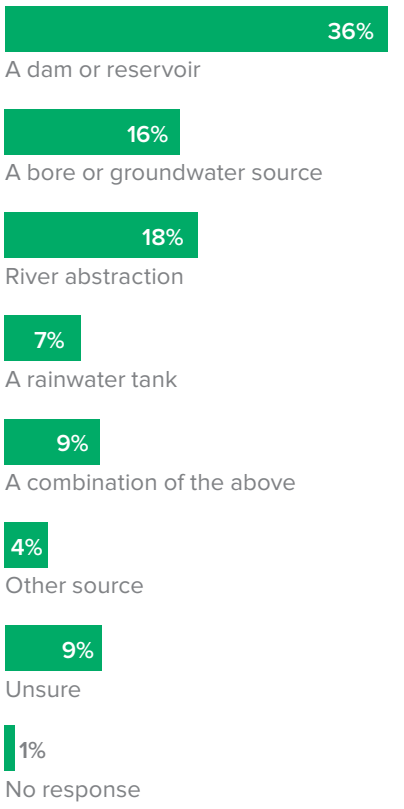
Results summary

When asked about the source of water for their usual residence, 36% of respondents thought they received most of their water from a dam or reservoir, 18% selected river abstraction and 16% from a bore or groundwater source. The majority of New Zealanders do receive their water from surface water (dams or reservoirs), rivers and groundwater. However 9% were unsure where their water is sourced from.

Concern about water shortage across the country is widespread. More than four out of every five respondents (87%) were somewhat to very concerned about water shortage in the whole of New Zealand. Concerns about water shortage at a local area level were also high, with 76% of respondents somewhat to very concerned.

Concern about water shortage is consistently high across participants in city/urban, regional centres and rural locations. Results for respondents in rural areas were slightly higher at 89% (compared to 86% in urban and regional centres) in the concern for New Zealand as a whole category. This is an opportunity for water suppliers to engage with the community to share water resource management initiatives with their customers.

Where does your water come from?



Where water actually comes from:

Groundwater **32%**

Dam or Reservoir **5%**

Surface Water **63%**
(Rivers and Lakes)

RESULTS

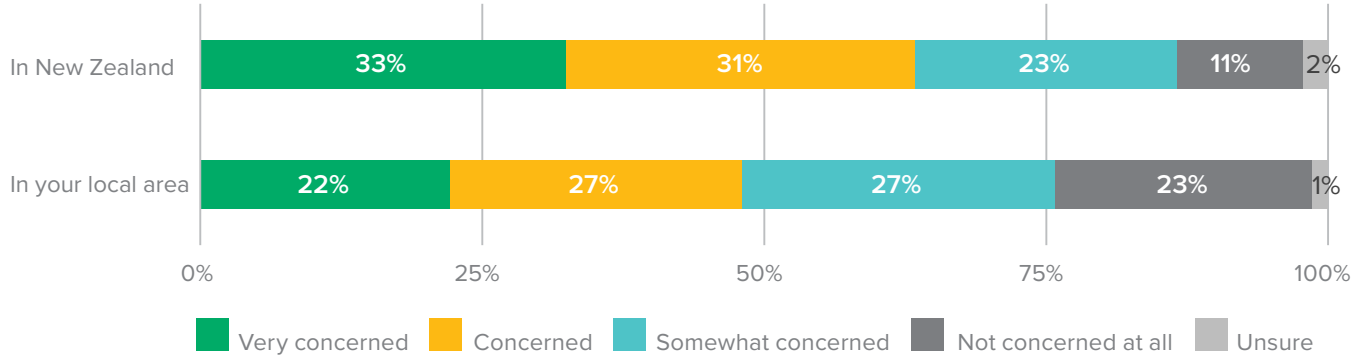
Based on research produced for the Ministry for the Environment (Aqualinc Research, 2011), consumptive water allocation in New Zealand can be attributed to the following three sources:

- Surface water, i.e. rivers and lakes (approximately two thirds)
- Groundwater (approximately a third)
- Reservoirs or dams, largely fed by rivers (5%)

This data is based on consented water allocation, rather than consumption. It provides an understanding of where our water is sourced from, but is not a precise measure and does not take into account direct sources, for example rainwater collection/rainwater tanks.

Sources of water vary significantly from region to region, with most of Auckland's water sourced from reservoirs, whereas Canterbury's water source is a split between groundwater and surface water.

How concerned are you about water shortage?



RESULTS There is significant concern about water shortage in New Zealand, both on a whole-of-country scale and a local scale. The availability of water is important to New Zealanders and the vast majority are concerned about the sustainability of supply, regardless of whether they live in a rural or urban environment.

How concerned are you about water shortage – urban vs rural?

Somewhat to very concerned responses

Given the concern for water shortages, it is interesting to explore how respondents feel about personal water use. Perceptions on saving water are considered in the next section.

SAVING WATER

Context

Public awareness of the importance of saving water has increased in the past decade. This is due to initiatives from government, local councils and a general rising awareness of environmental conservation.

In 2003 the government created the Sustainable Water Programme of Action, which is coordinated by the Ministry for the Environment and the Ministry for Primary Industries. This was driven by the need to manage increasing demands for potable water in New Zealand.

Increasing population, climate change and challenges in water resource management will further escalate the need for water efficiency.

A lack of knowledge about how much water is used, is a key issue. Without water meters, it is hard to drive effective behavioural change.

Water efficiency and being more aware of water use reduces wastage. There are many ways to be more water efficient in the home and at work. These initiatives vary from everyday habits, for example shorter showers or switching off the tap when brushing teeth, to installing efficient fixtures and using recycled water.

The survey sought information on what motivates people to save water; what respondents currently do to save water; and how well consumers believe water suppliers are assisting with water efficiency.

Results summary

Concern about saving water is a high priority for the majority of respondents and there are several key motivators. The main driver for respondents to save water is "doing their bit for the environment", with 67% of respondents selecting this. Saving money is also a driver for 35% of respondents to reduce water use.

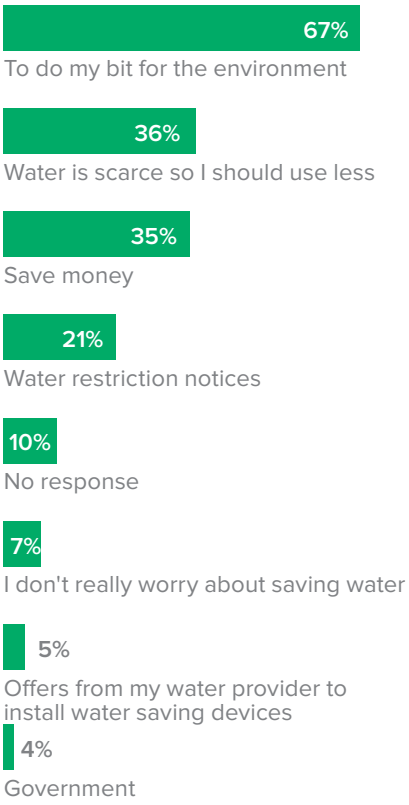
Auckland is the only region in the country where saving money is a greater motivator than environmental concerns, for respondents over 30 years old. This may be due to the fact that many Auckland residents are charged for both water and wastewater on a volumetric basis and therefore have closer scrutiny of costs.

The vast majority of respondents are conscious about saving water and already do something to reduce water use. Respondents take everyday initiatives to save water at home, including waiting for a full load before using the dishwasher or washing machine (74%), and turning the tap off when brushing teeth (73%).

Only 32% of respondents believe that their water supplier is good at helping consumers save water in the home.

There is scope for water suppliers to undertake further initiatives to assist and motivate the community to become more water efficient. This is reflected in the responses of "government rebate" and "offers from my water provider to install water saving devices" motivating respondents to save water. Installing water meters would allow water suppliers to know where and when water is used and to help to better manage demand. It will also encourage water consumers to take responsibility for their usage and save water more effectively.

What motivates you to save water? Please tick all that apply.



RESULTS

The majority of respondents are motivated to save water, with only 4% not concerned with saving water. The major driver for respondents is to do their bit for the environment with 67% of respondents selecting this. This is consistent across all age groups. 36% of respondents also believe water is scarce, so we should be using less. Another key driver is saving money for consumers, with 35% reducing water use to save money.

More than one in five respondents (21%) save water on a "reactive" basis, saving water when there are water restriction notices.

Five per cent of respondents save water if there are offers from their water provider to install water efficient devices and 4% when there is a government rebate.

From a regional perspective, Auckland is the only region in the country where saving money is the highest motivator. In Auckland, where water and wastewater is generally metered and charged for on a volumetric basis, the leading driver is to save money at 68%, followed by environmental concerns at 66%.

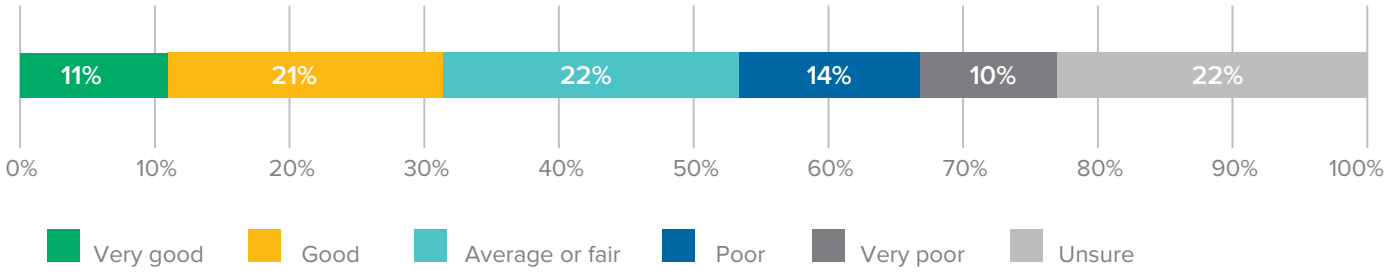
However, this motivator is for age groups over 30, with those aged 18-30 concerned more for the environment.

Interestingly, this is not reflected in other areas with volumetric water charging, with areas such as Bay of Plenty, Nelson and Northland noting environmental concern as their highest motivator. These areas however do not have volumetric wastewater charging in place like Auckland. Motivators to save money are the lowest in Canterbury, Hawke's Bay, Marlborough and the West Coast. In these regions, respondents do not generally pay for water on a volumetric basis or pay at all.

The vast majority of respondents are conscious about saving water and currently do something to reduce water use. Only 2% of respondents don't take any action to reduce water use at home. Four out of five (80%) respondents take everyday initiatives to save water at home, including waiting for a full load before using the dishwasher or washing machine (74%) and turning the tap off when brushing teeth (73%). 54% of respondents take shorter showers and 67% of respondents will fix leaking taps.

A significant proportion of respondents go the "extra step" in saving water, with 26% installing water efficient taps and shower heads, 19% monitoring water use regularly and 4% using a greywater capture system.

Thinking about your water supplier, how would you rate their performance on **"Helping your house to become more water efficient"**



RESULTS

There is a wide variance in consumer beliefs regarding water supplier's performance in helping with water efficiency. Thirty-two per cent of respondents believe their water supplier does a "good" or "very good" job at helping them be more water efficient at home. More than two in five people (46%), believe their water supplier could do better, rating them as either "average or fair", "poor" or "very poor".

Water suppliers have provided a varying degree of resources for the community including rebates and water efficiency publications. Water providers could consider doing more to educate people about water availability, sustainability and how to be water efficient.

How do people save water at home?

73%
turn off tap while brushing teeth

74%
wait for a full load before turning on dishwasher or washing machine

4%
cover the pool to prevent evaporation

4%
use the grey water system

37%
use mulch in the garden to reduce moisture loss

26%
install water-efficient taps and shower heads

67%
fix leaking taps

54%
take shorter showers

62%
have dual-flush toilet

19%
monitor water usage regularly

Price of water

In New Zealand, free access to clean water is considered a fundamental right. The current government's view (September 2017) is that no one owns water and there is no fixed cost or price allocated to the physical resource of water itself.

