

The rise and fall and rise again of an environmental social enterprise. (With apologies to the makers of *The Fall and Rise of Reginald Perrin*, one of my favourite British comedy series)

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The rise and fall and rise again of an environmental social enterprise. (With apologies to the makers of The Fall and Rise of Reginald Perrin, one of my favourite British comedy series)

JOHN STANSFIELD

Ki te kahore he whakakitenga ka ngaro te iwi
Without foresight or vision the people will be lost

In this paper I update earlier work on the case study in social enterprise in waste and recycling, using a community-development methodology. The case study follows, as the title might suggest, the rise of a thriving community enterprise, its demise and period in the wilderness, and its rise again. The study draws on personal experience as an activist insider and islander; the records of our social enterprise and the extensive public record in the community media; the tireless support of fellow directors in the new social enterprise Island Waste Collective, and of Denise Roche, former Green Party MP with responsibility for the waste portfolio and current member of the ministerial Waste Advisory Board.

Rachel Carson's seminal work *Silent Spring* (1962) was a clarion call to environmental concern which drew a sharp focus to the poisoning of the planet. Today's environmentalism poses a powerful critique and, in the contemporary lens of sustainable development, addresses social and economic as well as environmental concerns. The separation of people from planet as a locus of concern has not served either well. Nor are the realms mutually antagonistic or exclusive (Bradshaw & Winn, 2000). The bringing together of these two themes is evident from the time of the Brundtland Commission (World Commission on Environment and Development, 1987) and after that through the major international governance conferences and resolutions such as Agenda 21 (United Nations Sustainable Development, 1992) and the Kyoto Protocol (UNFCCC, 1997). This case study describes

how an enterprising community achieved social, economic and environmental goals, while building their community capacity and having much fun in the process. The crushing of the enterprise is briefly discussed, and tribute is paid to the spirit of the community which spawned the enterprise. The imminent rise, Phoenix-like, of a new community enterprise from the ashes of the old is predicted.

Context

Waiheke Island (pop. 10,000) is the jewel in the crown of the Hauraki Gulf, and is just 35 minutes by fast boat from Auckland, New Zealand's largest city. The community, in common with other islands, has a strong sense of place or what we now call "islandness" (Conkling, 2007). This is more colourfully put by the late, great Joe Waite, islander, raconteur, poet, entrepreneur and sometime local-body politician:

"The true mark of a Waihekean, son, is the ability to start an argument all by yourself in an empty room!"

Until 1989, the Waiheke County Council governed the island locally. To the chagrin of islanders, the County Council was then amalgamated with Auckland City Council. The first thing the good burghers of Waiheke could tangibly see changing was the loss of their fledgling recycling scheme. The tip, or transfer station, a popular scavenging point, was declared off-limits to the public, and ever-increasing volumes of perfectly reusable material were consigned to landfill. The loss of control of the waste facility became emblematic of a more significant feeling of disquiet about the loss of sovereignty, and was probably elevated to a higher position in islanders' minds because of this symbolic status.

Waihekeans, in common with many island communities, are sensitive to loss of sovereignty (Prescott, 2003), and were demanding a bit more say over the place in which they live. This desire for self-determination is a recurrent theme throughout the island's history, and many of the problems experienced in government relations can be sheeted home to this value. This disenfranchisement makes for fertile ground for community development and the forging of collective identity (Dalby & McKenzie, 2005).

Organising and learning

With the City Council now in charge, the recycling scheme was abandoned. The islanders' renowned talent for protest was exercised colourfully, then seemingly, publicly at least, died away and the community began to organise. Informally a group formed to pursue the community's interest in sustainable waste management. The Waiheke Waste Resources Trust (WRT) was later incorporated and thrives 22 years on as Auckland's premier sustainability

organisation and, somewhat ironically, the most valued community partnership for the council.

The first thing the WRT did was recognise a need to learn a great deal more about waste, waste economies, and waste in the environment. They developed a wānanga, or study group, and got together every few weeks to share research and learnings. Convivial meetings always centred around a shared 'pot-luck' meal, reinforcing local community-development lore and our first community-development principle for this case study:

"The community sector marches on its stomach."

The meetings were also useful opportunities to recognise expertise and try out working with each other. The organisation had high ambitions and would need a seasoned crew.

