
Opportunities for Sustainable Economic Development in the Kaipara Harbour Region



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*"The splendid land in the vicinity of the Wairoa River
will be a favourite resort for the future colonist."
J. Polack, (1838)¹*

EXECUTIVE SUMMARY

This research was commissioned by the Rodney Economic Development Trust and Kaipara Development Agency to identify opportunities for *sustainable economic development* in the west side of their respective territories and to explore how they might collaborate to ensure a sustainable future for one of their most important shared resources, namely, the Kaipara Harbour and its environs.

The research uncovered certain themes and categories that hold an established or emerging competitive advantage for the region. However, rather than any one economic activity holding the key to sustainable economic development, the greatest economic gains are most likely to come from a combination of related activities. The challenge will be to see how various economic activities can be organised to complement one another in order to work towards a diversified and stable economy. Furthermore, looking at the Kaipara Harbour region in a holistic way to enable these complementarities will require new forms of governance and behaviour, new institutions, and perhaps organisations, collaboration and partnerships; in short, a more integrated approach.

The region's current economic strengths lie in agriculture (mainly dairy) with significant and growing viticulture, horticulture, aquaculture, organics, tourism and light manufacturing. Most of the settlements and townships within the region rely on these sectors to provide jobs either directly or indirectly in services and related ancillary businesses. These sectors will continue to provide the economic base in the foreseeable future. Indeed, sustainable economic development in the wider Auckland and Northland regions relies on their continued productivity. However, proximity to Auckland, rising land values, alternative land-use options, such as coastal subdivision and lifestyle blocks, pose a significant threat to continued productivity gains in some sectors, primarily dairy. Hence thought needs to be given now to their spatial and resource requirements.

There is considerable concern among residents and stakeholders over alternative land-use options, including the sustainability and productivity of lifestyle blocks, the retirement of productive land through subdivision, and the 'absentee owner' phenomenon. On the one hand, the absentee owner could be the perfect ratepayer, contributing financially (through rates) while using little in the way of services and amenities (roads, rubbish collections and so on). On the other hand, when

¹ *New Zealand: Being a Narrative of Travels and Adventures during a Residence in that Country between the Years of 1831 and 1837.*

large tracts of productive hinterland within a large city-region are retired from production it can undermine the economic base and sustainability of that city-region as a whole, as well as the sub-region concerned. Absentee owners were also seen as undermining a 'sense of community' or 'sense of place' when there are large residential developments with no one home or unproductive lifestyle blocks that are inhabited only at the weekends.

A productive hinterland relies on the city for business and professional services such as finance, legal, marketing, insurance, transport and logistics; the city relies on the productive hinterland for its continued supply functions (e.g. in food and export production) and economic sustainability. In order to relieve the pressure at least one of two things must happen:

1. Productivity must rise in rural areas to match rising land values. This may mean changing land-use patterns to provide better returns on capital invested, for example in moving to intensive horticulture production and/or higher value products and services.
2. Planning and regulatory processes must work towards nodal intensification rather than the retirement of productive land. However, the retirement of coastal, low or non-productive land may actually be beneficial to the economy if, for example, it is reforested and improves the quality of waterways and increases lifestyle, tourism, and aesthetic amenity values.

We believe that some thought must also be given to the balance between productive land-based activities and other economic activities such as telecommuting and home/internet-based businesses. However, we saw little evidence that the latter had in any large way compensated for the former, particularly in providing substantial economic development or employment opportunities for the region (this perhaps needs to be explored further as this issue was not within the scope of this report).

The key concerns identified through this research are:

- **Land-use:** Changing land-use patterns and concern about the reduction in available productive land.
- **Infrastructure:** A lack of effective infrastructure, mainly in terms of providing access and connectivity with the wider and neighbouring regions through road, rail, broadband and waterways.
- **Integrated management of major resources:** The sustainable and productive management of significant resources such as the Kaipara Harbour was often seen throughout this research as ad hoc and "add-on", with pieces of legislation being added (such as a national quota management system for fishing) without regard for impacts at a local level. There was strong support among the residents and stakeholders consulted for some form of integrated management of large, productive resources such as the Kaipara Harbour and its catchment areas.
- **The Resource Management Act:** Most individuals consulted agreed with the spirit and intent of the Resource Management Act (RMA), but found fault in its interpretation and implementation. That is, there is a perception that the RMA does not provide for a balanced and managed approach to development as intended; rather it provides legal rulings that are

often unbalanced or disproportionate. It is also perceived in some quarters as a major barrier to development and investment in the region due to the prohibitive cost of compliance.

- **Leadership, governance and regulatory alignment:** There is a strong perception that current leadership and governance arrangements, combined with a lack of regulatory alignment, often mitigate against a clear and strategic vision for the Kaipara Harbour region and/or an integrated approach to economic development.
- **Political versus economic/geographical boundaries:** The mismatch between the economic geography/functional region and political boundaries make it difficult to advocate for and implement developments of regional importance and scale. For example, rural productivity is vital to both the Kaipara and Rodney districts, yet their regulatory environments are quite different.

Key economic development opportunities lie in a combination of:

- **Food and beverage production:** Adding value to the economic base in food and beverage production by diversifying and enabling aquaculture, intensive horticulture, organics, secondary industry, research and development, and export.
- **Tourism:** Cultural, heritage, culinary and adventure tourism development, building on the economic base of the region and developments in localised food production, the vast aesthetic appeal, history and natural capital within the region.
- **Infrastructure:** Advocating for key enabling infrastructure developments such as wharves and [car] ferries, roading and rail upgrades, broadband and...
- **Energy production:** Sustainable and renewable energy, to ensure increased capacity and security of supply to underpin future development in the region, but also embedding the economic spin-offs (such as engineering, production and maintenance contracts) within the local region.
- **West Side Story:** Providing a "West Side" story that gives a single organising idea for connecting the west side of Auckland to the west side of Northland via the Kaipara Harbour region. It is a story that links the people, culture and history to the environment and the economy, one that can develop a shared 'sense of place' for the Kaipara Harbour region and its people. This has obvious spin-offs for tourism but is also a useful marketing tool for the region's economic activities and in building a 'regional offering' that is attractive to investors and new businesses who wish to associate with and locate next to developing industries and clusters.

The opportunity for the Kaipara Harbour region lies in the connection that these activities have rather than the discrete activities themselves. This will provide scale, scope and diversity, rather than reliance on a single firm, industry or sector. All future activities can then be seen in terms of their complementarity with, and contribution to, existing economic strengths and strategic advantages. However, all of these wealth-creating opportunities will require an integrated approach including strategic thought about:

- The 'functional region' and the opportunities that arise from its economic base, its comparative advantages (above), and its strategic position between Auckland (the largest city in New Zealand) and Whangarei (the largest Northland city). As an example, region-wide advocacy for improved broadband (a mix of wireless and hardwire) has a much greater chance of being heard when the strategic fit enables wider regional aspirations to be met concurrently. These kinds of strategic developments, in an international context, are

often achieved through empowered development agencies, trusts or special purpose organisations.