Under the Resource Management Act (1991), local councils, who have authority over water allocation, can charge only to recover the costs involved in treating, transferring, maintaining and operating water infrastructure.

Free access to clean water is considered a fundamental right. This is potentially a contributing factor for the high water usage per capita and economic incentives could lead to more efficient water usage practices.

This issue attracts strong opinions both in New Zealand and globally. Parliamentary Commissioner for the Environment, Jan Wright, says pricing water makes economic sense where it is scarce and used for production. Having a price on water could result in better allocation and management of water resources. Currently water is allocated on a "first come, first served" basis, resulting in inefficiency and a third of allocated holdings being unused.

The New Zealand Water Consumer Survey investigated consumer perceptions regarding billing of water; attitudes to the price of water; and whether or not consumers believe there should be a cost when taking water from the environment.

VALUE

Context

Pricing of an essential service presents challenges to the industry and government. In New Zealand, there is no fixed cost or price allocated to the physical resource of water itself.

The survey sought to investigate consumers' perception on the value of water in New Zealand and if respondents are aware of how much they pay for their water. Furthermore, respondent's consideration of the impact of cost on their usage and perception of value for money was surveyed.

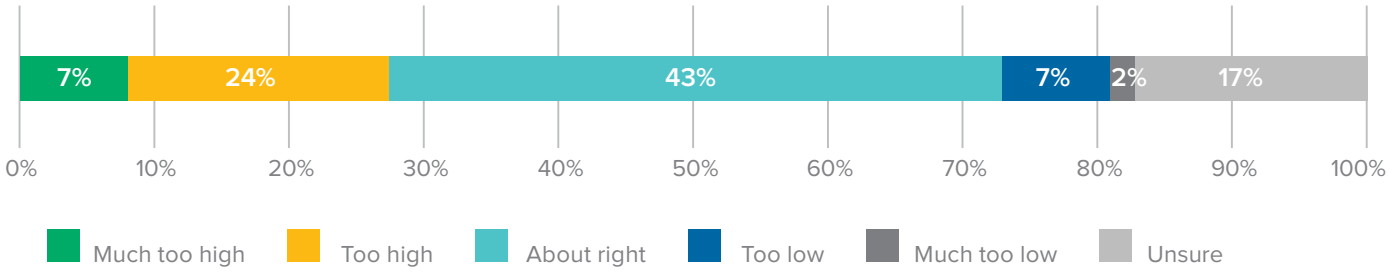
Results summary

New Zealand consumers have varying opinions on water pricing. Fourty-three per cent think the pricing of water is “about right”, whilst 31% believe it is too high and 9% believe it is too low. The response changes depending on region, for example in Auckland where water and wastewater is charged on a volumetric basis, a larger percentage of people believe the price of water is too high (45%) and fewer people are “unsure”. In other regions, where water is not charged volumetrically, more of the population is “unsure”.

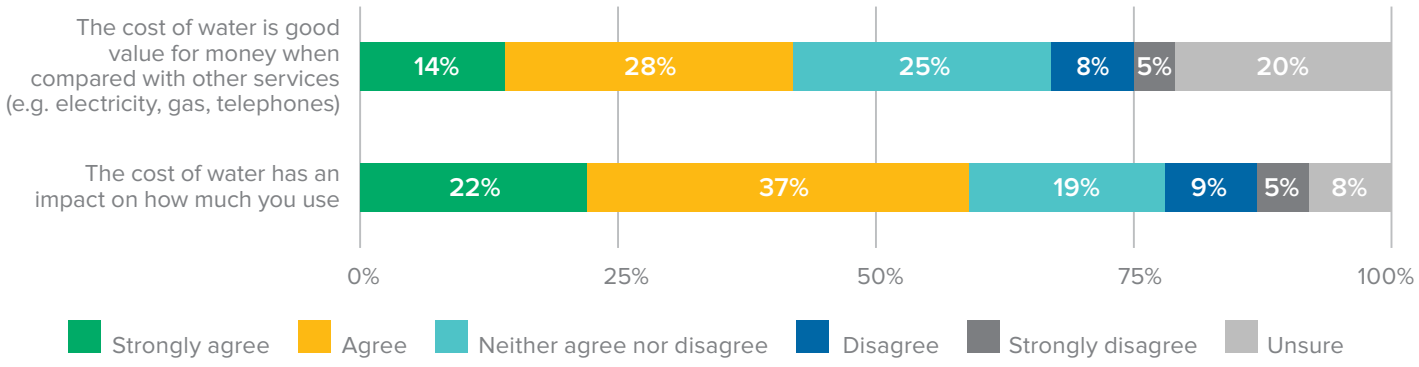
Respondents had varying responses on whether the cost of water impacts how much they use. Fifty-nine per cent of respondents agree that the cost of water has an impact on how much they use, whereas 14% disagree. This is greater in areas where water is charged on a volumetric basis.

Hence, increasing the cost of water will likely decrease water usage and result in more efficient uses of water, although the degree of elasticity depends on several socio-economic factors. As explored in the previous section, respondents are concerned about water shortages and therefore there are people likely to see value in water pricing reflecting the scarcity of the resource.

How would you describe the price of water?



Please indicate whether you agree or disagree which each of the following statements on water pricing.



RESULTS

Respondents were divided as to whether current prices are too high or low and whether the price of water is value for money. Fourty-three per cent think the pricing of water is “about right”, whilst 31% believe it is too high and 9% believe it is too low. Similarly, 42% of respondents believe the cost of water is good value for money when compared with other services and 12% do not think water is value for money.

There is a significant proportion of respondents who are “unsure” about the price of water. Seventeen per cent are unsure about it and one in five respondents (20%) are unsure about the value for money. This is an opportunity for engagement with consumers to further inform them of what they are paying for, by for example breaking down bills and benchmarking pricing.

These responses all change depending on region, for example in Auckland where water and wastewater is charged on a volumetric basis, a larger percent of respondents believe the water price is too high (45%) and less respondents are “unsure”. In other regions, where water is not charged volumetrically, more of the population is “unsure”.

The cost of water appears to have a significant impact on how much water is used. Almost three in five (59%) respondents believe that the cost of water affects the amount they use.

Based on these results, changing the cost of water will likely affect water usage. Increasing the cost of water may reduce usage of water and also increase efficiency of allocation.

TRANSPARENCY

Context

In New Zealand, water pricing for consumers varies from region to region. Most water suppliers charge for the water they supply, either as part of rates or on a volumetric basis via a water bill. In some areas, consumers pay a fixed charge for their water. Some consumers don’t pay anything for their water.

This variance leads to varying perceptions on the value of water.

There is a growing desire for transparency in water pricing and flexibility of choice. Additionally, there is national interest in putting a price on water for all users with the belief that this will create greater incentive to use the available resources in a more efficient, sustainable and less wasteful manner.

The Water Consumer Survey sought to understand how consumers currently pay and how they would prefer to pay, as well as their satisfaction with water providers.

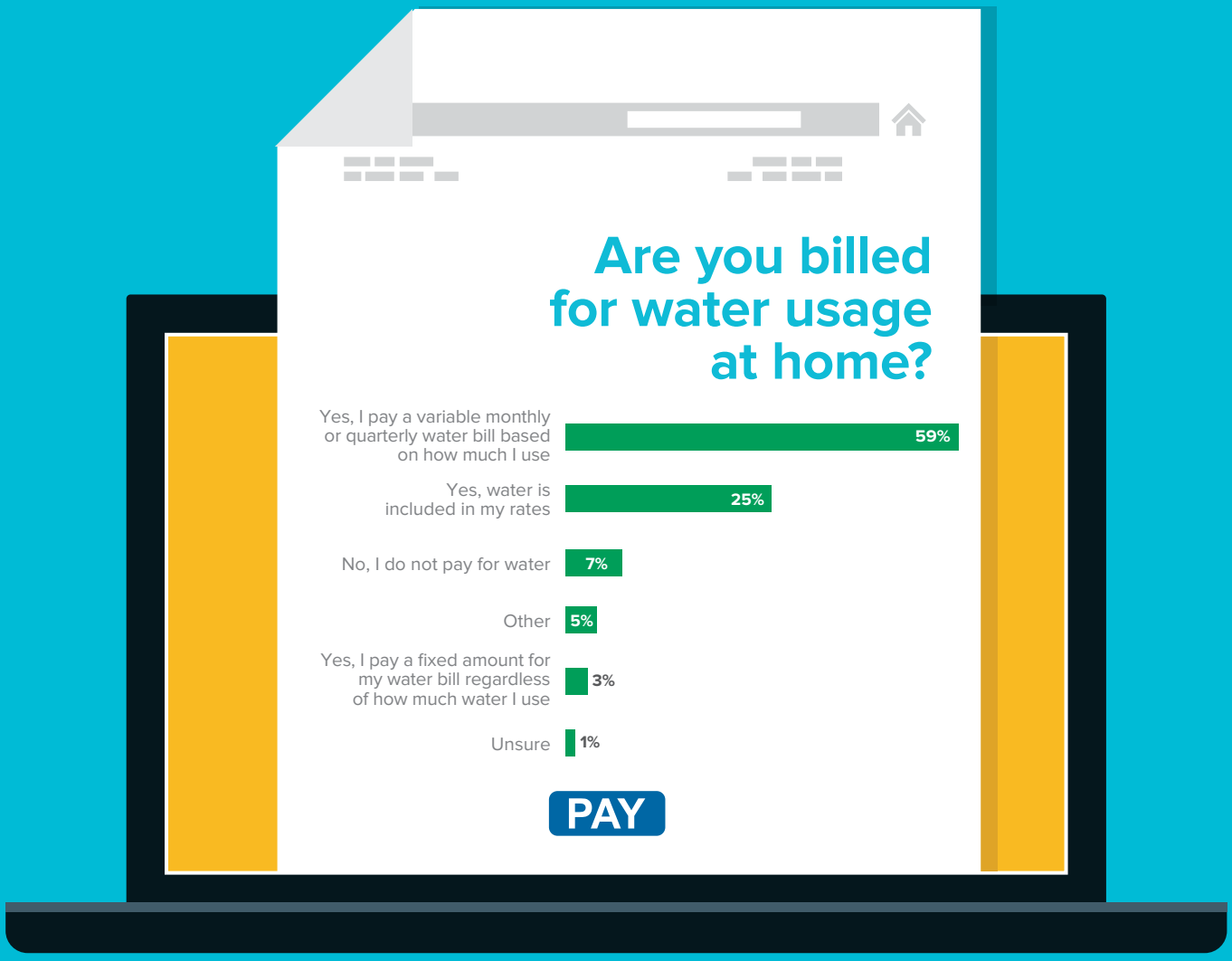
Results summary

A large proportion of New Zealanders believe that pricing of water should be based on how much water is used rather than a fixed charge. More than three in five respondents (63%) agree that they would prefer to pay for how much water they use rather than a fixed charge. Regions where there are no volumetric charges have a stronger response, with more of the respondents strongly agreeing.

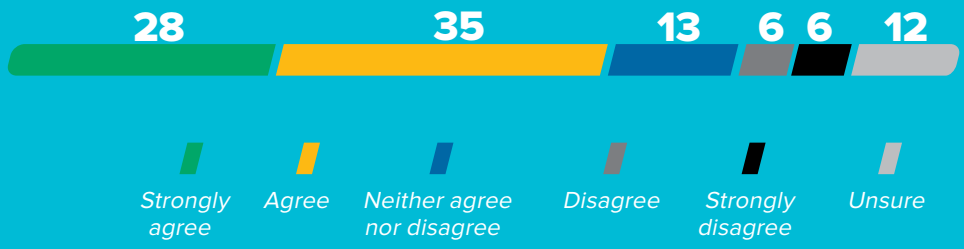
This is consistent with the discussion regarding water billing and a general desire for water to be priced on a value basis. However from the “Value” section, it appears approximately 74% of people also believe that the price is “about right” or “too high”. This raises the question of whether respondents are aware of what they are paying and what is currently being charged.