During this period, the WRT was informed by meetings with:

- Other communities and organisations concerned about waste, through exchange and field trips
- Community waste operations such as the Kaitaia Community Business and Environment Centre, CBEC
- Community waste campaigners from as far afield as Scotland and Wales
- Dr Google and social-media groups

Consolidating learning and building constituency

Over about 18 months, the trust gave itself a masters-level education in sustainable waste-management (Seadon, 2010) and developed its fundamental principles and strategies for the road ahead. Central to this was the development of a community consensus on a 'Waiheke way' in which Waiheke could manage the waste stream and use the enterprise to provide sustainable jobs, an improved environment, and investment in waste reduction through innovation and public education.

Building that consensus involved a range of creative strategies to inform and engage community members (Eichler, 2007). In this case these included extensive use of visiting local groups, holding a stall at the local markets, feeding local media, and events and stunts, such as the 'shopping-trolley dolly' entry in the local Santa parade (see link below) to draw attention to the issue of waste and an island approach. These strategies speak to the second principle of Waiheke community development. This was first coined by the late Dr Wendy Craig who, although she was not of our community, would have felt right at home:

"If you are fun to be with, there will always be people with you."

The first lucky break was the adoption of a new law which required local councils to consult with communities in developing local waste-management plans. In its usual fashion, council arranged for a couple of consultants to

talk to the community of Waiheke at a public meeting. A process that had been budgeted to take two hours then ensued over the following six weeks. The well-informed and articulate advocates of the WRT were successful in advocating for a radical waste plan which strongly reflected the community consensus developed over the previous 18 months. This plan was adopted by council and formed the basis for new tenders in waste contracting for Waiheke. The strategy was to set the bar for environmental performance high, so that groups with strong environmental credentials could compete with the waste Moghuls. And compete we surely did.

An enterprise of our own

In 2000 the WRT began meeting with the Kaitia community enterprise CBEC to plan a joint bid for the waste contract. The WRT partner had significant knowledge of the challenges of island logistics, the fragile roading system and precarious infrastructure. As well as strong support from the local community, CBEC had several years' experience both contracting with council, and delivering curbside waste collection and recycling. (This experience of partnering proved to be invaluable in 2018 and 2019 when we began to craft our approach to retake the contracts for waste.) The parties came together incorporated as Clean Stream Waiheke Ltd (CSWL), and developed the successful bid for the contract. The company was incorporated in May 2001 and commenced operations on July 1, 2001.

The day before operations were due to commence, with all the contracts having been executed, the directors were aghast to find the council was requiring a further \$100,000 bond. This late demand was in addition to the bank and personal guarantees which had already been supplied. The company had never operated and had very modest capital. Seeing no other options, the directors, all volunteers, took personal loans against their homes, and in one case against his parents' home, to ensure the operation could start on time.

Commencing operations was a terrifically exciting time, with a very steep learning curve for all those involved. The company commenced operations with an experienced community waste-operator managing operations, and a board with both commercial and community-development experience. The first big surprise was how jubilant the community were at having regained control of their waste stream. The second was how little council understood the operation. For example, the council had been relying upon the previous operator to faithfully record the tonnage of green waste converted to mulch and compost. This compost had been sold at the gate and, as the transactions were primarily cash and there was no audit process, there may have been some under-reporting. Council estimated processing and sales to be up to 200 tonnes per annum. As the company began to keep more careful records, the amount of green waste processed was found to be over 800 tonnes in the first year, rising in year six to over 2000 tonnes.

As soon as operations commenced, the company (CSWL) started to get real and reliable data on waste volumes. In the first year, refuse volumes dropped by 250 tonnes, recycling was up by 530 tonnes, and all this looked

