

WASTE AS AN INDICATOR OF A SUSTAINABLE COMMUNITY

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Abstract

Recycling became a way of life in Kaikoura, with waste becoming an indicator which promotes sustainability and contributes to resilience within the community. Secondary is the positive social and environmental behaviour that a common vision embodies. Throughout the Community, positive environmental behaviour is becoming a social norm. Fifteen years of environmental data can show the increase in positive behaviour and the decrease in the Community's environmental footprint from waste.

So how does the Community deliver recycling services on the smell of an oily rag when other centres are striving for efficiency? The answer is in a Community run organisation with a positive mandate, staff with a passion and a Community drive to protect the natural environment.

Innovative Waste Kaikoura Ltd is a community owned organisation:

- Delivering waste management within a number of contracts
- Strong ethos around environment, education and employment = the three E's.
- Resource recovery
- Landfill operation
- Innovative solutions including:
- Event waste management
- Construction and demolition waste
- Trees for Travellers
- Restoration Station & Kaikoura Community Shed

Innovative Waste Kaikoura Ltd was born from a vision and a belief that Kaikoura is "too good to waste." The vision was to achieve 'Zero Waste'. The driving mandate being diversion from landfill in order to preserve and extend the life of landfill.

Nineteen years after adopting a Zero Waste vision, Kaikoura can illustrate reduced environmental impact. The success of the reduction in Community's carbon footprint and overall environmental

impact has hinged on positive behaviour change that can be illustrated by the ongoing success of the zero waste vision. Kaikoura is producing only 180 kg per person, the average in the OECD is 520 kg of waste per year. Waste diversion is around 75% of total waste by weight.

Background

Kaikoura is a small town on the east coast of the South Island. Kaikoura is located midway between Christchurch and Picton. Kaikoura is geographically isolated; to the north are the Seaward Kaikoura ranges, the highest mountain range outside the Southern Alps, the Hundalee ranges to the South and the Inland Kaikoura ranges to the west. To the east is the Pacific Ocean. The geographical isolation has given rise to a unique and resourceful community.

Kaikoura was first settled by Maori approximately 800 years ago, the first Europeans arrived in about 1840. These were whalers looking to exploit Kaikoura's natural ocean bounty. The whalers were quickly followed by settlers looking to clear land for farming, commercial fisherman and service industries. Kaikoura grew to a town very quickly, considering then the only access was traditional Maori trading routes, by ship or boat access.

Kaikoura continued to grow, the first rail and road links were built in the 1920's. Economic growth continued until the 1960's when, Kaikoura entered into a period of economic decline. The economic decline lasted until the 1980's when the first Whalewatch venture gave birth to Kaikoura's tourism industry.

With tourism came an increase in the population. This brought economic prosperity but also impacts. In 1998 it was thought the Community would have to invest millions of dollars in building a new landfill. The alternative was to adopt a vision of Zero Waste. This contributed to decreased waste to landfill therefore prolonging the life of the landfill, reduced environmental impacts, an engaged Community and a healthy natural environment.

The aim to achieve Zero Waste to landfill.

Introduction

In 1998, it was predicted that with the current rate of waste disposal in Kaikoura, the urban landfill would be full by the year 2001. The Kaikoura Community was faced with the options of spending millions on building a new landfill or shipping the landfill outside the District.

The first option, for new a landfill, was unattainable; this was just unaffordable for the Community. With only 3600 ratepayers, the rates burden would be prohibitive to build a new landfill. The second option to ship the waste outside the District to a regional landfill was an offensive proposition to the Community. The Community did not want their waste to be someone else's problem. During consultation, the Community came up with a third option, this was to act more responsibly and reduce the amount of waste the Community generated. This was much more acceptable to the community, thus the Kaikoura Community embraced a vision of Zero waste.

The first step was for the Council to formally adopt the commitment to Zero Waste. The commitment was made by the Council on behalf of the Community in a meeting in November 1998.

The next step was to establish an organisation that could assist with diversion of waste and waste management services whilst keeping the vision of Zero Waste to Landfill. Kaikoura became a Zero Waste district in November 1998. In June 2000, this contract came up for renewal, and Kaikoura Wastebusters prepared a proposal and presented it to Kaikoura District Council.

The outcome of this proposal was that Kaikoura Wastebusters Trust and Kaikoura District Council formed a partnership company to run both the landfill and resource recovery centre. This partnership company formed Innovative Waste Kaikoura Ltd. The aim was to develop low cost solutions to drive waste diversion to its maximum level.

Guest speaker Bill Sheehan, of the Grass Roots Recycling Network, based in Athens Georgia, said local government must nurture community support for waste reduction and create the conditions for recycling and reuse to out-compete landfilling. Experience in the US had shown that community based programmes were successful, but when taken over by the private sector and run on a bigger scale were likely to fail due to lack of commitment.