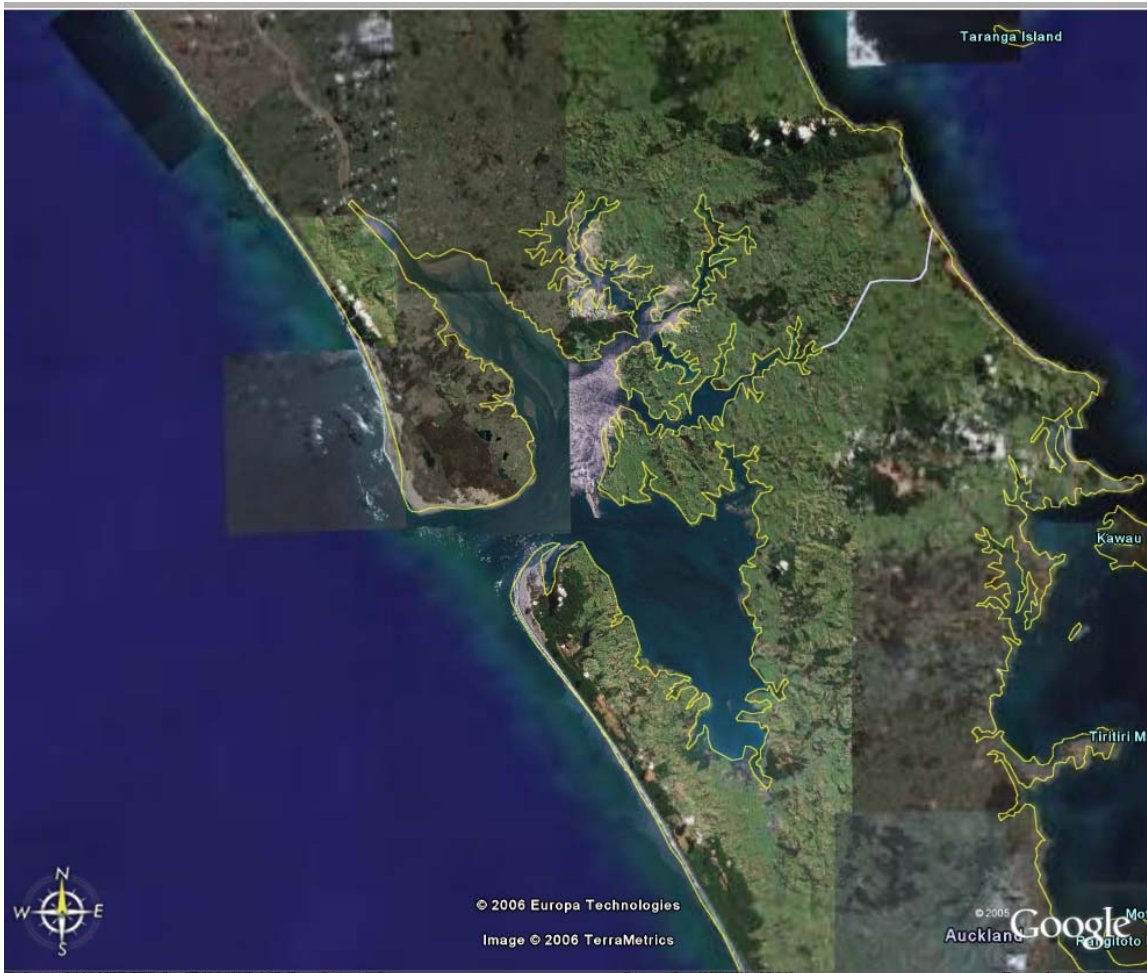
- How the interconnections between Auckland, Hamilton, Tauranga and Whangarei present opportunities for rural and semi-rural areas to maintain productivity and to lobby for increasing intensification in, and connectivity between, those cities. In doing so the Kaipara Harbour region can expect to increase productivity through reduced transaction costs (e.g., in increased transport and communications capacity and connectivity) and by ensuring that those developments benefit the functioning of the local economy.
- How the region can add value to the Auckland and Northland regions' aspirations for visitor experiences and tourism.
- How to develop a shared sense of place. Support for nodal intensification, allowing for plenty of open space with wildlife areas and aesthetic amenity, came through strongly in the consultation along with – and balanced against – the desire to have productive rural areas, towns, villages and settlements and the ability to work locally in a diverse and robust regional economy.
- Developing an increased understanding of city–region dynamics and the mutually reinforcing economic activities of cities and their surrounding hinterlands. This is particularly important in the New Zealand context where “regions” (in the rural sense) are highly productive.

INTRODUCTION

Research objectives

This study was jointly commissioned by the Rodney Economic Development Trust and the Kaipara Development Agency to provide local decision-makers with relevant information to help inform future strategic directions and to help develop a platform for future projects aimed at increasing exports, wealth and employment in the Kaipara Harbour region. It therefore attempts to decrease uncertainty around certain strategic directions that may already be apparent, but at the same time attempt to uncover and develop any new ideas that may fit with the profile and aspirations of the Kaipara Harbour region (loosely defined as the Kaipara Harbour and its environs, encompassing both Rodney and Kaipara Districts; see Figure 1).

Figure 1 : The Kaipara Harbour Region



Underpinning this research is a conviction that Kaipara Harbour region communities have a right and an expectation that they will be able to not only live and play, but also work and do business

in their environs, including providing for their own well-being while also making a contribution to the regional and national economies now and in the future.

Methodology

In the preparation of this report, the researchers gathered information from two principal sources: (a) a review of secondary data, previous reports, strategies and initiatives; and (b) by canvassing the views of representatives from businesses and industry sectors operating (or intending to operate) in the Kaipara Harbour region and key stakeholders, including Māori, political and environmental groups. The business/industry representatives and key stakeholders included in this study were selected by the researchers, the Kaipara Development Agency and Rodney Economic Development Trust, mindful of the need to ensure appropriate sector representation. Information was gathered by means of small-group and personal interviews (24), focus groups (2) and a postal survey (completed by four respondents). In total, 48 individuals were consulted.²

The survey instrument used in the interviews and postal survey was a semi-structured questionnaire, developed by the researchers in consultation with the Rodney Economic Development Trust and Kaipara Development Agency.³ A slightly modified version of this questionnaire was used in the two focus group discussions.⁴

The interview and focus group questionnaires were designed to elicit the information required to inform the research, but were semi-structured so as to give the interviewees as much opportunity as possible to share their industry/regional knowledge. In both cases, the key questions posed were:

1. What are the major constraints to sustainable economic development in the Kaipara Harbour region?
2. What are the key opportunities for sustainable economic development in the Kaipara Harbour region?

Although we asked about both constraints and opportunities, the research focus was particularly on the latter and this report reflects that emphasis.