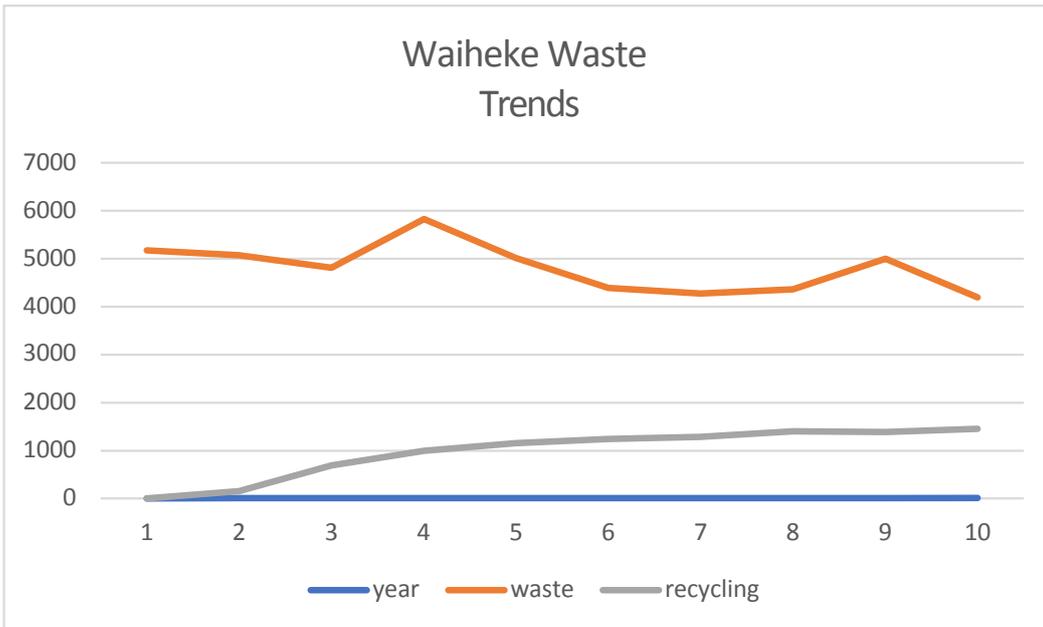
like good news. However, combined weights were increasing and, with the construction boom and growing local industry, an impending rubbish explosion loomed. In response, the company, which had been severely undercapitalised and was scrambling to keep on top of unpredicted volumes, invested in its parent organisation, WRT, and developed a waste-education and community-engagement programme. They backed a community-development approach to reduce the problem ahead of an expensive plant to manage it. WRT engaged a pair of local community-development educators to build a volunteer army fit for the task. This time was also a period of reflection and learning for the company and the community. The ability to finally measure the real weights and volumes of waste, recycling and re-use enabled the basis of what was to become a very evidence-based initiative.

The waste-education team had some highly innovative strategies for community engagement and were always challenging the company to innovate further than the waste stream. For example, a successful biodiesel plant was designed and built. The plant, which harvested 25,000 litres of waste cooking oil and converted this to diesel fuel, both eliminated waste and ran the company's trucks and machinery. This was the result of a small piece of research conducted by the waste educators and a successful partnership with The University of Auckland's engineering school: Engineering Projects in Community Service (EPICS).

The education team developed the much-loved annual festival Junk to Funk, which showcased the island's creative talent in producing wearable art from the waste stream. This event involved 1200 people from a population of just 4000 at the time. The team also used opportunistic strategies where existing events, such as the local market and the music festivals, provided an opportunity for community engagement. These events were the forerunners of the Waiheke Sustainability Festival, which most recently saw ten days of sustainability focus and over 50 events, involving many other clubs and environmental organisations.

Another initiative of the team, which is now adopted Auckland-wide, is the zero-waste (Song, Li, & Zeng, 2015) approach to significant community events. From the environmental disaster of previous years, a crowd of 5000 at the Onetangi Beach Races can now produce as little as 20 litres of waste for landfill. Half a dozen community groups staff many waste reduction stalls, with volunteers growing engagement and earning grants for their clubs. The undeniable success of this programme, which vastly outperformed waste-reduction attempts at both commercial and council events, has now seen it become mainstream. In its latter years, the WRT and CSWL were contracted by commercial event organisers, and zero-waste events are now part of the Waiheke way.

Clean Stream Waiheke won awards for innovation both nationally, from the Glass Packaging Forum, and internationally, at the Green Globe Awards. It had an active research-and-development ethos which informed its innovations. In the case of glass, changes in the New Zealand economy meant the glassworks were flooded with clear glass, and the market price plummeted from \$78 a tonne to just \$12 a tonne. Freight costs alone were \$60 a tonne, and it was clear the company would need to develop either a higher-value product from the glass or find ways of using it domestically.



Investigations with the engineering school led us to explore glass-processing options and eventually import specialised machinery from the United States. This plant produced a domestic aggregate at \$35 a tonne with no freight cost (downcycling) and some much higher-value products for export to the mainland (upcycling).

Over the nine years of CSWL's operation, the population of the island grew by 11%, while waste to landfill fell by 20%. This experience prompted us to develop our model of waste management.