This can be seen as a driver for water metering and greater knowledge of the volume of water being used. Additionally, water suppliers could consider undertaking educational campaigns to address the large proportion of respondents who are unsure about the specifics of their water bills, or additional information could be provided in the bill itself, as well as benchmarking pricing against other services.

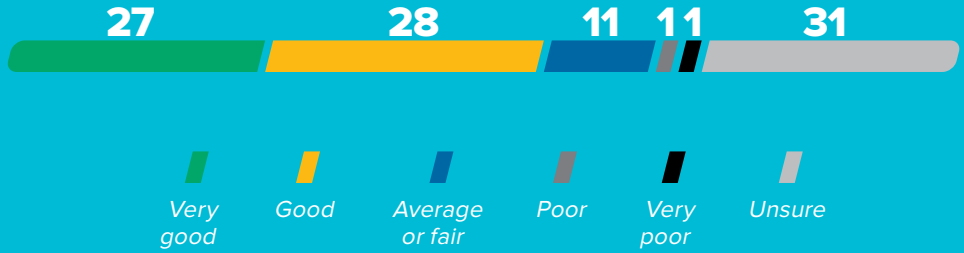
In addition to this, more than half the respondents (55%) are happy with the current billing and payment processes.



You prefer to pay for how much water you use, rather than a fixed monthly or quarterly charge (%)



Thinking about your water supplier, how would you rate their performance on 'Billing and payment processes' (%)



"I am not in support of water being exported from New Zealand in bottled form for pecuniary gain for private business ventures"

CONSUMER

RESULTS

The method of paying for water varies across New Zealand. Fifty-nine per cent of respondents believed they pay a variable monthly or quarterly bill based on how much they use. Only 3% of respondents pay a fixed amount for their water bill regardless of how much water they use, however 25% of respondents believe water is included in their rates.

Seven percent (7%) of respondents do not pay for water. Thirteen per cent of these respondents receive their water from rainwater tanks, 12% receive their water from river abstraction and 32% from bore or ground water source. Fifteen percent (15%) of these respondents are unsure where their water comes from.

Consumer perceptions appear to be aligning with a desire for transparent pricing. More than three in five respondents (63%) agree that they would prefer to pay for how much water they use rather than a fixed charge. One in four respondents (25%) neither agree or disagree or are unsure and 12% of respondents disagree and would prefer to pay a fixed charge.

Pay-for-use pricing could support demand management and water resource allocations. In cities where there are large infrastructure upgrades it would also help in terms of pricing models that would drive behaviour. For example, smart water meters with peak and off-peak pricing models would help incentivise customers to use water in low demand periods, thereby delaying or reducing needs for costly infrastructure upgrades.

More than half the respondents (55%) are happy with the current billing and payment process. Eleven per cent believe the water suppliers are average or fair. Almost one in three respondents (31%) are unsure.

CHARGING FOR TAKING WATER

Context

In New Zealand, there is no charge for the physical resource of water. Under the Resource Management Act (1991), local councils, who have authority over water allocation, can charge only to recover the costs involved in treating, transferring, maintaining and operating water infrastructure. The current government's view, (September 2017) is that no one owns water and there is no fixed cost or price allocated to the physical resource of water itself.

In the cases where consumers pay a fixed charge for potable water or have their own water abstraction method, they can use as much water as they like, at minimal cost.

This issue has become highly debated in New Zealand recently, with the spotlight focussing on commercial users, particularly water bottlers, paying minimal charges for water abstraction.

The survey sought respondents' perceptions on these controversial issues and if there should be a charge for taking water, particularly where profit is made from commercial activities.

Results summary

New Zealanders responded strongly to the need for a charge for abstracting water, with almost nine in ten (89%) respondents agreeing that there should be a cost when taking water from the environment for bottled water and similar industries. Similarly, 77% of respondents agreed that there should be a cost when taking water from the environment for agriculture and horticulture. This is generally consistent across urban, regional and rural areas.

Almost three in five people (59%) believe that there should be a cost when taking water from the environment for all users. This is less than the response for commercial activities, however still relatively high.

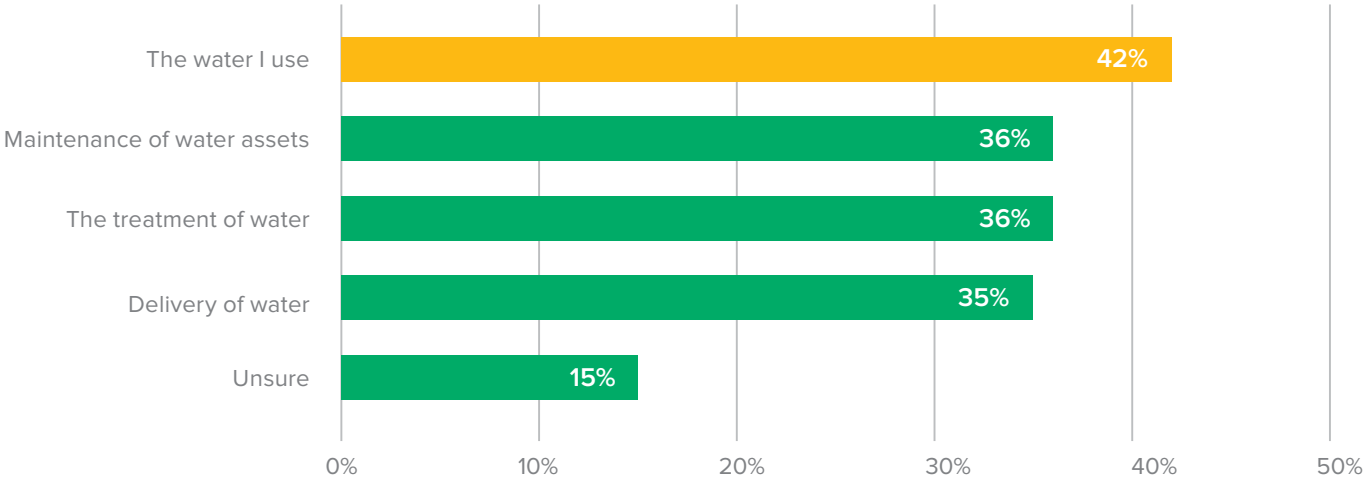
Fourty-two per cent believe they are paying for the water they use and 15% of respondents are unsure of what they are paying for in their water bill.

Respondents are therefore generally in favour of paying for what they use, however there is a proportion of consumers who are unsure what they are paying for.

Water suppliers could consider undertaking educational campaigns to address the large proportion of respondents who are unsure about the specifics of their water bills, or additional information could be provided in the bill itself.

Furthermore, respondents believe that there should be a cost to take water from the environment, particularly if it is for a commercial activity.

What are you paying for in your water bill? Please tick all that apply.



Should there be a cost when taking water from the environment?

When used for **bottled water** and similar industries (%)

71 18 5 1 1 4

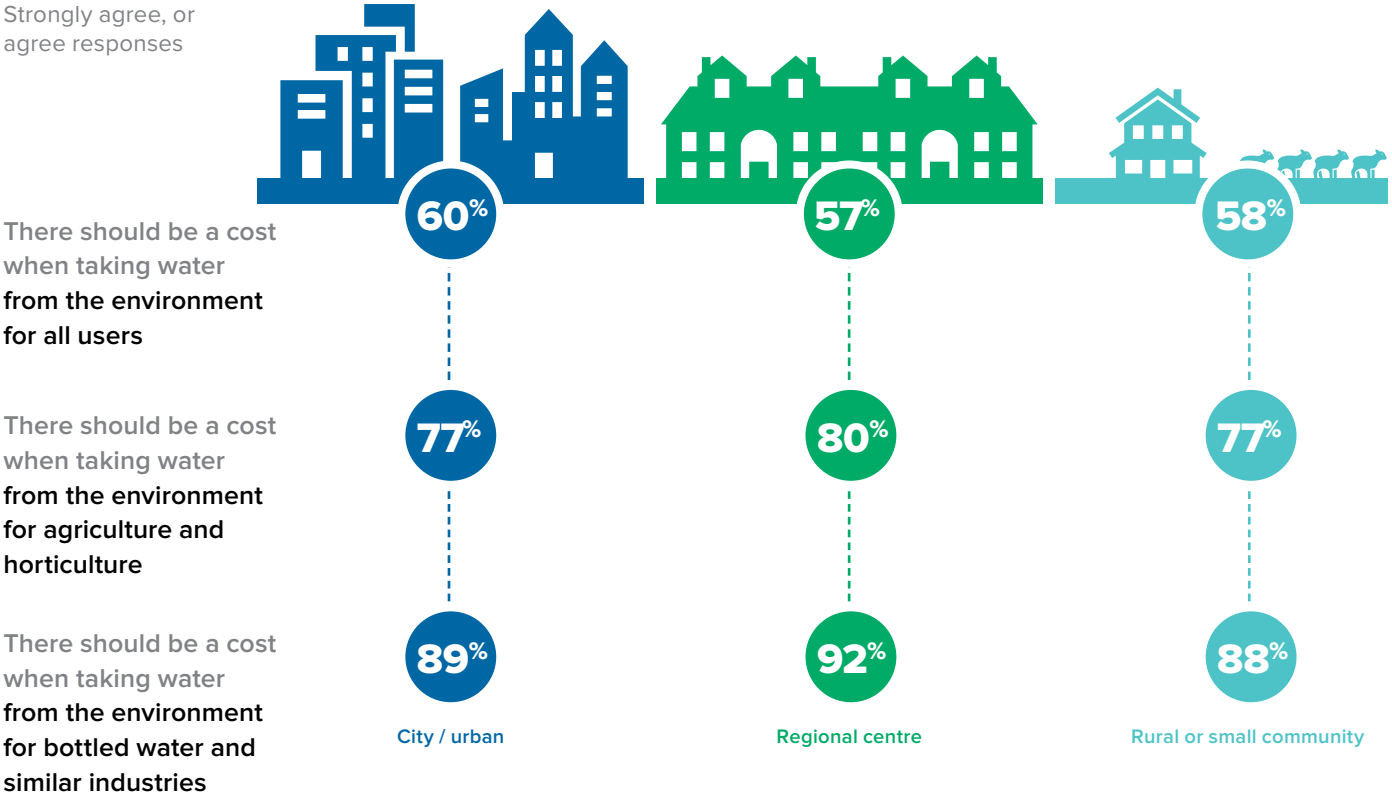
When used for **agriculture and horticulture** (%)

45 32 11 4 3 5

For all users (%)

28 31 16 10 7 8

Strongly agree *Agree* *Neither agree nor disagree* *Disagree* *Strongly disagree* *Unsure*



RESULTS

New Zealanders have responded strongly to the need for a charge for abstracting water, with almost nine in ten (89%) respondents agreeing that there should be a cost when taking water from the environment for bottled water and similar industries. Seventy-seven per cent of respondents agreed that there should be a cost when taking water from the environment for agriculture and horticulture. Almost three in five people (59%) believe that there should be a cost when taking water from the environment for all users. This is less than the response for commercial activities, however still relatively high.

Interestingly, these responses are consistent across city, regional and rural regions. There was a very strong response country-wide for this issue. Respondents, widespread, believe that there should be a cost to take water from the environment particularly if it is for a commercial activity.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Customer experience

The customer is seen as a significant influence in shaping the water industry. Customers are the heart of the industry and drive the future. As technology changes and communication increasingly becomes digital, so do customer demands.

Customer service has always been important to water suppliers. However there is an increasing focus on being customer-centric and responding to customer needs.

The customer experience and the service expectation of customers continues to grow as organisations, including those outside of the water industry, invest in innovation to improve the customer experience. As this investment grows, it further raises the expectations of the customers.