Themes

Given the nature of semi-structured surveys, responses were wide ranging. Nonetheless, certain themes were evident in relation to opportunities for economic development; the key themes are summarised in Figure 2. The diagram shows that food production, energy and tourism were most

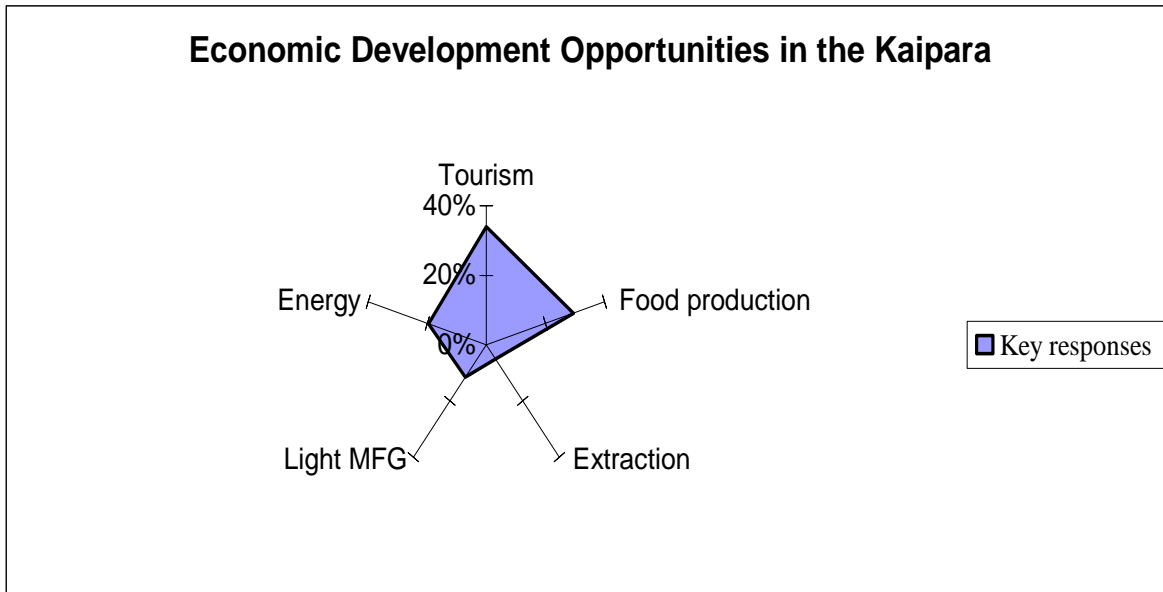
² The individuals/organisations consulted and the sectors they represent are listed in **Appendix I**.

³ See **Appendix II**.

⁴ See **Appendix III**.

commonly cited as the key opportunities for sustainable economic development in the Kaipara; light manufacturing and extractive industries received only modest support.

Figure 2



In the following sections, we discuss the key opportunity sectors identified by the respondents. However in order to fully appreciate the barriers and opportunities, this discussion needs to be located within both international and local contexts. To this end, we begin with a brief overview of the global context followed by an overview of local conditions (land, labour, infrastructure, economic activity and development) which dictate the way that the Kaipara Harbour region can develop.

This is followed by a detailed discussion of the food production sector, focusing on the established agriculture sector (which is dominated by dairy), horticulture and marine-based food production. Our attention then moves to the tourism sector, focusing primarily on culinary and harbour-based activities. The next section focuses on the energy sector, which is approached from the perspective of security of supply as well as its potential social, economic and environmental impacts. Light manufacturing and other sectors are briefly discussed before concluding the report with a discussion of governance issues concerning the Kaipara Harbour region. This final section also explores possible future directions.

GLOBALISATION AND THE LOCAL ECONOMY

On a global scale there are serious threats to resource-based economies such as the Kaipara Harbour region. China, India and other developing nations see industrialised food production as a development pathway and therefore are willing to “buy their way into the market” by taking lower margins or initial losses as a market entry strategy and/or to “compete on price” exploiting lower labour, and therefore production, costs. Floriculture for example is a specific industry segment where China poses a significant competitive threat to economies like New Zealand due to low-cost high-volume production in some species. But that is not all that these economies are doing to grow their economies. India, for example, is leading the world in the growth of outsourcing “back office” functions such as finance and accounting, customer communications, payroll systems etc. While this may seem at first relatively benign there is increasing concern that professional and technical functions in developed countries are increasingly at risk as well due to the high number of cheaper well-educated workers in developing countries, particularly India. For example Infosys, a large multinational company with a significant presence in India specialising in outsourcing, recently posted a 50% increase in business in the last quarter (BBC World, 11/10/06).⁵

In a recent keynote address to the “Driving Local Competitiveness” conference (Wellington 2006) Professor Michael Enright of Hong Kong University highlighted what he saw as major global influences on economies. These included:

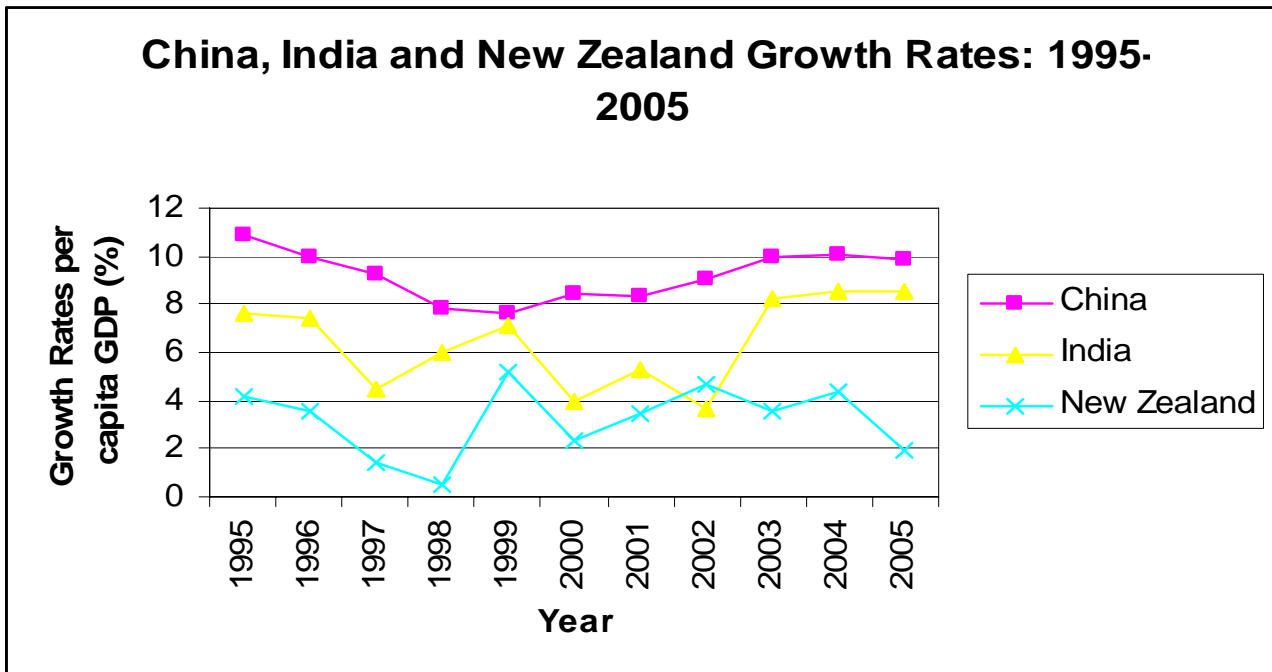
- The rise of China and India
- The emergence of knowledge, innovation and the ‘creative economy’ as key economic drivers in the 21st century
- Local and regional competitiveness rather than national competitiveness on a global stage (cities and regions as units of competition)
- Reform and governance pressures on local leadership to meet the dual responsibilities of local democracy and economic sustainability
- Resource prices (land, labour and capital)
- The globalisation of competition (new forms of competition, new business models, outsourcing etc)