Learnings from the front line of the waste war

WASTE OPERATIONS ARE A TRANSPORT BUSINESS

Most of the big waste companies have grown out of the transport industry. Conventional waste operations are not transforming waste or influencing in any way how much waste there is, but performing the much simpler task of picking up waste from one place and taking it to another. There is nothing inherently evil about a transport business, but we need to understand the limitations of its worldview. It understands that its job is to put things in trucks and drive them around, and that it makes the most money by driving the most stuff for the longest distance.

The conventional approach then is not a worldview which has any sense of the waste hierarchy (DEFRA, 2011) and the need to reduce waste. Waste education, as it is conducted by the big waste companies, is not sophisticated. The real innovators in the waste sector around the world have been small, committed communities that are values driven. These communities understand that we are on a trajectory of completely unsustainable and unaffordable waste practices. Moreover, they have developed an understanding that creates a community identity, a binding community-

development feature around the values they hold on the actions they take to minimise waste.

A more sophisticated approach to waste begins with the waste hierarchy, and while everybody understands this in theory, it is seldom at the forefront of operational design. While the hierarchy identifies *reduce and reuse* as the highest-order actions, it is *the dispose of and mitigate* which receive all the resources. Unsurprisingly then, waste volumes grow, and little real attention is paid to *reduce and reuse*. One departure from this trend was the adoption in the 2008 Waste Act of a disposal levy, albeit at a very modest \$10 per tonne, to fund the development of alternative strategies based on a circular economy.



The Waiheke Way

There are some things about Waiheke and transport that are unique. We are a small island surrounded by an expansive piece of sea. Our roading network is narrow, fragile and expensive to maintain. Big trucks might be efficient for carting waste; however, their impact on the quality of life and the fragile roading system must be considered if we are not to externalise costs. Savings by using big trucks accrue to the waste operator, but the burden of road repair costs and decreased quality of life falls on the residents.

Given the consistent opportunity, people will do the right thing

The community-development approach used by the WRT and Clean Stream, its operating company, emphasises the importance of the relationship with households in the community because no sustainable change can be made without the first work being done at the household level. This is our third community-development principle:

Trust the people, because only the community can make real and lasting change.

Sometimes this approach brought WRT into conflict with the council. When it began in 2001, WRT instituted curbside collection of recyclables, and then demanded that recycling bins were placed alongside public litter bins. Council disagreed; they did not use public recycling bins in Auckland until 2008. WRT insisted and went ahead, arguing that you must give the public consistency of opportunity if you are going to make a sustainable long-term change (Halkier, Katz-Gero, Martens, & Hargreaves, 2011). The company advocated that it could not, for instance, train people to do one thing at home and another thing when they were out, because the dissonance this causes has a corrosive effect on a commitment to sustainable waste practices. The company's investment in community engagement and community waste-education built a consistency of approach to the constituency, which enabled real conversations about long-term change. WRT's not-for-profit status and visible investment in its community gave it a legitimacy that private-sector operators and council would struggle to achieve.

Waste is not an engineering problem, it is a problem of human behaviour

This fundamental principle is a most important lesson because, although the company invested in all kinds of clever engineering innovations, the most significant changes were made at the household level (Tonglet, Phillips, & Bates, 2004). If we cannot make sustainable changes at the household level, we cannot affordably solve the waste problem through engineering. The late George Blanchard, a longtime WRT board member who was himself a senior lecturer in engineering, once told us as a board: "I love machines. I have spent my life around machines, they have been my life work, yet I can tell you, as proficient as I am in the world of machines, there is no machine built which can outperform the human ability to learn and adapt and change processes."

The very best performances internationally, in communities whose demographics and density resemble ours, are systems where the householder is the primary sorter, and the secondary sorting happens at a curbside vehicle. These are very low-tech solutions, but they are enormously flexible. They can, for instance, add a new product to the recycling stream with minimal re-engineering and, with proper measurement and appropriate communications, can build success and share this with the communities

that enable this success. One of the real failures of the typical industrialised system is that it does not report to households or acknowledge their place in the system. Waste reduction is an ideal community-development project because community developers know this communication is their most powerful tool.