These expectations are set by the interactions they have with all the various organisations they deal with on a daily basis. Price alone is not the only significant metric, with an ever growing number of organisations seeking to differentiate on service delivery and reliability.

Furthermore, in a technologically changing environment, customer expectations of communication methods, availability of data and timeliness is rapidly increasing. Industry needs to now support a wide array of customer contact points, from the traditional (telephone and email) to digital channels including web, mobile (including apps) and social media.

Understanding the customer will be key to providing the response that is expected.

WATER QUALITY

Context

The quality of water is central to the role of water suppliers. Water suppliers are responsible for abstracting, treating and transferring clean drinking water. This water is treated to the Drinking Water Standards for New Zealand 2005 (revised 2008).

Water quality is becoming an increasing concern. Recently, media has brought to light cases of contaminated water being consumed, especially in regional and rural areas.

There has been considerable media coverage of a recent contamination event in the town of Havelock North, where it is

believed that heavy rain washed livestock faeces into a surface pond, which then contaminated a nearby water bore. This resulted in over 5,000 cases of gastroenteritis and a government inquiry.

Impacts of climate change, including increased extreme events, will likely further impact water quality. Lower flows in summer and higher temperatures could result in algal growth. Extreme flooding events could result in sewer overflows and contamination of water sources.

The survey sought to understand consumer perceptions of the quality of potable water supplied.

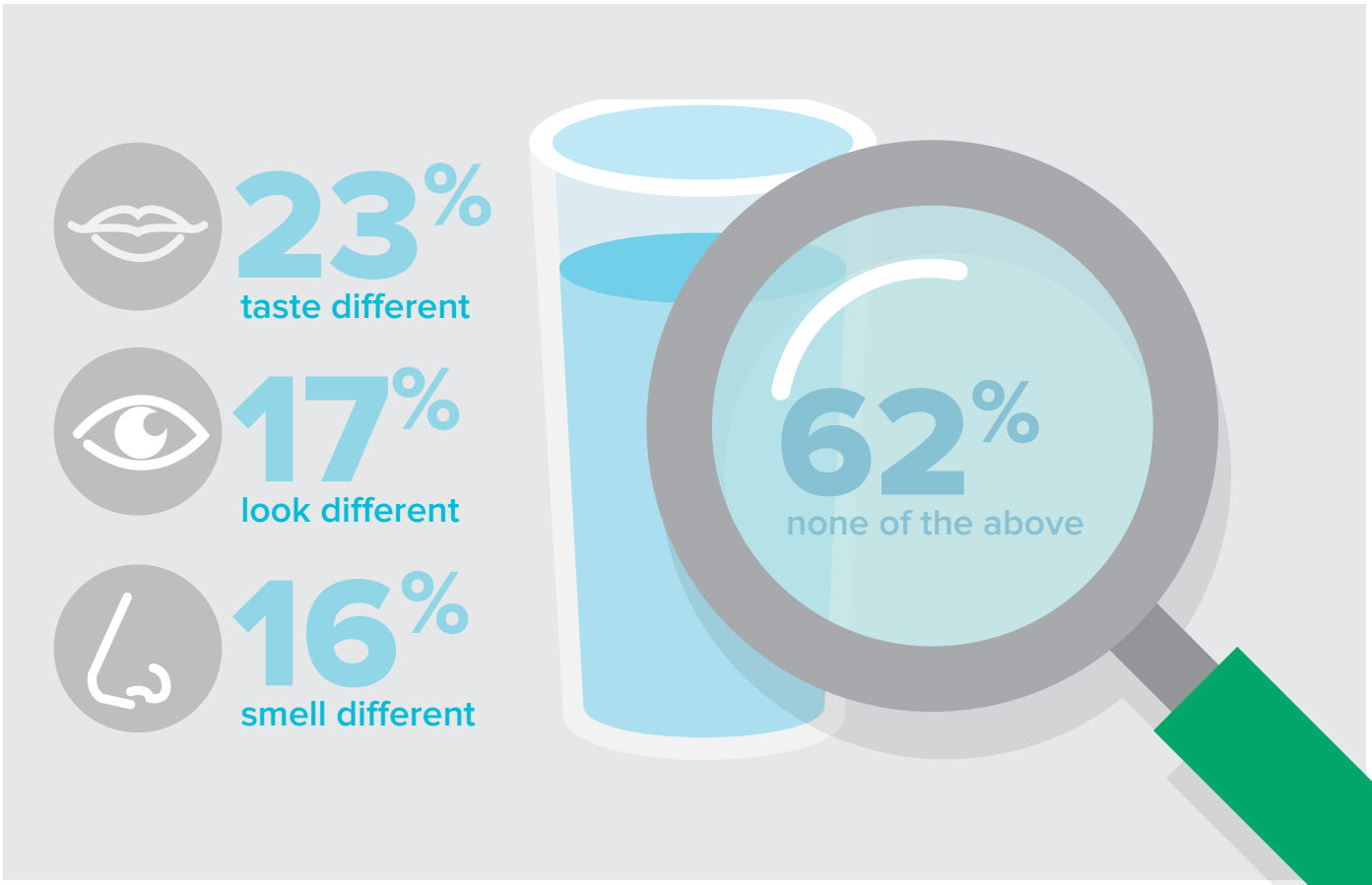
Results summary

New Zealanders have a high confidence in the quality of water supplied. More than four in five respondents (83%) are confident that their water suppliers provide high quality drinking water.

The level of confidence varies depending on the participant's environment. Eighty-seven per cent of respondents in urban areas selected "good" or "very good". This reduces to 64% for those in rural areas. This is potentially due to the media bringing attention to cases of contaminated sources of water in rural areas and the quality of water. Almost half of respondents in rural or regional areas (42%) experience changes in the look, taste or smell of their drinking water. Respondents in urban or city areas generally experience a higher quality of water than those in rural or regional areas.

Respondents see drinking water quality as a high priority with 89% somewhat to very concerned about drinking water quality in New Zealand and 76% somewhat to very concerned about drinking water quality in their local area. This is highest in rural and regional areas.

Does the water supplied to your home ever... (Please tick all that apply.)



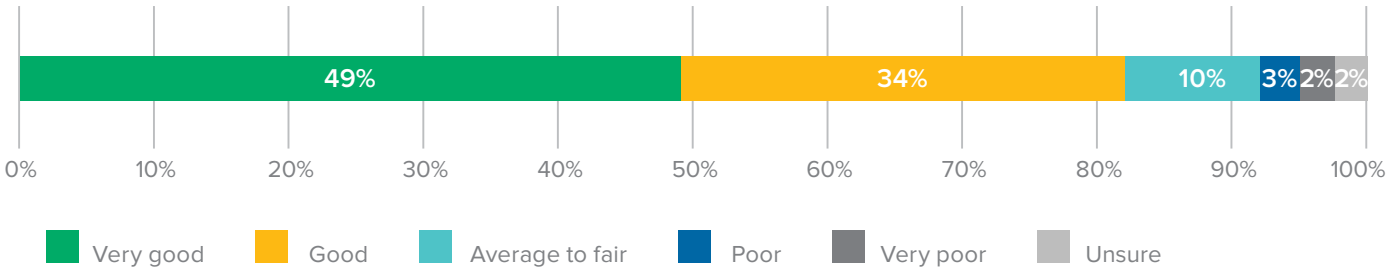
RESULTS

More than three in five respondents (62%) notice no changes to the water quality supplied to their home. However, approximately a third (34%) of respondents have noticed the water supply to their home tasted different, looked different or discoloured or smelled different.

This varies depending on the region, with respondents living in regional centres and rural or small communities experiencing greater changes in water quality: 42% of people in these regions have experienced changes in water quality.

Due to the concern from respondents regarding the drinking water quality, it is important that water suppliers to continue to maintain a high standard of drinking water quality, with a particular focus on regional and rural areas.

Thinking about your water supplier, how would you rate their performance on **"Providing high quality drinking water?"**



RESULTS

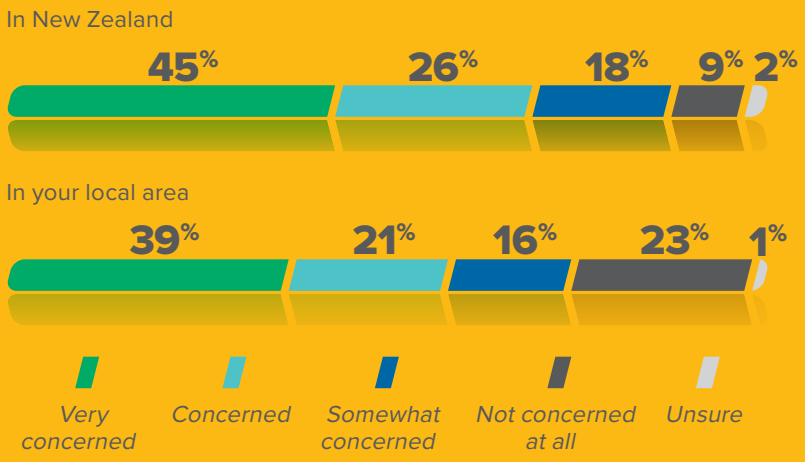
More than four in five respondents (83%) are confident that their water suppliers provide high quality drinking water. Ten per cent of respondents believe the water suppliers have an "average or fair" performance in providing high quality drinking water and 5% believe they have "poor performance".

The level of confidence varies depending on the participant's environment. Eight seven percent (87%) of respondents in urban areas selected "good" or "very good". This reduces to 78% in regional centres and 64% for those in rural areas.

The majority of consumers are confident in water suppliers' performance.

Thinking about your water supplier, how would you rate their performance on **"Providing high quality drinking water – urban vs rural?"**

How concerned are you about drinking water quality?



RESULTS

Drinking water quality is a priority for New Zealanders, with 89% somewhat to very concerned about drinking water quality in New Zealand and 76% somewhat to very concerned about drinking water quality in their local area. Those in regional and rural areas are most concerned about the drinking water quality.

The majority of respondents see water quality in general as central to a positive customer experience.

"In general the water quality in New Zealand is good but government help is required to enable smaller communities to bring themselves up to standard."

CONSUMER

SERVICE DELIVERY

Context

Customer service is a priority for most organisations, including the water industry. Expectations regarding level of service continue to grow as organisations invest in innovation to improve the customer experience.

Price alone is not the only significant metric, with an ever growing number of organisations seeking to differentiate on service delivery and reliability. Understanding the customer will be key to providing the response that is expected.

Many organisations are currently striving to become more customer-centric.