Figure 3 represents the comparative growth rates of China, India and New Zealand over the last 10 years. It is clear that, with the exception of particularly favourable exchange rate and commodity price conditions in 1999 and 2002, the New Zealand economy has grown at a far slower rate than either China or India. In terms of labour cost competitiveness New Zealand’s GDP per capita (average income per head in year 2000 \$US) is \$US 15,133.00; China \$US 1,455.00; India US\$ 586.50.

⁵ <http://www.bbcworld.com/content>.

New Zealand will not compete on labour costs alone; moreover, in terms of productivity, New Zealand performs poorly against other OECD countries and does not have anywhere near the differential needed to compete on this basis with China or India.

Figure 3



In the recent "Metro Report" prepared by the Metro Auckland Project Team there was a discussion on globalisation and regional economies. The following has been adapted from this report.

"New Zealand is a relatively open economy, and therefore is able to benefit from the rise of the global economy through increased competition, innovation, and access to new opportunities for business. However, the growth of rapidly industrialising economies such as China and India and the fast pace of technological change also brings new challenges and opportunities that have to be embraced at national and sub-national levels. This is coupled with the challenges of a geographical location away from major markets.

The removal of trade barriers along with advances in information technologies have enabled greater competition in service sectors (e.g. through new forms of outsourcing) that were previously shielded from international competition. So the benefits of globalisation cannot be achieved without accepting change and working differently, especially at the regional level where local market conditions can be addressed. Resources are shifting away from traditional industries and into new ones where they can be put to more productive use and the rate of change is increasing as developing

countries increase their share of world trade. Traditional industries are modernising and specialising at a faster rate than previously.

This change provides greater scope to exploit economies of scale, enhance the dynamic forces of competition, reward innovation and provide better opportunities for technology transfer and commercialisation of knowledge, all of which increase the incentives and opportunities for investment. Nations and regions have to seize this opportunity. However, the transition can result in insecurity and will involve adjustment costs. This is especially true of the costs of changing land uses and infrastructure for a modern economy ... and the cost of adjusting the skills of people and the orientation of firms to a new and more knowledge intensive economy.

Increasing globalisation brings risks of widening economic disparities between localities and communities. Large-scale industrial and agricultural change has already led to economic decline in many places resulting in deprivation and localised concentrations of poverty. The shift towards higher value and higher skill activities can further worsen localised disparities. **The challenge then is to identify how the shift towards higher value activity can be used to support the revitalisation of disadvantaged areas, and to understand how to modernise those sectors that can continue to be productive and how to open up new opportunities** [emphasis added].

Because economic activity is now more mobile, it is important to understand the factors that drive business locations and the associated decision of investors and workers about where to locate. **Regional economies can be viewed as sub-national markets in which location decisions are played out, and where market failures and weaknesses need to become the targets of action. Regional economies can also develop their own sources of growth. They rely upon their embedded assets, their patterns of development, their human capital and innovation to shape their economies and how they adapt to change circumstances** [emphasis added].

As barriers break down between markets, and technology enables more goods and services to be traded, locational decisions of firms, investors, and individuals become more complex. But this requires national and regional economies to continuously review their comparative advantages and to refresh what they have to offer global markets. Comparative advantages for a region will change over time according to the ability of firms and individuals to learn from interaction within the global economy.

Maximising growth in the performance of regional and/or other sub-national economies means ensuring that the market failures that hold back the drivers of growth (infrastructure, skills, enterprise, innovation, investment) are tackled effectively.

Regional economies have particular institutional, cultural and environmental conditions that shape how the drivers of growth can be promoted or unlocked and how the barriers to growth can be tackled. Regional economies also have particular strengths and fixed territorial assets (natural and physical capital) that provide the basis for economic development, and shape what is possible, at least in the short term.

Highly functional regional economies are where markets and regional assets combine. The benefits of proximity to cities and towns enable agglomeration, and enable businesses to be more productive. They also emphasise a need to address social and environmental imperatives effectively.

Limitations and conflicts can arise when political, institutional, and administrative regimes do not match functional regional economies. The boundaries of local and regional governments often do not correspond to economic, social or even physical geographies. They are often relics of previous development phases that have now passed, or are quirks of accident and political history. Regional governments rarely preside over functional economic regions. Few national governments have the time, or resources, to continuously re-organise boundaries, and so collaboration and flexibility across boundaries is often required.

The goal is to organise the efforts of governments, at all levels in securing outcomes for places, not simply in making narrow and institutionalised inputs. Flexibility and collaboration is critical to achieving these outcomes. A key focus is therefore on the capacity of local and regional leaders to broker and articulate common agendas and future plans around which resources and investment can be organised." (Metro Auckland Project Team, 2006) [emphasis added]

Regions that have recognised these factors often empower economic development organisations to mediate across public and private boundaries, be market-led, and to facilitate and spearhead strategic initiatives. This approach derives from recognition that a concerted regional effort is more effective at delivering outcomes that are beneficial to the region than relying on outside market forces to drive development within the region.

Understanding the economic geography is therefore the key to assessing the potential of a region and its ability to attract investment. A degree of decentralisation is important for optimising the functionality and competitiveness of a region, but safeguards are needed to ensure optimal outcomes for the region as a whole, rather than disconnected or even parallel agendas (where they are not optimal for the region as a whole) and developments. The Kaipara Harbour region has some challenges in unlocking its economic potential, not the least of which are hard infrastructure

shortcomings and an economic geography that does not fit with political and governance boundaries and layers. In order for holistic, sustainable and integrated economic development to occur in the Kaipara Harbour region a more cohesive and integrated approach is needed, not only to balance environmental concerns with economic considerations, but to ensure that in an increasingly globalised world, where goods and services, firms and industry sectors, finance, and knowledge advantages move quickly, that it acts strategically in order to remain competitive and to create and maintain an upward spiral of investment and employment rather than a downward spiral of disinvestment and economic leakage.