It's all about the sorting

In the materials-flow economy, the first thing we do to add value to a commodity is to sort and grade it. I learned this as a very young boy helping on a tomato farm. A case of tomatoes would be worth so many shillings a pound, and my job was to sort these into four grades. The lowest grade struck the rate per pound of the entire case, and every grade higher attracted a premium. It is pretty much the same with rubbish. One of the problems with the commingled collection system is that its outcome is a bigger problem than its inputs. Picture this: we have in one hand an empty egg carton and in the other hand a used sauce bottle. They are already separated, but we now put them into a single receptacle so they can be carted first to the industrialised Materials Recycling Facility (MRF) where a machine separates them, sometimes successfully, one from the other. We have taken what was separate, commingled it, compressed it, carted it, and we are now processing it to re-separate it. That is engineering madness. There are other problems with a centralised commingled system. Principal amongst these is that, to achieve the transport efficiencies required, the commingled recycled material is compacted at a higher than ideal density, and the glass tends to shatter. Glass slivers then contaminate the cardboard and paper, which can then no longer be recycled in New Zealand. Moreover, machinery is not available to sort the small particles of glass into the constituent colours, and the material is unsuitable for remanufacturing. As a result, the once reusable product must be recycled to lowest-value aggregate.

The waste hierarchy

It may be time to revisit the waste hierarchy. A more sophisticated waste-management system must now identify opportunities for upcycling materials as well as downcycling. However, the basic principle of the waste hierarchy is very sound and is mostly ignored. Reduce is at the apex of the hierarchy, followed by reuse, and third is recycling. The point of the hierarchy is that we only recycle materials which we have failed to reduce and failed to reuse. There has been too much celebration about the increased recycling volumes, particularly where the result is degraded materials with limited markets and products are permanently downcycled. The only sustainable long-term solution to reducing Waiheke's waste costs is to reduce Waiheke's waste. The waste operation must be governed by an organisation which is committed to waste

reduction first, reuse second and thirdly to recycling. Given the transport costs islanders face, recycling is appropriate only where it is unfeasible to reduce and reuse. This freight cost creates a tariff barrier which means as freight costs increase, local reuse becomes increasingly attractive.

The winning formula

Above all, WRT learnt in its island environment, given the transport problems and costs, the rule is:

“We should never move anything away from the island until it is at its highest value, greatest density, and we have extracted from it as much as we can use or earn locally.”

An examination of the domestic refuse found that, after removal of organics and various non-recyclable plastics, multimedia plastics and waste fibre constituted around 60% of the waste stream. Initial research and development with The University of Auckland’s engineering school developed a prototype plastic-fibre composite board made entirely from waste materials. This process was then further refined with a private-sector partner, and an engineered composite board (ECB) was developed. This board can utilise a significant part of the waste stream that is destined for landfill, and can incorporate waste, including hazardous material such as chipped, treated timber, which cannot be burned or buried because of the incorporated toxins. ECB was developed into domestic and building products. Two further university studies refined both the manufacturing process and business plans for the product, and the initiative gained international recognition in the Green Globe awards.

The company, along with the trust, employed up to 26 workers at its peak, including many staff who had suffered from long-term unemployment or irregular work. Intensive training and a ‘skills’-based pay system were introduced, and workers were encouraged up a promotion path and into qualifications. Two positions were created for severely disabled workers, and workflows adjusted to meet their health and rehabilitation needs. The company earned most of its money off-island and spent almost all its money on the island. The manual sorting system was more labour-intensive than the city plant but produced much better-quality and higher-earning recyclables. These better-quality recyclables continued to find markets during the Global Financial Crisis, when poor-quality recyclables from the city’s machine-sorted plant became valueless. Most importantly, jobs were created in a community that needed them. Capital is not always the answer.

The sharing of opportunities has been a deliberate strategy to broaden the WRT base and has resulted in its gradual ascendancy to the most prominent of the island’s NGOs, frequently acting as mentor and umbrella to other organisations. CSWL’s waste project supported community gardens, childcare centres, adult literacy, the schools, local environmental restoration initiatives, our local marae and many other community causes.

Key outcomes

- Improved training and employment for locals
- Improved environmental outcomes
- Strengthened community organisations
- A strong sense of local ownership, community capability and connectedness
- Strengthened community identity and civic pride

Nek minnit

In 2009 the WRT lost the contract for rubbish and recycling services to a multinational firm now owned by the investment arm of a Chinese municipality. By 2015 waste to landfill had increased by over 30%, and the support of community organisations had shrunk, as had the workforce. This sponsors a fourth (tounge-in-cheek) community-development principle:

No good deed goes unpunished.