Results summary

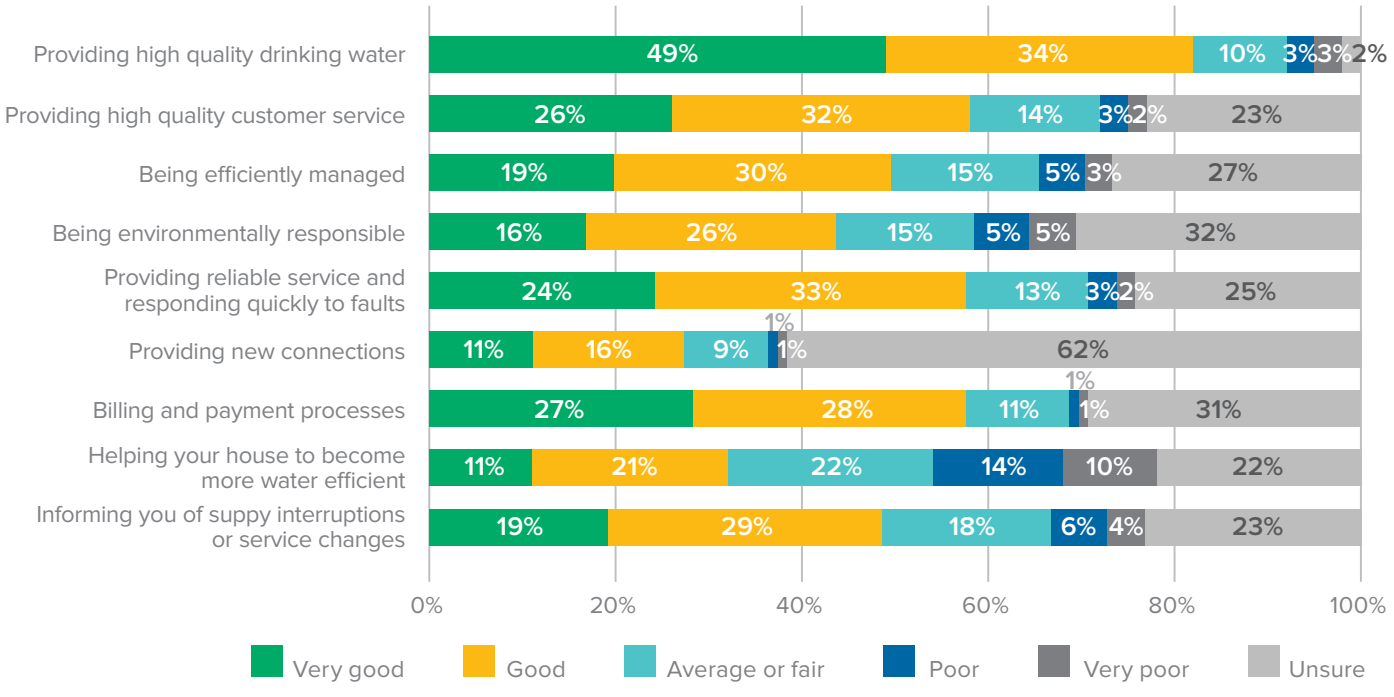
In general, respondents believe water suppliers are either good or very good at what can be included as the "core" requirements of a water supplier – scoring highly in consumer confidence, including the quality of water (83%), billing and payment processes (55%) and reliability of service (57%).

Almost three in five respondents (58%) also believe that water suppliers provide high quality customer service. This is higher in urban or city centres than rural or small communities.

Areas that are not "traditional" requirements of the water supplier are fast becoming imperative to the industry, and this is where there is most scope for water suppliers to improve. Only approximately one in three respondents (32%) believe water suppliers are helping them become more water efficient, 27% of respondents are confident in water suppliers providing new connections and 42% of respondents believe water suppliers are environmentally responsible.

There is an overall confidence in the performance of water suppliers. However there is scope to improve in areas that are important to consumers and a requirement to involve consumers in this process. The changing priorities of consumers are evident, especially towards an environmental focus. Consumers will hold water suppliers accountable for their responsibilities, particularly towards the environment. This is an opportunity for water suppliers to take initiative and work towards consumer expectations.

Thinking about your water supplier, how would you rate their performance on the following areas?



RESULTS

Respondents believe their water suppliers provide high quality drinking water (83%) and provide a high quality customer service (58%). This reduces to 53% in regional centres and 49% in rural and small communities. This is also significantly higher (76%) in our largest urban area, Auckland.

Respondents are reasonably confident in reliability of service (57%) and billing and payment processes (55%). This confidence in reliability of service reduces in rural and small communities to 48%.

There is much scope to improve in areas that are increasingly becoming priorities for consumers. Only one in three respondents (32%) believe water suppliers are helping them become more water efficient, approximately one in four (27%) are confident in water suppliers providing new connections and approximately two in five respondents (42%) believe water suppliers are environmentally responsible. This is generally consistent across the country.

There is an opportunity for water suppliers to take responsibility for their environmental impacts and meet consumer expectations.

COMMUNICATION

Context

As organisations push to become more customer-centric, it is important to understand what consumers think about current communication practices and how they would like to be communicated with.

In a fast-paced, technologically evolving environment, customers' priorities and expectations are changing. Communication can either increase customer satisfaction, or frustrate customers, depending on how it is undertaken. This applies to frequency of communication as well as method.

The survey sought to understand how customers view communication by water suppliers and understand communication preferences.

Results summary

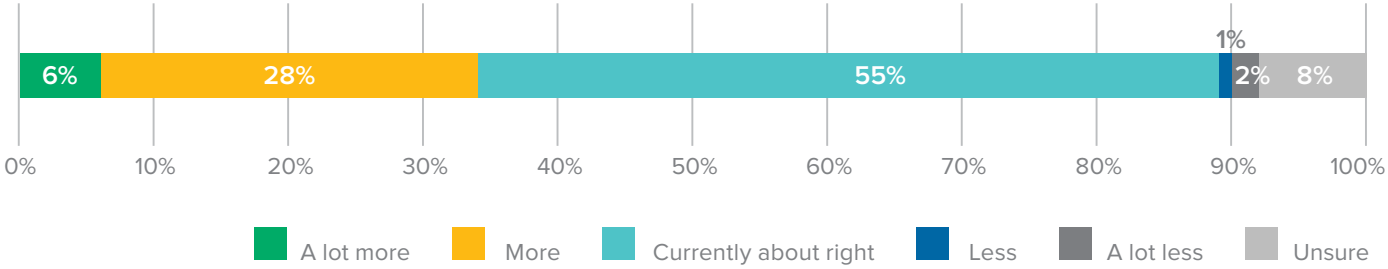
More than half of respondents (55%) believe the communication from water suppliers is currently "about right". Approximately one in three respondents (34%) would prefer more communication from water utilities.

There was a strong response in method of communication with 66% of respondents selecting their preferred method of communication as email. This is consistent across all age groups, from 18 to 70+. Mail and social media are other forms of communication selected by respondents, with phone calls and text messages the least popular overall. Approximately one in four respondents (23%) would like to be communicated via mail and one in five respondents (20%) would like to communicate via social media.

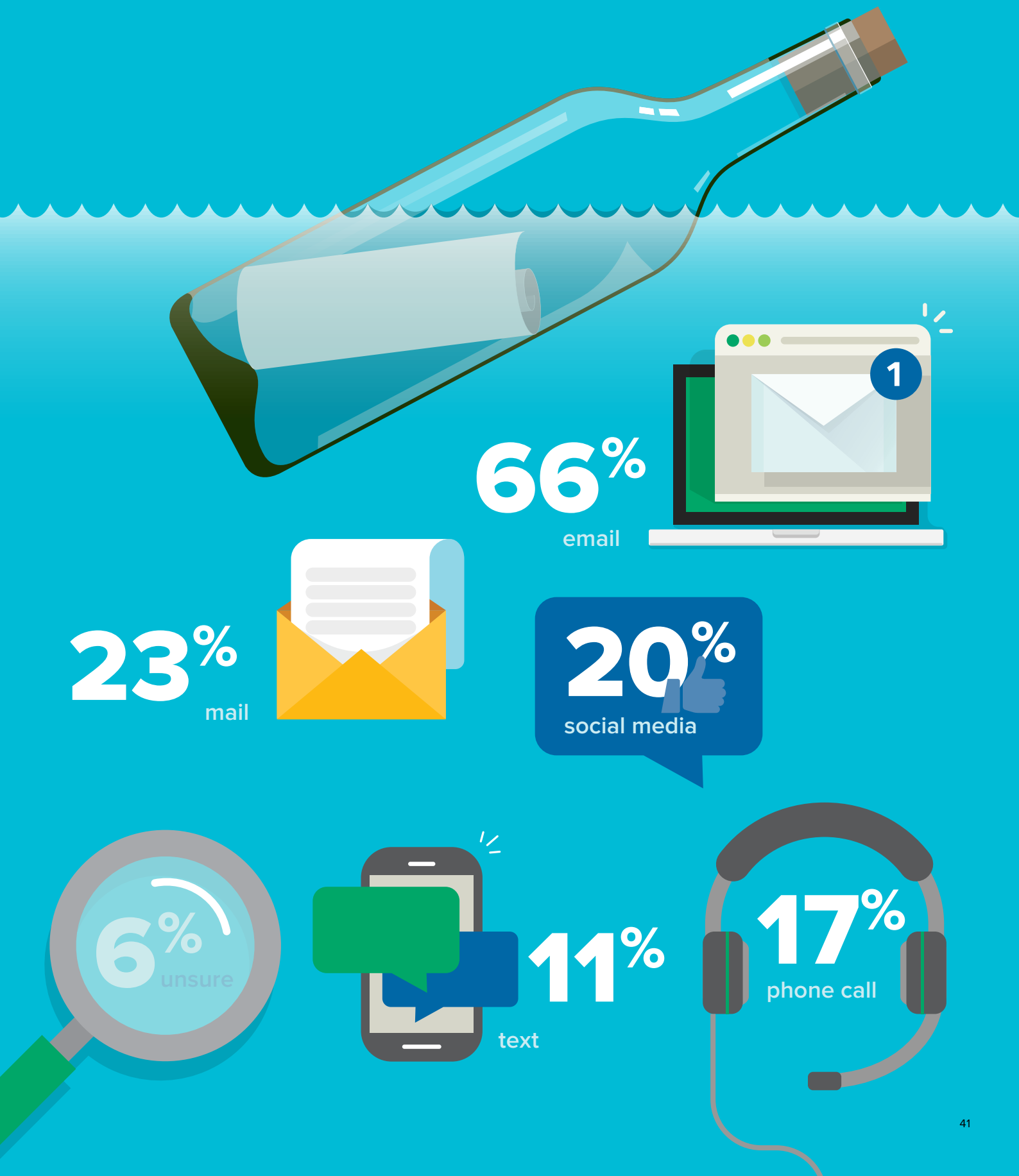
Those under 50 years of age also prefer social media and mail, whilst those above 50 years of age prefer mail and phone calls.

This feedback is valuable to water providers in terms of reviewing and improving their approach to customer interaction. This is an opportunity for water suppliers to tailor their communication interfaces for different generations. For example to engage more effectively with the younger generation water suppliers can invest in digital tools, such as apps, web interfaces and social media.

How much communication do you want to receive from your water supplier?



How would you like to communicate with your water supplier?



Future of Water

The future is uncertain for every industry, including the water industry. In a changing world, with innovative technology, increasing urbanisation, mass migration and climate change, water suppliers must be resilient to shock and adaptive to change.

In a time of rapid change, the future is likely to be completely different from the world today. Social, technological, economic, environmental and political trends are likely to look unrecognisable.

The population of New Zealand is growing fast with rapid urbanisation shifting the population from rural to urban centres. The water industry needs to provide resources for the growing population. The aging population trend across New Zealand will see the median age rise by 2050 from 36 years to 43 years and the percentage of the population over 60 rise significantly (Stats NZ, 2011). Such changes will change the focus of the services industry and impact water demand.

There is also a trend towards increasing responsibility for the environment and health. As observed already in this survey, respondents are concerned with the environmental impacts and will hold water suppliers accountable for their environmental concern and water quality.

The water industry is likely to be affected by a technologically changing world. Smart meters, electronic leak detection and smart network analysis will enable networks to automatically respond to change. Big data will enable water suppliers to better understand the complex analytics behind various issues, including water supply and demand.

Climate change will be a major factor for New Zealand and a large proportion of impacts will be felt through water. The Ministry for the Environment has provided projections on how each region of New Zealand, as well as the country as a whole, could be affected by climate change. There will be more extreme events and variability – flooding and storms will become more intense, drought will affect the eastern regions of New Zealand, rising sea levels and river flows will impact water infrastructure and water quality. Longer summers and higher temperatures, reducing soil moisture and groundwater supply, will impact water supply. It is important for water suppliers to adapt to such changes.

Tomtit in the rain © James Bloor Griffiths

Furthermore, the impact of water suppliers on the climate will need to be reduced. The water-energy nexus – the relationship between energy used for water resources – results in water treatment producing a significant amount of greenhouse emissions. Climate change mitigation will be essential for water suppliers.