The Kaipara Harbour region has some natural and locational advantages such as its highly productive and fertile soils, natural beauty, and its proximity to and relationship with the largest market in New Zealand, namely Auckland. Historically the relationship between Rodney District Council and the greater metropolitan Auckland region has been fraught, with periodic calls to either form a unitary authority or alternatively work with Northland. Kaipara District Council has tended to work with the Northland region and falls within the Northland regional boundaries. Recent discussions have seen Kaipara District attempting to work with the Rodney District in relation to economic development opportunities. This makes sense in terms of both the physical and economic geography. It should not be a case, however, of either one or the other; rather it should be a case of thinking strategically about the 'functional region' and the opportunities that arise from its economic base, its comparative advantages, and its position between Auckland City and the largest Northland city. The interconnections between Auckland, Hamilton, Tauranga and Whangarei present opportunities for the rural and semi-rural areas to maintain productivity and to lobby for increasing intensification in those cities (and smaller towns within the region) rather than acceding to sprawl as an economic development strategy.

Cities provide opportunities for regional hinterlands to engage with a global economy, access business and professional services, finance, and logistics, and to benefit from concentrated markets. In order to ensure long-term sustainability decisions must be made within the Kaipara Harbour region as to how to maintain and build on its comparative advantages, while at the same time allowing for future demographic growth. **This can only be achieved by allowing for intensification of existing towns and villages, safeguarding rural productivity, and reinforcing the economic base with value-added activities through research and development.** There is no point in trying to duplicate the functions of large cities in small towns. It does however make sense to strategically support the wealth creating activities and comparative advantages within the region, to build long-term competitive advantages that will compete both nationally and internationally.

LOCAL CONTEXTS

Physical, political & historical context

The Kaipara Harbour is the largest enclosed harbour and estuarine system in New Zealand (McEwen, 1987, p. 9). Its northern side falls within the boundaries of the Kaipara District Council and Northland Regional Council, while the southern side lies within the jurisdiction of Rodney District Council and Auckland Regional Council.

The harbour encompasses a variety of environments including inter-tidal mudflats, mangrove forests, swamps, sandflats and saltmeadows. It is an important habitat for diverse flora and fauna, including globally threatened species (Cromarty & Scott, 1995), and has been identified as a site of significant wildlife interest (SSWI) with a wildlife habitat value ranked as outstanding (Auckland Regional Council & Northland Regional Council, 2006).

The land surrounding the harbour is similarly diverse, with sand dunes, river valleys, rolling hills, steep ranges and some unmodified native forests. Land within the catchment area has been heavily modified by human occupation; formerly covered in extensive forests and wetlands, the area is now primarily pastoral (Elmetri, Divett, Cornelisen, Gibbs, & Barter, 2006, p. 5).

Archaeological evidence indicates that the lands surrounding the harbour were, at different times, extensively settled and contested by Māori (Waitangi Tribunal, 2006, pp. 13-14). The hapu and iwi groupings of influence in the region include Ngati Whatua o Nga Rima in the south, and Te Uri o Hau and Te Roroa in the north, with Ngati Manuhiri and Ngati Wai to the east.

Demographic profile

The demographic profiles for Rodney and Kaipara Districts are diametrically opposed in relation to a number of key indicators. For example, with an estimated resident population of 18,050, the Kaipara District has one of the lowest population densities in the North Island at 6 people per km² (Statistics New Zealand, 2006). Population projections predict a 3% decline by 2026 (Statistics New Zealand, 2005). The population of Rodney, on the other hand, was estimated as 89,200 in 2005 (density of 37 per km²) and is expected to increase more than 50% in the next 20 years (Statistics New Zealand, 2006).⁶

In terms of ethnic make-up and income, the two populations are again dissimilar: in 2001, Māori represented 22% of the Kaipara District population but only 9% of Rodney's (Ministry of Social

⁶ Population projections for the Helensville catchment in Western Rodney are for an 88% increase in population between 2001 and 2021 (= 8,400 in 2001 to 15,800 residents in 2021) (Speer & Starr, 2006, p. 26)

Development, 2006); in the same year, 18.1% of Rodney's population lived in low-income households⁷ compared with 28% in Kaipara (Ministry of Social Development, 2006).

With respect to education, the proportion of people aged 15 and over in Kaipara holding a post-school qualification was 22.3% in 2001 compared with 30.2% in Rodney (just below the New Zealand-wide average of 32.2%) (Statistics New Zealand, 2001).

All of these projections are, however, based on trajectories taken from historical trends. The continuing decline in population predicted for the Kaipara District does seem at odds with predictions of continued growth in both the Auckland region and the fast-growing Rodney District, which is likely to impact on the Kaipara Harbour region. This is already evident in the region's recent popularity for lifestyle blocks and residential developments, largely driven by their relative affordability.⁸ This latter trend also has the negative effect of retiring productive land, as discussed in more detail below.

Infrastructure

Infrastructure is often cited as key to facilitating economic growth. Given the Kaipara Harbour region's low population density and rating base, it was not surprising that in this consultation respondents identified infrastructure as a major constraint to economic development in the region. In this regard, roading, telecommunications and power were the most commonly cited issues. Many informants (largely unprompted) supported the idea of building wharves in the harbour to improve water-based transportation and tourism opportunities.

Improving infrastructure (roading, rail, transport, electricity and communications) is one of the six key strategies for improving economic growth in the *Kaipara District Economic Development Strategy* (Kaipara District Economic Development Trust, 2002) while the *Strategy for Rodney's Economy* (Rodney District Council, n.d.) recommends strategies to deal with roading, stormwater, energy, signage, water supply, communications and sewerage.

There are considerable barriers to improving infrastructure in the two Districts. For example, the Kaipara District Council administers over 1500km of roads, only 23% of which are sealed (Northland District Council, 2006, p. 37); roading costs account for 70% of the Council's expenditure. Internet uptake is hampered by limitations in broadband capacity (Northland District Council, 2006) and cellphone coverage is patchy; a low population density limits the lobby power of residents to

⁷ Defined as "households with gross real income less than 60% of the median equivalised national income benchmarked at 2001" (Ministry of Social Development, 2006).

⁸ For a detailed discussion on the impact of the increasing numbers of lifestyle blocks and other smallholdings see Sanson, R., Cook, A. and Fairweather, J. (2004). *A Study of Smallholdings and their Owners*, MAF Information Paper No: 53. This report notes that in 2003/04, lifestyle blocks in the Kaipara District numbered 2,759 at an average of 3.78 ha.

demand improvements. In Rodney, projected population increases will put mounting pressure on local infrastructure, some of which is already under strain:

"...congestion is becoming a significant issue in parts of the district, particularly for Hibiscus Coast. There are plans for significant further development on the Hibiscus Coast, which will create additional traffic volumes. ... Weekend and holiday period congestion is increasingly common on the main routes north of Auckland, and is particularly acute in and around the urban centres and towns in Rodney, which act as bottlenecks."
(Rodney District Council, 2006, p. 6)

Like Kaipara, transport costs are significant; in Rodney, they account for around half of the annual budget (Rodney District Council, 2006).