“Local government has to create the incentives to sort and separate resources at the mouth of the landfill, and aim to starve it. It also has a role in exerting an influence further upstream to reduce the wasteful use of resources prior to consumption.”

Next, came the involvement of the wider Community. The Kaikoura District Council also took a brave step, and ceased collection of kerbside waste. Urban households could no longer leave their waste out for collection. Instead, an urban recycling collection was instigated. The reason for this was to make waste disposal inconvenient for residents and recycling easily accessible. Residents had to take their own waste to the recycling centre and pay as they disposed. This made the cost of waste very visible to ratepayers and thus altered behaviour.

Community education began. Recycling became a way of life in Kaikoura, with waste becoming an indicator which promotes sustainability and contributes to resilience within the Community.

What is the evidence of the behaviour change? This small act, of making people responsible for their own waste increased recycling from 15% to 25%, inside the weekⁱⁱ.

Discussion

Innovative Waste Kaikoura was born from a vision and a belief that Kaikoura is capable of reaching 'Zero Waste'.

"To achieve zero waste by 2015; facilitate sustainable employment using waste material and to provide funding through viable projects that protect, restore and enhance the environment".

So how does the Community deliver recycling services on the smell of an oily rag when other centres are striving for efficiency? The organisation has been successful as the primary mandate has been to reduce waste in order to prolong the life of the land fill. The activities that Innovative Waste Kaikoura Ltd were engaged in fall into three main categories:

- Recycling and recovery of the waste stream - targeting zero waste by 2015.
- Managing the landfill on behalf of the community to ensure this is the last landfill Kaikoura will ever need.
- Generating self-sustaining employment opportunities using products recovered from the waste stream, (both on and off-site).

Innovative Waste Kaikoura Ltd has set policies in place to ensure the amount of refuse being landfilled is reducing according to Zero Waste targets. The enthusiasm driving Innovative Waste Kaikoura's vision engendered positive community and business sector support.

Innovative Waste Kaikoura Ltd took an approach to Zero Waste that was people oriented, seeking to meet the employment needs of their community while maintaining environmental balance. To this end strong links were forged with many local businesses, community organisations, Work and Income NZ and business partner Kaikoura District Council. This solid foundation group enabled Innovative Waste Kaikoura Ltd to build above and beyond its core task.

A business recycling pick-up started in 1999, this was the beginning of Innovative Waste Kaikoura Ltd generating employment through the waste stream outside the immediate resource recovery centre itself. Innovative Waste Kaikoura is prepared to employ the "hard-to-employ" and train WINZ registered people by providing employment opportunities and step-training them into full-time work.

New employment opportunities are constantly being assessed, while current operating areas are revisited frequently. Marketing and processing product has a strong focus. At the end of the day, Innovative Waste Kaikoura Ltd would not survive without marketable products, and part of the plan is developing marketable products from waste stream. The challenge with reaching markets is Kaikoura's isolated location. However, through making the most of back loading and partnerships with transport companies, this has been achieved.

Currently Innovative Waste Kaikoura Ltd is marketing recycled material transported out of Kaikoura. On site processing occurs, compost made from the Community's green waste brought to site, second hand goods sold through the Recycle Shop, glass is being processed on site.

Products include: garden mulch (chip) and compost (bagged or bulk loads), firewood, timber, second hand goods, crushed glass and glass pavers, crushed glass for filters, or builders fill or sandblasting fiberglass products, renovated furniture and clothing renovation.

Community spirit, buzz, humming, are words that have been used to describe the atmosphere on site, and Innovative Waste Kaikoura Ltd capitalizes on and reinforces that by encouraging people to develop their own ideas for employment using waste stream products.

It is not "just a dump" any more.

Innovative Waste Kaikoura Ltd's vision encompasses:

- Financial challenge. Includes development of company and marketing of product.
- Environmental/ecological aesthetics.
- Cultural/community relevance. Includes mentoring, training, employment issues.
- Community mandate for zero waste.

To help achieve that vision, Innovative Waste Kaikoura Ltd has evolved:

- Youth Team from 2000-2003.
- Trees for Travellers developed 2001.
- HCU Composter built 2001.
- WasteBusters sell shares 2010 to Kaikoura District Council
- Food scrap kerbside collection starts 2011; now evolved with foodwaste kerbside and free drop off system.
- Diversion from Landfill hits 75% 2012
- External funding received for and employment of a part time Project Coordinator to assist with education and advocacy around waste minimisation.
- Most recently, the Restoration Station & Kaikoura Community Shed.