Industry, community and government all have a significant role to play in shaping New Zealand's water future. By understanding what future trends could look like and changes that are likely to occur, water suppliers can be prepared. Getting water policy and investment plans right today is crucial if New Zealand is to achieve a sustainable approach to water management for the future.

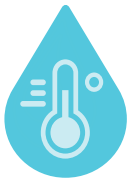
The survey sought to understand consumer perceptions on the future of water in New Zealand.

CONCERNS / VALUES

Context

The world is rapidly changing and New Zealand is no different. Global trends are changing and the future is uncertain. Accommodating population growth, resilience to change and water quality concerns have received a lot of attention in recent times.

New Zealand is experiencing record rates of migration and population growth. There is also increasing urbanisation with New Zealanders moving from regional areas to city centres. There is a need in cities to accommodate rapid growth particularly Auckland, Tauranga, Hamilton and Queenstown.



Resilience to climate change and adverse weather events is a key concern for New Zealanders and water suppliers and responses need to be tailored for each region. Many regions around the country will be affected by sea level rise, and will face issues around stormwater removal and (drinking) water supply systems affected by salt water.

For instance, one in five hundred year flooding in Christchurch in 2017, following a cyclone, has seen drainage infrastructure unable to cope with the floods. In contrast, the Kaipara district experiences extreme shortages of water in summer periods. Over six years they experienced drought during five summers.

Results summary

Concern for the future of water in New Zealand is widespread. Consumers in New Zealand are well educated on the impacts of climate change and are passionate about the environment. Over 80% of respondents are somewhat to very concerned about all the impacts on water in their local area.

Over four in five respondents (85%) are somewhat to very concerned regarding climate change impacts, with 85% somewhat to very concerned for flooding and 84% somewhat to very concerned about drought. 86% of respondents are also somewhat to very concerned about population growth.

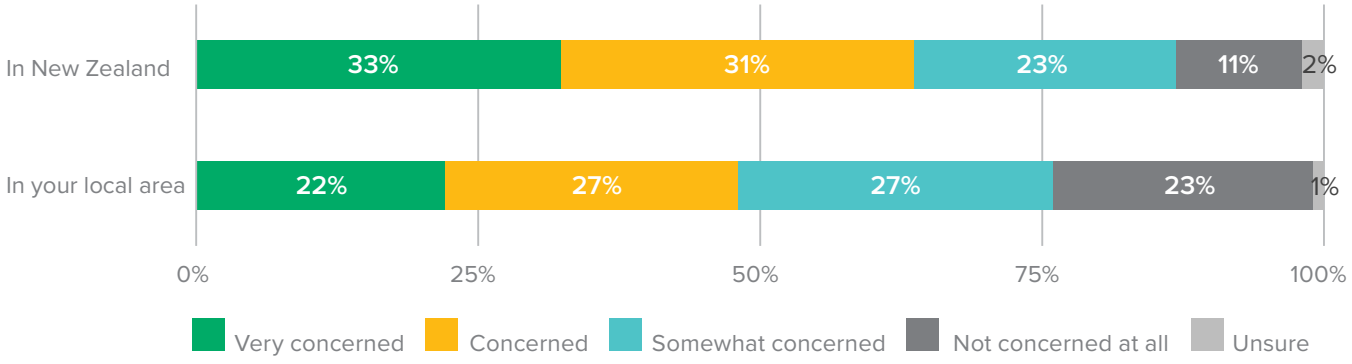
These factors will impact the quality and quantity of drinking water. Almost nine out of ten people (89%) are somewhat to very concerned about drinking water quality and 87% are somewhat to very concerned about water shortages in New Zealand.

This is an opportunity for water suppliers to take the lead in regards to climate change mitigation and adaptation. Trends in the global water industry have seen water suppliers targeting carbon neutrality by 2030 and strategies for future planning. Water resource management strategies are also imperative to allocate resources in times of increasing scarcity. Respondents' concern and passion can be an encouragement for water suppliers to implement stretch targets and take leadership in climate change.

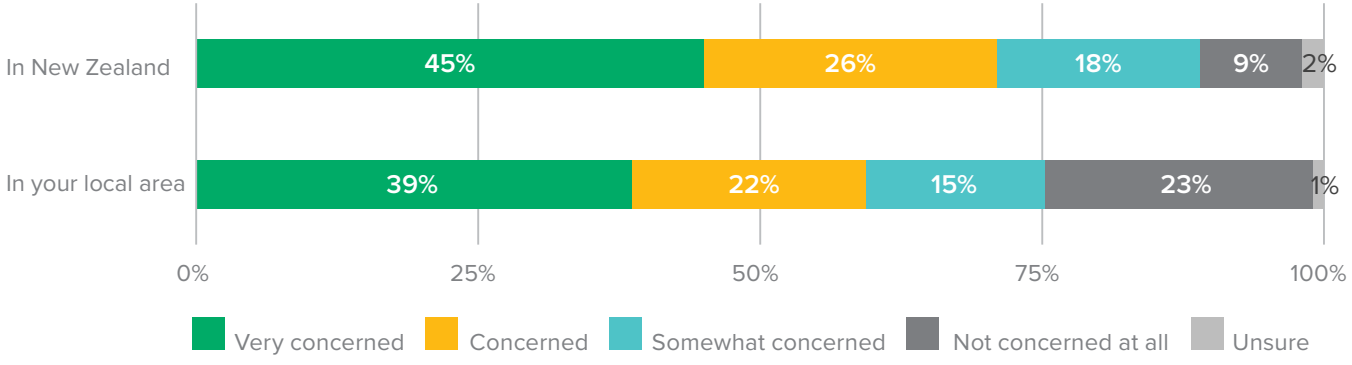
Consumers are more concerned about drinking water quality than water shortages, which indicates that they understand the issues facing New Zealand.

Concern for drinking water quality is higher in regional centres rural and small communities. This is an opportunity for water suppliers in these areas to invest in water treatment and water quality, and for central government to assist to ensure consistent supply across the country.

How concerned are you about water shortage?



How concerned are you about drinking water quality?



RESULTS

The majority of respondents are somewhat to very concerned about all the impacts facing the future of water in New Zealand. There is a growing trend for environmental concern, as seen in previous sections. Over four in five respondents (85%) are somewhat to very concerned regarding climate change impacts, with 85% somewhat to very concerned for flooding and 84% somewhat to very concerned about drought. Eighty-three per cent are also somewhat to very concerned about earthquakes.

A large proportion of respondents (85%) are somewhat to very concerned about intensive agricultural or horticultural impacts on water. 86% of respondents are also somewhat to very concerned about population growth.

A large proportion of respondents are somewhat to very concerned for water shortages (87%), an impact from population growth and climate change. Water suppliers have an opportunity to create water resource plans to ease the concerns of respondents and plan for the future.

This is an opportunity for water suppliers to take leadership in climate resilience and adaptation and reduce their environmental impact. Water treatment infrastructure is energy intensive, contributing to greenhouse gas emissions and climate change.

Global water utilities are on a pathway to carbon neutrality, mitigating their impacts on climate change. They are also preparing for the future and creating adaptation plans for resilience of water infrastructure.

The growing trend for respondents towards environmental concern means they will hold water suppliers accountable for their environmental impacts.

MANAGEMENT / GOVERNANCE

Context

Industry, community and government all have a significant role to play in shaping New Zealand's water future. Getting water policy settings and investment plans right today is crucial if New Zealand is to achieve a sustainable approach to water management for the future.

The future of water in New Zealand is dependent on how well it is planned for now. Understanding trends and working together with the wider community is imperative for future proofing. Additionally, community awareness of governance enables more confidence in the management of services.

Effective governance ensures consistency of services tailored to meet local solutions. Recently there has been concern regarding water quality and availability in rural areas. Effective governance into the future should ensure the consistency of water services between urban and rural areas and between regions.

There has also been recent discussion about the need for regional or national governance of water services to protect health and effectively manage assets.

The survey sought to understand what respondents know about current governance and what their perceptions of the efficiency of water suppliers are and their ability to plan into the future.

Results summary

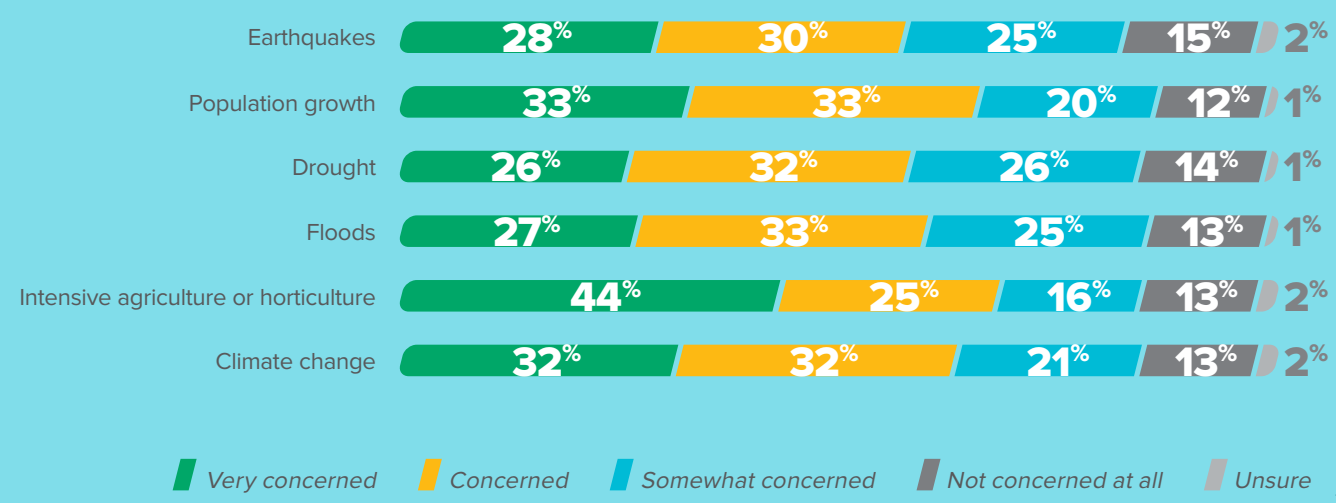
Most respondents (64%) agree that water supplies in New Zealand are efficiently managed, but only 42% believe that water providers adequately maintain water supplies and assets.

Sixty-seven per cent of respondents were unsure of how many organisations are responsible for water supply in New Zealand. There appears to be a lack of understanding amongst most respondents regarding the structure of water governance. This generally leads to a lack of trust in planning and efficient management.

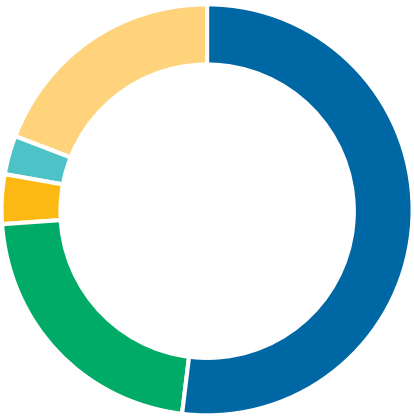
Half of the respondents disagree that local and national governments work together to make the right decisions for New Zealand's water resources and 44% disagree that local and national governments adequately plan for the future.

There is much scope for water suppliers to improve and shift to a more future-focussed approach. Furthermore, there is an opportunity to strengthen the governance of water in New Zealand and provide clarity to consumers regarding the structure.

How concerned are you about the following impacts on water in your local area?

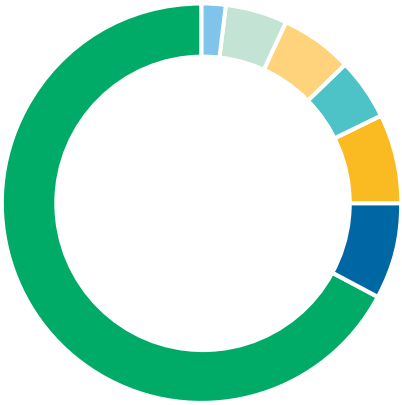


Who owns the water supply infrastructure in your local area?