Infrastructure constraints are considerable for the Kaipara Harbour region, however the interconnections between the diamond of cities in the top half of the North Island (Auckland, Hamilton, Tauranga and Whangarei) are critical to New Zealand's economic transformation agenda. In our view there is an opportunity to lobby for increased connectivity between Auckland and Whangarei through road, rail, air services and broadband capacity. These are absolutely critical for the Kaipara Harbour region to remain competitive in a global context. The economic base as it stands is not enough and is vulnerable to 'land hungry' development pressures, therefore businesses within the region need to be supported in their bid to remain competitive and in providing downstream value-added products, increased productivity, and jobs. Global connectivity, reduced transaction costs, and access to knowledge and information technology are at the heart of that competitiveness.

Economic activity and economic development

Current economic activities centre on agriculture (with a large dairy sector); horticulture (with clusters of activity around kumara and specialised foods such as capsicums), viticulture, sand mining and quarries. Emerging industries include aquaculture, organics, tourism, and marine, along with support sectors such as light engineering and construction in the various service towns and townships.

The region is therefore a predominantly resource-based economy, mainly servicing the domestic market but with some significant resident export businesses mainly in dairy, forestry and horticulture. While the area is seemingly rich in natural capital (natural assets/resources), it is relatively under-resourced in physical capital (plant and machinery) and secondary industry, human capital (in both population density and skills), and financial capital (with two councils dealing with low rating bases and high expectations for infrastructure development, and no large centres for business, financial and professional services). Economic activities in the region are coming under increased pressure from external sources; for example, proximity to Auckland, giving rise to increased land values, alternative land-use options such as coastal subdivision and lifestyle blocks, poses a significant threat to continued production in land-based economic activities in particular.

The *Northland Strategy for the Sustainable Economic Development* characterises the Northland economy as “robust ... with a strong focus on agriculture, aquaculture, horticulture, forestry and tourism” (APR Consultants, 2002, p. 8). A survey of local businesses identified primary industries (forestry, fishing, aquaculture, agriculture, horticulture) and tourism as “key sectors for the future development of the region” (APR Consultants, 2002, p. 11). During the consultation that informed the Strategy, a wide range of projects of relevance to sustainable economic development were identified as warranting further investigation, as outlined in Table 1:

Table 1 : Projects warranting investigation by the regional development agency

<ul style="list-style-type: none"> ▪ Labour pools. ▪ Labour market audit. ▪ Planning groups to address skills development. ▪ Retirement village opportunities. ▪ Regional forestry marketing strategy. ▪ Information technology awareness. ▪ Aquaculture research. ▪ Demonstration farms. ▪ Northland guaranteed service standard. ▪ Northland sports academy. ▪ Dedicated creative industry training institute. ▪ Signature events. ▪ Business incubators. ▪ Northland health council. 	<ul style="list-style-type: none"> ▪ Coordination of seasonal labour. ▪ Shuttle buses for trainees and employees. ▪ Multi-faceted youth centres. ▪ Added value in the forestry industry. ▪ Information technology infrastructure evaluation. ▪ Computer recycle points. ▪ Enhanced fish stocks. ▪ HortResearch facility upgrade. ▪ Community banks. ▪ Northland regional creative industries trust. ▪ Northland cultural ambassador. ▪ Te Papa North. ▪ Northland regional community foundation.
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Information gleaned during the development of the *Strategy for Sustainable Economic Development of Northland*, along with information from other sources,⁹ was used to inform the *Kaipara District Economic Development Strategy*. That Strategy identifies the agriculture and dairy sectors as playing a major role in future growth for the District; other growth areas “are likely to include forestry, tourism, horticulture, construction, and new Maori business opportunities.” (Kaipara District Economic Development Trust, 2002, p. 18). These areas are largely consistent with those that are identified in the Strategy as having been identified by past research as key economic opportunities:

- “Enhancing agricultural profitability.
 - Expansion of horticulture.
 - Expansion of forestry including processing.
 - Further development of tourism industry.
 - An increasing number of Maori business opportunities.
 - Potential for increased provision of aged care services.”
- (Kaipara District Economic Development Trust, 2002, p. 18)

⁹ Namely, the Kaipara Establishment Group, the Dargaville Flood Relief Business Recovery Project, the Kaipara District Council Annual Plan 2001-02, the Kaipara District Council Strategic Plan 2000, and the Kaipara District Economic Development Trust Deed (Kaipara District Economic Development Trust, n.d.).

The document also identified a number of barriers facing economic development in the Kaipara and Northland regions generally, including:

- Improving educational outcomes
- Improving infrastructure such as roads, rail, air services and telecommunications
- Finding ways to use new technology to compete nationally and internationally
- Finding ways to smooth out season fluctuations in terms of income-earning opportunities
- Enabling better utilisation of Māori land
- Overcoming outsiders' negative perceptions about the district and region

In 2001 Tai Tokerau Management Consultants produced a report for Te Puni Kōkiri examining economic development in Tai Tokerau (Northland) from a Māori perspective, based on interviews with individuals involved in Māori organisations and businesses, and Māori in leadership roles in relation to economic development.

The opportunities for Māori economic development identified by the respondents centred in particular on land development, fisheries (including aquaculture) and tourism. In terms of barriers, the key themes were as follows:

- "Access to finance
- No asset base, eg land, capital
- Treaty of Waitangi (TOW) claims settlement
- Skilled human resources – growth of human capital
- Organisational management structures
- Industry development" (Tai Tokerau Management Consultants, 2001, p. 7)

The *Strategy for Rodney's Economy* (Rodney District Council, n.d.) identifies bio business,¹⁰ tourism, forestry/quarrying, manufacture/commerce, community life and education/training as "important platforms from which to build on" (Rodney District Council, n.d., p. 10). The barriers facing some of these sectors are detailed in the report as follows:

¹⁰ Defined as "horticulture, flower and seed production, ... marine farming (excluding fishing and fish products), animal husbandry, including meat and dairy farming, and dairy products" (Rodney District Council, n.d., p. 32)

Table 2 : Sector-specific barriers to economic development

Tourism	<ul style="list-style-type: none"> ▪ “The low level of performance by operators in the industry ▪ Limited industry development ▪ Inadequate participation in regional marketing ▪ Modest awareness of attractions of the district ▪ Inadequate tourism infrastructure ▪ Sustainable tourism management” (Rodney District Council, n.d., p. 31)
Bio business	<ul style="list-style-type: none"> ▪ “Steep increases in land values due to lifestyle conversion putting pressure on the financial viability of agriculture ▪ The loss of good quality soils due to non-agricultural development ▪ Reduced water quality, especially affecting marine farming ▪ Conflict between agricultural and lifestyle activities ▪ Access to start-up capital and new technologies” (Rodney District Council, n.d., p. 32)
Forestry & Quarrying	<ul style="list-style-type: none"> ▪ Sustainable management ▪ Mitigation of negative impacts (Rodney District Council, n.d., p. 36)

In a study based on interviews with 30 key business and council stakeholders, Speer & Starr (2006) set out to examine the likely nature of future economic development in Rodney’s Western Sector (that is, the Kumeu and Helensville catchments) and to recommend steps that could be taken to foster this development. That study produced a SWOT analysis, as set out in Table 3.