Secondary advantages are the positive social and environmental behaviour that a common Zero Waste vision embodies. Throughout the Community, positive environmental behaviour has become a social norm. Fifteen years of environmental data can show the increase in positive behaviour and the decrease in the Community’s environmental footprint from waste.

Success

Fifteen years of environmental data can show the increase in positive behaviour and the decrease in the Community’s environmental footprint from waste.



Figure one: Waste volumes since 2002

The success is throughout the whole Community, the organisation and the Council together achieving results. The enduring success from the environmental data shows that while the Community is not making huge improvements over the last ten years, maintaining the low levels of waste disposal illustrates that the behaviour is ingrained and people are playing their part.

The success of the program hinges on the behaviour of the Community and the Community participation has a major influence on the results. The Community engagement in the alternative waste management program is overwhelmingly positive. The recent community survey conducted in 2016, shows 94% of respondents were satisfied or very satisfied with the Resource Recovery Centre. In addition, 96% of respondents said they minimised rubbish by recycling regularly. Businesses within the Community engage visitors and customers by including requests to recycle and education material to help visitors recycle.

With Kaikoura District Council remaining the driving force behind the program, further success lies in the Council placing importance on really knowing, understanding what they want to achieve from the delivery of waste services and education. The desire of Council to partner with social enterprise to deliver the service is an important part of the success. To achieve this Council has a procurement policy in place to ensure that social, environmental and economic concerns are all weighted in contract tendering.

The political understanding and participation in the project has helped gain momentum over the years. In the 2015/2016 solid waste audit, Councillors volunteers to help. That meant they donned rubber gloves and helped sort through rubbish bags, to assess what people are putting in the waste stream. The political will is driven by Community support and real understanding of the process.

The viability of Innovative Waste Kaikoura has hinged on delivery of the varied contracts and waste programs. The organisation is now involved in delivering other Community contracts which has resulted in more local employment and the community funds staying in the Community. The organisation is recycling people as well as material. That is making sure people are involved in the success of the organization – training, empowering and educating is an important key to success.

The other advantages of the program are reductions in Community's carbon footprint, overall environmental impact and prolonged life of the landfill. This has hinged on positive behaviour change that can be illustrated by the ongoing success of the zero waste vision. Kaikoura is producing only 180 kg per person, the average in the OECD is 520 kg of waste per year. Waste diversion is around 75% of total waste by weight.

Our ethos being different in terms of not believing that “airspace is a cheap way of dealing with waste”. The program has galvanized a community to achieve and maintain the independence of waste management. A resource recovery centre that people are proud of and a waste minimisation record that is among the best in New Zealand.

What was our involvement?

This paper has been prepared and co-written by two self-confessed environmental advocates.

Rob Roche was involved with the Youth Program in the 1990’s and now is the General Manager of Innovative Waste Kaikoura Ltd. Rob continues the work that was beginning in the mid 1990’s by a group of committed individuals and volunteers. The work at Innovative Waste Kaikoura Ltd includes:

- Developing markets for recyclable product,
- Processing recyclable product to find markets,
- Training individuals to be work ready,
- Motivating individuals to be passionate about the recycling industry,
- Developing educational opportunities toward sustainability
- Engaging Community behavior change to reduce waste,
- Working with many sectors of the Community,
- Developing relationships with Government and non-governmental organizations.
- Implementing National Policy for Waste Management.
- Managing contracts currently held by Innovative Waste Kaikoura Ltd.

Rachel Vaughan is an Environmental Planner for the Kaikoura District Council. Rachel is a waste champion and works on waste minimisation and environmental policy, strategic planning and the hairy interface between using the Waste Minimisation Act, the Resource Management Act and sound environmental management. Rachel manages the Community’s waste programs and was instrumental in developing the Zero Organics to landfill program in 2011 and the glass processing plant at the Recycling centre in 2014.

Conclusion

The Kaikoura Community has not let the small rate payer base, the geographical isolation or the lack of resources hinder success. Kaikoura continues to be a forerunner in successful waste minimisation and diversion of waste from landfill.

The ongoing waste data for the Kaikoura District shows that waste minimisation has been a commitment by the whole Community. Diversion of waste from landfill began with a Council need to reduce waste to landfill. The end result is involvement of people, committed organisations and effective processes which are all working to achieve a reduction in solid waste.

The Kaikoura Community are proud of the results and feel good to be contributing to a common goal. The positive environmental outcomes contribute to ongoing preservation of the natural environment. Diversion of waste from landfill continues to be a focus as well as providing innovation to recycling solutions.

ⁱ Kaikoura District Council archive agenda, January 2000. Reference to guest speaker, Kaikoura Zero Waste Conference 1999.

ⁱⁱ Kaikoura District Council internal files; 2001.