- Council **52%**
- Council controlled organisation **22%**
- Private ultilty **4%**
- Other **3%**
- Unsure **19%**

How many organisations are responsible for water supply in New Zealand?



- 1 **2%**
- 2-5 **5%**
- 6-20 **6%**
- 21-50 **5%**
- 51-100 **7%**
- 100+ **8%**
- Unsure **67%**

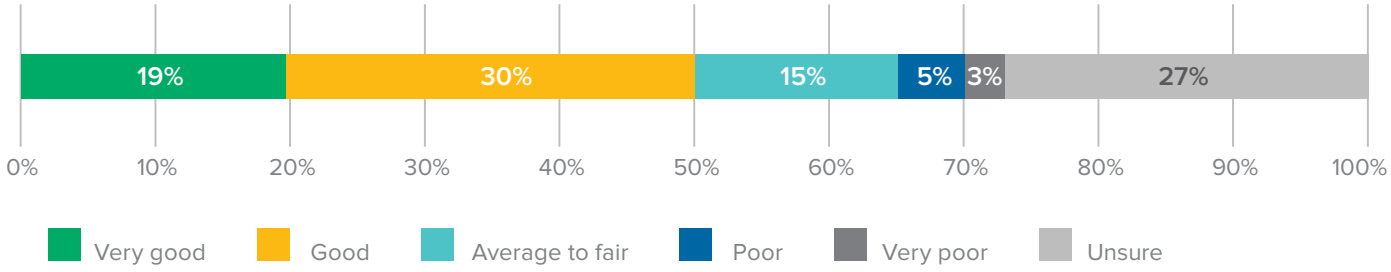
RESULTS

The majority of respondents (67%) are unsure how many organisations are responsible for water supply in New Zealand. Nineteen per cent are unsure on who supplies the water supply infrastructure in their local area.

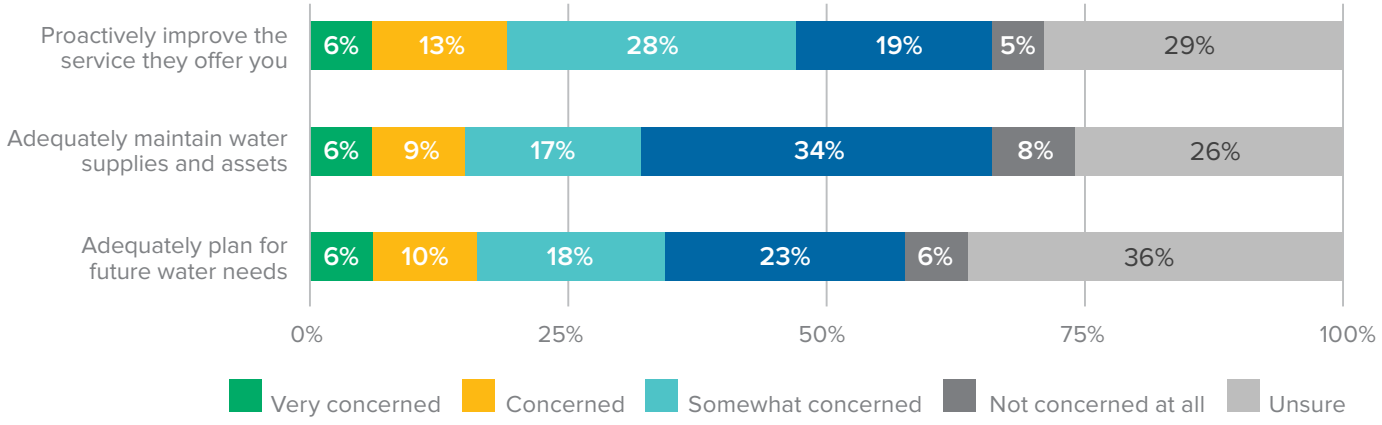
There are 67 organisations in New Zealand that manage water supply – mainly council, or in some cases, a council controlled organisation. Knowledge and education of governance and management results in greater trust in the organisations. A lack of knowledge regarding the water industry can result in misinformed perceptions of the industry and uncertainty in the capability of water suppliers.

These results illustrate that education of consumers is important for improved confidence in the industry. Water suppliers have an opportunity to communicate with their consumers and provide education and information on the industry.

Thinking about your water supplier, how would you rate their performance on "Being efficiently managed"?



Thinking of your drinking water provider, do they:



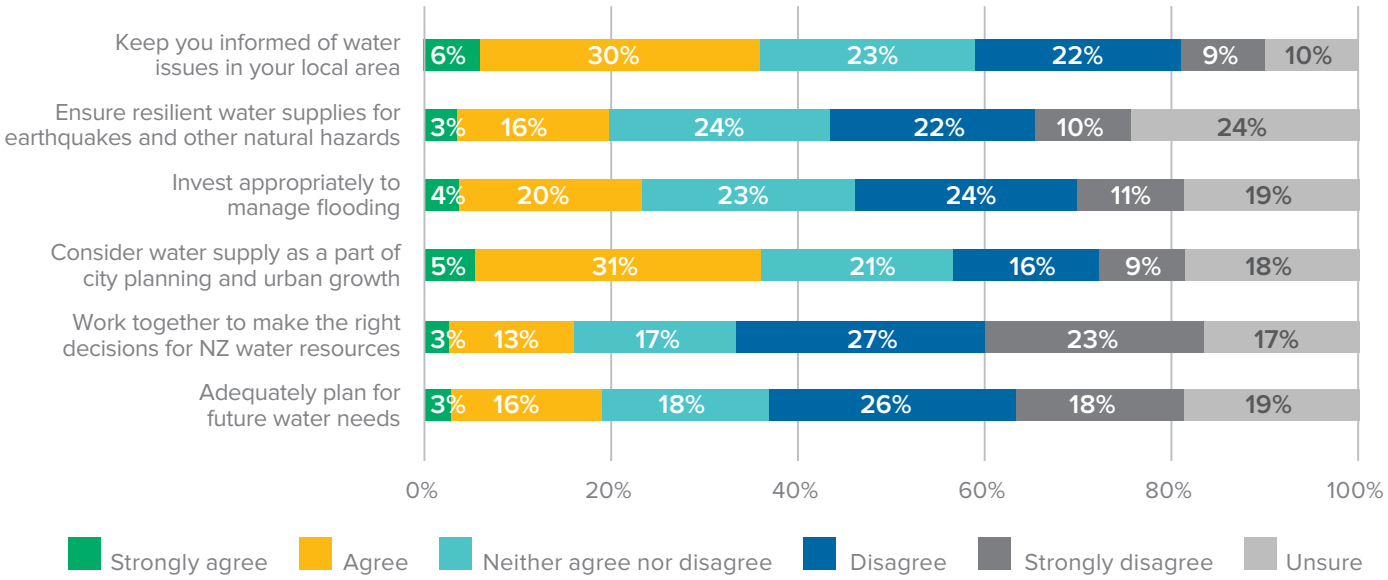
RESULTS

The majority of respondents (64%) agree that water suppliers are efficiently managed. More respondents agree than disagree that drinking water providers proactively improve the service they offer and that they adequately maintain water supplies and assets. However a significant proportion remain uncertain.

There is much scope for water suppliers to improve community confidence especially around their ability to plan for the future. Approximately one in three (36%) respondents are uncertain that drinking water providers adequately plan for the future. If this planning is happening, it is not being effectively communicated with consumers.

As mentioned, this confidence will potentially grow from knowledge. A large proportion of respondents are unsure about aspects of the water supplier's role. In planning for the future, water suppliers can take action. They can increase confidence by educating and engaging the community on their plans and achievements.

Thinking of the local and national governments, do they:



RESULTS

These results show a lack of trust and confidence in local and national government for future planning and appropriate investment in infrastructure. There is a lack of trust in the decisions being made for New Zealand.

Only 36% of respondents agree that local and national governments keep them informed of water issues and only 36% agree that they consider water supply as part of city planning and urban growth. There is also generally disagreement or uncertainty that local and national government ensure resilient water supplies for earthquakes and other natural hazards, invest appropriately to manage flooding, work together to make the right decisions for New Zealand's water resources and adequately plan for future water needs.

Appropriate governance and confidence in governance is imperative for the future proofing of New Zealand's water supply. The future of water cannot be successfully planned or managed without efficient governance. It is important that local and national governance bodies are informed by these results and take action.

It is important for the community to be educated on the role of the water suppliers. It is also important water suppliers take action to future proof and work together with the community. Greater communication and engagement of the community will lead to more confidence in the decisions made by local and national government.

Whakarewarewa Thermal Park, Rotorua © Power of Forever

Healthy waterways

New Zealand's waterways are amongst the most beautiful in the world. However there is growing concern for the quality of water in some parts of the country. There is an increasing drive to address waterway pollution.

The quality of water in New Zealand's waterways is a growing concern in some parts of the country. The Ministry for the Environment's 'Our Fresh Water 2017' publication describes the main pressures on the quality of fresh water as those resulting from land-based activities. Water quality at sites where the upstream land cover is mainly urban and pastoral tends to be poorer than sites where native land cover is dominant. *E.Coli* from livestock has become a major factor in a reduction in river swimming.

Sediment from deforestation is another pollutant factor. New Zealand is one of the most deforested nations on Earth, with 95% of native wetlands also cleared, leaving waterways unprotected. Heavy rainfall events lead to a huge amount of fine material from deforested areas.

Furthermore, industrial discharges are contributing to the degradation of certain waterways.

The issue of combined sewage and stormwater systems overflowing and discharging wastewater into waterways has attracted attention from politicians and media, as well as from local communities and environmental groups.

In light of a push for healthy waterways, in February 2017 the government released a statement that they are planning to make 90% of New Zealand waterways swimmable by 2040.

Cleaning up freshwater is a complex issue but is a priority for many New Zealanders.

WATERWAY QUALITY

Context

The quality of water in New Zealand's waterways is a concern in many parts of the country. Land-based activities, including urbanisation and agriculture, are putting pressure on freshwater quality.

Contamination of watercourses by overflows from combined stormwater and wastewater networks is an increasing concern. In Auckland, there have been issues around the sewer/stormwater system overflowing into the Auckland Harbour during periods of heavy rain. This results in 1 million cubic metres of diluted wastewater flowing into the harbour every year. Overflows are common in other regions as well, where older combined networks are not designed to have capacity for large rainfall events.

Stormwater-induced pollution impacts waterways by other means, such as litter and nutrient laden sediment being washed from urban catchments, via stormwater infrastructure.

The survey sought to understand how concerned respondents are about waterways and waterway pollution.

Results summary

There is significant concern for waterway health amongst respondents. Almost three in every four people (73%) are concerned about poor water quality in their waterways. This was a strong response, with only 2% of respondents being "unsure". Sixty-nine per cent of people believe councils' should invest more to improve stormwater quality and 43% would pay more to improve it (27% disagree that they would pay more).

63% of respondents stated that litter and floating plastics were the pollutants in their local area that concerned them the most, followed by sewage overflows (53%).