Table 3 : SWOT analysis for Rodney Western Sector

<p>Strengths:</p> <ul style="list-style-type: none"> ▪ “Cohesive communities ▪ Attractive natural landscapes ▪ Tourism attractions developing ▪ Good natural resources ▪ Diversity ▪ Attractive lifestyle opportunities ▪ Proximity to Auckland for employment ▪ Land still available for growth ▪ Geographically separated from Greater Auckland gives identity, some economic advantages, and an opportunity to define your own future in terms of scale of growth, where, standards and amenity 	<p>Weaknesses</p> <ul style="list-style-type: none"> ▪ Small, lower-wage economy ▪ Infrastructure challenges in some areas, water, stormwater, wastewater¹¹ ▪ Floodplain issues ▪ Limited roading – a “one road” network ▪ Large distances between village centres, coupled with a small population base, make economic development more challenging ▪ For some communities, significant distances to Auckland limit business opportunities ▪ Local employment needs must rely on business growth in nearby areas like Westgate and North Shore ▪ Increasing conflicts of interest between different types of land users
<p>Opportunities</p> <ul style="list-style-type: none"> ▪ Cluster new businesses into activity nodes ▪ Encourage higher density agricultural businesses ▪ Provide more mid-price tourist accommodation ▪ Kumeu needs a genuine town centre focal point with design standards that set the theme for the area; good for locals and tourists ▪ Commuter rail transport to Helensville ▪ Strengthen tourism marketing covering all of the entire Western Sector as a year-round destination ▪ Capitalise on unique natural features like Muriwai Beach and Woodhill forest venue for recreation 	<p>Threats</p> <ul style="list-style-type: none"> ▪ Water and wastewater limitations in some areas ▪ Inadequate electricity supplies ▪ Natural gas shortage will affect glasshouses and other industries ▪ Petrol price increases make inter- and intra-district travel increasingly expensive ▪ Ongoing rural land subdivision is breaking down the base of key economic industries in agriculture and tourism.” <p style="text-align: right;">(Speer & Starr, 2006, pp. 11-12)</p>

Speer and Starr’s report advocates for the use of intelligent planning and increased connectivity through transport infrastructure to take advantage of the Rodney Western Sector’s proximity to Auckland. Building on these tools there is also a strong emphasis on tourism development including the need for more accommodation. While we would endorse these measures at a local level we

¹¹ Although not included in the Speer and Starr summary of their SWOT analysis, patchy broadband coverage was also noted as an issue elsewhere in the report.

would encourage the audience of this report to think about the connections that this area has to the Kaipara Harbour region as a whole and the opportunities that arise from thinking holistically.

Building from an already strong economic base will provide a basis for tourism development that is not reliant on natural attractions or passive scenic tourism. Food (both land and sea) production, sustainable energy, and forestry managed correctly could all add to the attractiveness of the region, as discussed below. Similarly, we encourage consideration of how the Rodney District's Western Sector could provide a staging point for a "west side story" that connects burgeoning cafes, restaurants, wineries and wine trails, natural assets, adventure tourism and recreational facilities with the Kaipara Harbour region's culinary, cultural (particularly Māori) and heritage (for example Matakōhe and Dargaville museums) tourism products, the Twin Coast Discovery Highway and other major international tourism products in Northland. While we share Speer and Starr's observation that there is a lack of accommodation product we believe that there is the opportunity for investment in line with international tourism demand and latent domestic demand for "authentic visitor experiences". This can be encouraged by opening up the Kaipara through road and waterways and by providing public access through [car] ferry access in and around the harbour with access points that could include Helensville, Shelly Beach, Port Albert, Pouto, Tinopai and Dargaville. Increased accommodation needs increased attractions and tourism products in parallel. A coordinated and cohesive approach by Māori and the primary councils concerned in a drive to build a "west side story" would send the right messages to the private sector to invest in new tourism opportunities.

Iwi groups have indicated their desire for the development of further cultural tourism products such as the Te Hana marae experience concept (that is both on Highway 1 and has access via the upper reaches of the Kaipara Harbour), Te Roroa looking to develop small-scale tourism and accommodation products north of Dargaville, the night walk cultural experience operating from the Copthorne Hotel at Omapere and the developing "digital heritage centre" that will tell the stories of Kupe and the local iwi in and around the Hokianga. This provides tourism and accommodation operators alike with the opportunity to provide interesting, authentic and diverse experiences that will build on and complement the already established and well-developed tourism and leisure products that largely operate in and around State Highway 1, the east coast, and Paihia.

KEY SECTORS

In the following sections, we discuss each of the key sectors identified in the consultation as opportunities for sustainable economic growth in the Kaipara Harbour region (as summarised above in Figure 2). The discussion also summarises the conclusions of prior studies (where available) and grounds these within the current discourse. As noted in the introduction, the research focus was primarily on identifying opportunities for economic development within the region.

Food production

Agriculture / dairy

The significance of the primary sector to the Northland region can be readily seen in key statistics. In 2005 the sector accounted for 16.8% of employment, 15.5% of GDP and 38.2% of business units in the region (Statistics New Zealand Regional Labour Market Report: Northland). Within the primary sector, agriculture and services to agriculture industries were the region's biggest industry sector in 2005, employing approximately 7,637 FTEs (full-time equivalent employees), representing 14.3% of employment.

The Northland region has around 9.5% of New Zealand's dairy herds (Livestock Improvement Corporation, 2006). In 2004/05 there were around 1,100 herds in Northland with an average herd size of 255 cows; the Kaipara District has the largest concentration of herds and cows in the region. This is consistent with the 2001 Census,¹² which identified agriculture as the most popular occupational group in the Kaipara compared with service and sales for New Zealand as a whole (Statistics New Zealand, 2001).

Direct employment in agriculture is accompanied by indirect employment engaged in services to agriculture and processing, which in the Kaipara District is dominated by the large Fonterra milk processing plant at Maungaturoto. A recent study of the Taranaki region estimated that the dairy processing industry has an employment multiplier in the region of 6.5 (NZIER, 2002, p. 17) which emphasises the importance of processing to a host region.

The importance of agriculture to the New Zealand economy is clearly set out in the Ministry of Agriculture and Forestry 2003 report: *The Contribution of Land-based Primary Industries to New Zealand's Economic Growth*. The report outlines the business environment and policy framework in which both agribusiness and forestry operate. It also highlights the scale and contribution of the sector and identifies the complex forward and backward linkages involved in agricultural

¹² The final data from the latest Census are not yet available but are due to be released in December 2006.

production. The report observes that it is difficult to quantify the growth potential of the New Zealand dairy industry but emphasises that:

"...leading edge biotechnology has great potential to drive productivity gains and new product development... [and] ...the scale of the industry means that [even] small productivity and output gains have large aggregate effects." (Ministry of Agriculture and Forestry, 2003, p. 20).