The loss of the enterprise was an enormously frustrating and challenging time for the community, occurring, as it did, at the very time government was once again changing the structure of local government and moving the seat of power even further from local communities. Waiheke, as a tiny community of then 8000 people within the 1.4 million people covered by the new council, was often seen as a noisy irritant. However, democracy is something that island communities do very well and when the Royal Commission into the governance of Auckland sought submissions from those that hoped to govern it was shocked to find that 28% of all submissions came from the 0.58% of the population who inhabited the Hauraki Gulf islands.

What followed was ten years in the wilderness; despite some reasonably impressive protest events and the capturing of hearts and minds via both conventional and social media, the islanders were ignored, and the contract awarded offshore. The impact on the organisations and the political infrastructure was devastating. Our one reliable income stream was lost and relationships with a brand-new Auckland Council were at an all-time low. Gradually organisations and leaderships recovered and began to regroup after what had been a crushing defeat. We began to plot our eventual return, gathering under yet another Waiheke waste community-development principle:

We will need to grab all the rubbish for the poor before the rich find out how valuable it is!

Having lost access to the waste stream, we were forced to look more broadly at sustainability issues. The board of the WRT rewrote its constitution to

focus on the emerging global understandings around sustainability that eventually coalesced into the 2030 Agenda and the United Nations' 17 goals for sustainable development. Meanwhile, at the council level, a new waste team was beginning to understand that it had successfully killed off the most successful venture in waste reduction in the region. Tentative meetings were held, olive branches extended and some tiny contracts in community engagement around waste policy were awarded to the WRT. No such delicate dances of negotiation are without dead rats to swallow. At one stage the council insisted that they wanted to invest "to build the capacity" of the WRT so that it might at some future point have some small role in managing the waste on our island. This, we should understand, was being made as a genuine offer but by people who had never themselves managed a waste enterprise.

Over time the relationship began to improve, and new opportunities arose. Some of these sorely tested the relationships of the WRT with a wide range of community groups, when council officials began to pick the winners and attempt to instruct WRT about whom it should best work with.

A tortuously slow community consultation produced a very sound report in favour of a community resource-recovery park, and there was almost a riot when the council blithely ignored the report and recommended its own position, which it had developed years earlier. It recommended a small-scale community recycling facility with possibly as many as two jobs where once 26 had been employed.

On a more positive note, we were pleased to find the relationships that we had built in research and development continued. In particular The University of Auckland engineering school continued to partner with us to test new ideas on sustainability, such as the tidal power study and the community energy grid, and also revisited some of our earlier projects such as the engineered composite-board project, which underwent further testing and which the university's engineering students generously designed to go to scale.

Finally, in 2019 the council called for proposals for a new contract to manage the island's waste and recycling for the coming ten years. As I write, a collaboration of islanders, council officials and a council-owned business are within striking distance of finalising a contract which would return to the island a community resource-recovery park. In July 2020, this facility will open, utilising the operating principles developed under the CSWL operation. The new venture enjoys enormous community support as a result of almost 30 years of community-development work on waste in this community.

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Community development and social enterprise resources

Organisation

<http://www.wrt.org.nz/>

Engagement

<https://www.youtube.com/watch?v=KDT3FsZIKkl>
<https://www.youtube.com/watch?v=TyY7Ko5SZaQ>

Innovation

https://www.youtube.com/watch?v=5HUAJDT_Yyc&t=89s
https://www.youtube.com/watch?v=_hzlNKFrw4
http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10464715

John Stansfield (b.1958) is a serial social entrepreneur and head of pathways for Community Environment and Social Services at NorthTec Institute of Technology in Whangarei, New Zealand. John has worked extensively in the NGO sector in advocacy and leadership positions and has campaigned on sustainable-development issues for several decades. He is currently Vice President of the International Association for Community Development, IACD, and its Director Oceania, and is the President of the Aotearoa Community Development Association, ACDA. He is also Editor of *Whanake, The Pacific Journal of Community Development*. John holds a Master in International and Intercultural Management (MIIM, 1999) from SIT Vermont, USA, with a major in sustainable development; a Postgraduate Diploma in NGO Management and Leadership (NLM, 1997) from SIT, BRAC Bangladesh, and a Bachelor of Social Work and Social Policy (BSW, 1983) from Massey University, Palmerston North, New Zealand.