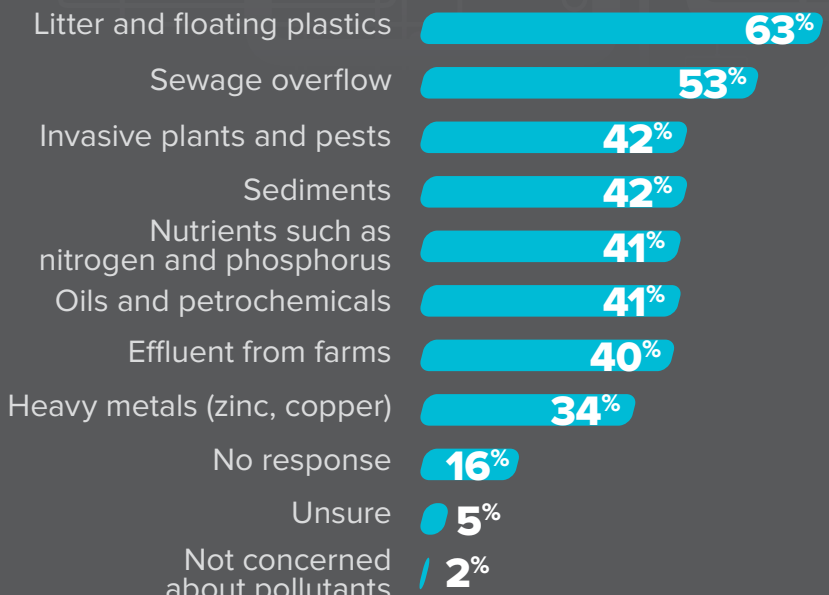
This is a strong message to councils that the public supports a push for cleaner waterways and investing more to address the effects of pollutants. There are strategies already in place, including new infrastructure, however it is clear that there is plenty more work to be done.

Implementation of Water Sensitive Design (WSD), including the construction of wetlands, swales and bioretention basins, is a proven means of capturing and treating stormwater at source to minimise quality and quantity impacts on receiving watercourses. Such infrastructure could separate stormwater from sewer, reducing pressure on the wastewater infrastructure. Increasing the use of gross pollutant traps could be a measure to control litter and floating plastics.

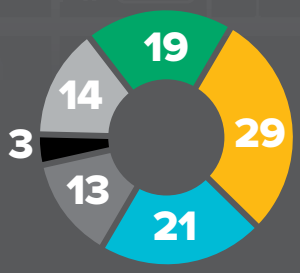
Such strategies would be an opportunity for councils to invest in stormwater management, improving the health and future of waterways.

Waterway pollutants and the quality of water

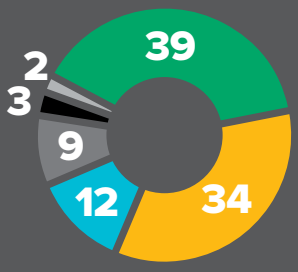
What pollutants in your local area concern you most? (tick all that apply)



Stormwater is significant cause of waterways pollution in my local area (%)

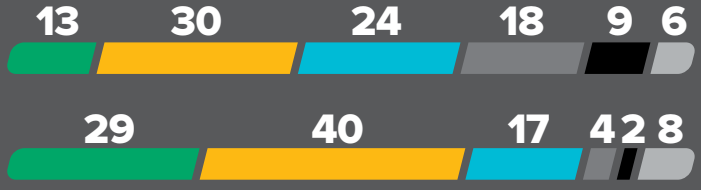


I'm concerned about poor quality in my local waterways (%)



I am willing to pay higher rates to reduce pollution from stormwater in my local waterways (%)

Councils should invest more to improve stormwater quality (%)



"There has not been enough focus on litter (especially plastics) entering stormwater and then the oceans. More public education is required, especially in schools."

CONSUMER

RESULTS

There has been a strong response about local waterway quality, with only 2% being unsure. Almost three in every four people (73%) are concerned about poor water quality in their waterways and 43% would pay more to have better quality waterways. This concern leads to a desire for councils to invest more in improving waterways, with 69% of respondents agreeing with this.

More than half of the respondents were concerned about most of the pollutants entering waterways, with only a very small percentage (2%) not concerned about pollutants. The highest concerning pollutant is litter and floating plastics (63%), followed by sewage overflows (53%). Invasive plants and pests, sediments, nutrients, oils and petrochemicals and farm effluent are also contaminants of concern.

This clear concern for the environment (as previously examined) and waterway quality is a message to councils that the New Zealand public is passionate about the environment and that waterway quality requires more investment and education. A national approach to addressing waterway quality, in partnership with councils, could potentially also result in a more consistent approach in tackling pollutants.

Survey methodology

The New Zealand Water Consumer Survey was conducted using the online survey platform 'Qualtrics' between the dates of 1 May and 16 June 2017. The survey received more than 4,500 completed responses from around the country.

The survey length was 31 questions. The full list of questions can be found on the Water New Zealand website www.waternz.org.nz/watersurvey

The survey was advertised through a variety of media channels and distributed by Water New Zealand's member organisations to reach a wide audience across the country.

The survey link was accessible from mobile and computer devices.

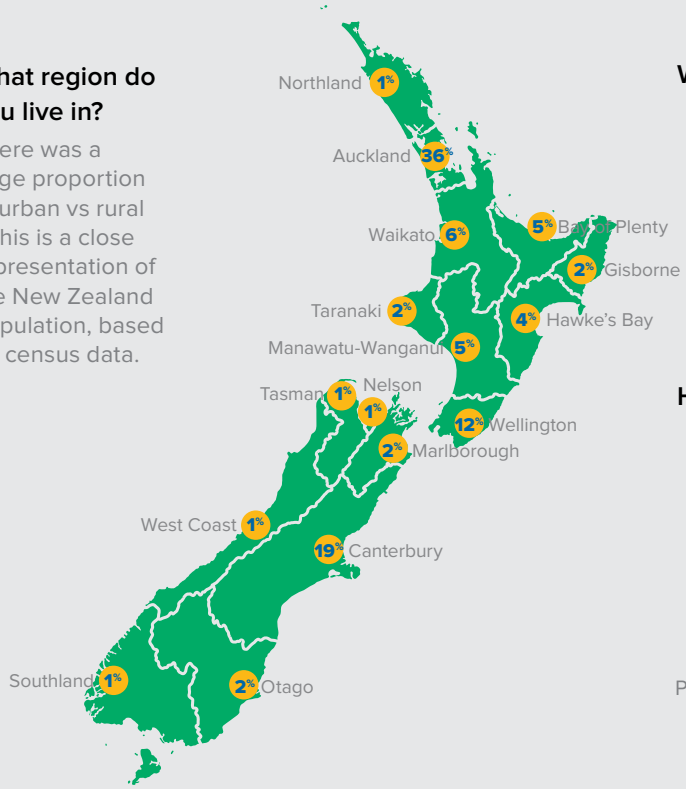
A prize draw was offered for survey participants. The prize was $2,000 and was drawn on 27 June 2017.

Response distribution rates are demonstrated in the graphs opposite. Efforts were made to ensure a wide distribution of the survey and that the respondents were representative of the New Zealand population.

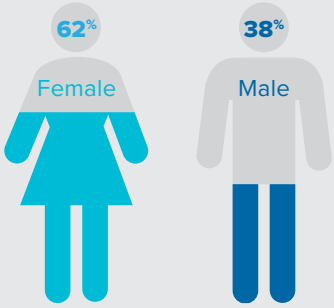
Where do you live?

What region do you live in?

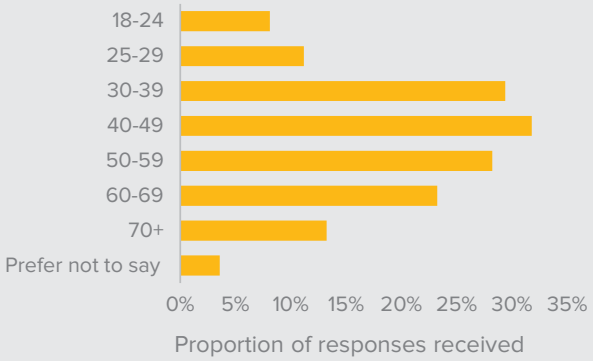
There was a large proportion of urban vs rural – this is a close representation of the New Zealand population, based on census data.



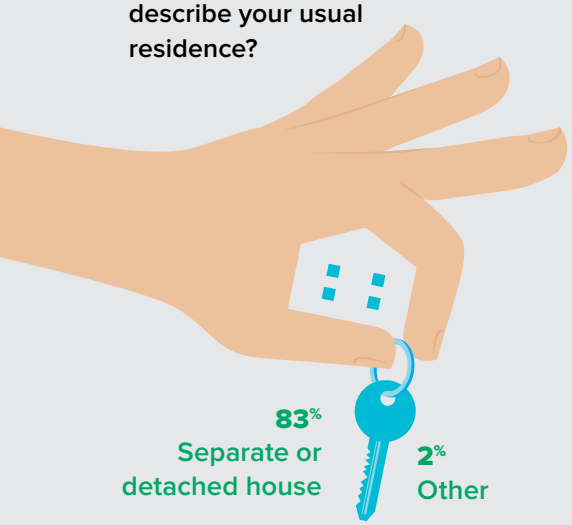
What is your gender?



How old are you?



How would you describe your usual residence?



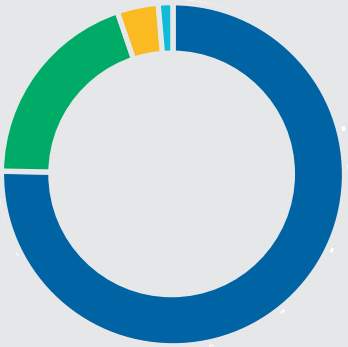
83% Separate or detached house

2% Other

6% Semi-detached, row or townhouse

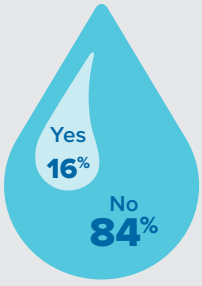
9% Flat, unit or apartment

Do you own or rent your usual residence?



- Own **75%**
- Rent **20%**
- Live with parents or family **4%**
- Other **1%**

Do you currently work, or have you worked, in the water sector?



Appendix A1: about the authors

water NEW ZEALAND
The New Zealand Water & Wastes Association Waiora Aotearoa

ABOUT WATER NEW ZEALAND

Water New Zealand is a national not-for-profit sector organisation comprising approximately 1900 corporate and individual members in New Zealand and overseas.

Water New Zealand is the principal voice for the water sector, focusing on the sustainable management and promotion of the water environment and encompassing the three waters: drinking water, waste and storm waters.

www.waternz.org.nz

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Delivery of the survey has been guided by a steering committee made up of members of the newly formed Water New Zealand Customer Value Special Interest Group.

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Appendix
A2: about the authors

ARUP

ABOUT ARUP

Arup is the creative force at the heart of many of the world's most prominent projects in the built environment and across industry. We offer a broad range of professional services that combine to make a real difference to our clients and the communities in which we work.

From 85 offices in 35 countries more than 13,000 planners, designers, engineers and consultants deliver innovative projects across the world with creativity and passion.

Founded in 1946 with an enduring set of values, our unique trust ownership fosters a distinctive culture and an intellectual independence that encourages collaborative working. This is reflected in everything we do, allowing us to develop meaningful ideas, help shape agendas and deliver results that frequently surpass the expectations of our clients.

The people at Arup are driven to find a better way and to deliver better solutions for our clients.

We shape a better world.

www.arup.com

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Daniel is Arup's Regional Water and Urban Renewal Business Leader. He is passionate about developing and implementing smart and innovative solutions in the water sector.

Daniel previously developed the first two National Water Surveys in Australia. He is a leader in the water industry with awards including the International Water Centre Water Leader Scholarship, Singapore Professional Engineer Award, the Consult Australia Future Leader's Award and the Engineers Australia Presidents Award for Excellence. He was recognised by Engineers Australia as one of Australia's Most Innovative Engineers.

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James has more than 10 years' experience in design and management of water supply, wastewater and stormwater infrastructure projects. He has successfully delivered projects in New Zealand, Fiji and the UK.

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Priyani is a civil engineer at Arup, specialising in engineering design and analysis, water and economic strategy and designing for a whole-of-water-cycle approach.

With a background in economics, Priyani works with clients to understand how to deliver water projects to meet their economic, financial and wider strategic aims.

Priyani is passionate about humanitarian engineering and using engineering skills to benefit the community.

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Milford Sound, Southland © Swiss Media Vision

Learn more

with our user-friendly data visualisation tool, allowing online viewers to delve into various sub-sets of respondent data based on gender, age, geographical location and other metrics.