It is obvious that dairy production is a key economic base for the region providing employment and returning wealth to the region. This has multiplier effects in both employment terms and dollar terms. The opportunity here may lie in increased productivity, but it is hard to see, given other pressures on land use and land values, that this alone will provide sustainable and/or substantial returns to the region as a key focus. Rather, the opportunity is likely to lie in the value-added components that a focus on secondary food production (such as Puhoi cheeses) and/or functional foods and "nutraceuticals" might bring.

Horticulture

A climate, soil and crop information study, initiated by the Far North District Council and Kaipara District Council in 2003, assesses the suitability of land for selected crops in the Western Kaipara and the Hokianga. The study highlights the potential diversity of the region, identifying a variety of new crops that could be brought to scale in the Kaipara, including peanuts, blueberries, avocados and hydrangeas (as detailed below) but such research into the region's soils and climate is also of considerable benefit to traditional agriculture.

Table 4: Potential crops

Crop	Potential	Areas
Māori potatoes	Med-High	Wairoa River plains / western side of Pouto Peninsula / Punakitere River basin / northern side of Lake Omapere
Manuka (for oil)	Med-High	Area east of Tokatoka, Awakino, Punakitere River valleys. Lake Omapere / northern side of the Hokianga Harbour around Panguru and Waireia.
Bananas	Med-High	Waihue, Aranga, Otaua, Awarua, Umawera, along Waipoua and Waimamaku Rivers, northern side of Lake Omapere.
Mate tea	Med-High	In all areas of the study region north of around Dargaville as well as along the western side of the Pouto Peninsula. Particularly high potential in Waihou Valley, along Utakura River, around Umawera and near Tapuwāe.
Figs	Relatively high	Western side of the Pouto Peninsula and around Pouto; along the Punakitere River.
Blueberry	Med-High	Lake Omapere, Kaikohe, Punakitere River, lower slopes of the Parataiko and Tutamoe Ranges, near Aranga, western side of Pouto Peninsula.
Hydrangea	Med-High	Slopes of the Maungataniwha Range and (to a lesser extent) Parataiko and Tutamoe Ranges, around Umawera, north-west side of Lake Omapere, around Kaikohe, Punakitere and Waima Rivers, hills around Aranga, near Kairara, west coast from Omamari to Muarangi, around Pouto.
Peanuts	Medium	Over much of low elevation parts of the region. Best potential: Punakitere and Whakanekeneke Rivers / northwestern side of Lake Omapere / along Kaihu River / Wairoa River plains / on the west coast between around Bayllys Beach and The Black Rocks / area around Lake Humuhumu.
Avocados	Low	
Cherimoya (custard apple)	Area not well suited	

Horticulture is one of New Zealand's fastest growing export sectors, from \$115m in 1980 to over \$2.3b in 2005, making up more than 7% of the country's merchandise exports (HortResearch, 2005). Nationally, horticultural exports are dominated by wine and kiwifruit; in the Kaipara Harbour region, the significant crops are vegetables and subtropical fruit. The region has a number of large hothouses suitable for growing high-quality crops such as tomatoes, capsicums and telegraph cucumbers. For example, the Rodney Economic Development Trust estimates that nearly 50% of national capsicum exports in 2005 were produced within the Kaipara Harbour region. Flower production, also under glass, is of increasing export significance in the region, producing crops such as cymbidium orchids and sandersonia. Viticulture, although small on a national scale in terms of grape growing, is significant in terms of wine makers and is expected to have increased production and planting looking forward. The region has a proud history, especially in the west around Kumeu, with some of the most well-established wineries in the country along with new plantings and boutique wineries further north. With this sound base and its future potential, viticulture can add significantly to the overall regional food and beverage offering in addition to its contribution to the local economy and export.

Marine-based food sectors

Traditional fishing

Commercial fishing has been a feature of the Kaipara Harbour since the early days of European settlement, and the Harbour continues to be an important customary fishery for local marae. The Kaipara Harbour Sustainable Fisheries Management Group¹³ was formed in 2000 in response to concerns about the sustainability of fishing in the Harbour, including "evidence of localised depletions and decreased catch per unit effort (i.e., it was becoming harder for fishers to make a livelihood)" (The Kaipara Harbour Sustainable Fisheries Management Study Group, 2003, p. 1). A 2002 NIWA report confirmed these assessments when it noted that catch rates have declined in recent years for the major commercial species (flatfish, grey mullet and rig) and that fishing effort moving to the Kaipara from other areas and increased effort by local fishers are implicated in this decline (Hartill, 2002).

A key concern in this regard is that the current Quota Management System neither limits nor manages fish resources at the local level. In addition, the Group noted the need to manage actual or potential conflicts over harbour use between recreational, commercial and customary fishers; between fishing and other harbour-based activities such as aquaculture and marine farming; between fishing and harbour transportation routes; and with conservation initiatives (such as the protection of wetlands).

¹³ The Group's membership includes commercial fishers, iwi, and community interests.

The Kaipara Harbour Sustainable Fisheries Management Study Group unanimously agreed a strategy for the Harbour which includes the establishment of a "licensing regime for fishers on the harbour (rather than a separate Quota Management Area)" (The Kaipara Harbour Sustainable Fisheries Management Study Group, 2003, p. 1). The proposed strategy includes proposals that:

- "Codes of Practise for commercial and recreational fishers are outlined which make changes to existing regulations. These should be read as a basket of measures aimed at meeting the objectives of this strategy.
- The need for the establishment of a compliance and monitoring regime based on a partnership between the stakeholders, and invite this discussion with the Ministry of Fisheries.
- The need to identify a compliance plan and education programme in conjunction with the Ministry of Fisheries.
- The need to involve other stakeholders in considering other issues on the Harbour and to monitor the effect of implementing this strategy." (The Kaipara Harbour Sustainable Fisheries Management Study Group, 2003, p. 1)

Although the adoption of a regulated licensing or permit system for the Kaipara was the Group's preferred option, they would also support the establishment of a separate quota management area for the Kaipara Harbour provided that government bears the cost of establishing and administering the system. This is an option advocated by the Kaipara Harbour Iwi Working Party in their report containing recommendations from local marae on a Kaimoana Customary Take Plan (Kaipara Harbour Iwi Working Party, 2002). This is not only important for the continued viability of commercial fishing but it is also important for recreational fishing and associated leisure and tourism activities that both the Kaipara and Rodney Districts are renowned for. A healthy and productive harbour relies on diversity not depletion. The current Quota Management System subordinates local interests and other economic opportunities to commercial fishing. Sustainable economic development of the region is crucially dependent upon the sustainability of the Kaipara Harbour.

Aquaculture

Aquaculture (or "marine farming") is the fastest growing sector in the global food economy, worth around US\$50 billion in 2000; in contrast, growth in wild fishery production has levelled off since 1989 (Jefferies, 2003, p. 5). Given that demand for seafood is set to far outstrip current production levels, aquaculture can be expected to play an important role in meeting that demand.

New Zealand's contribution to global aquaculture production stands at less than 0.2%, representing 0.15% in terms of value (Jefferies, 2003, p. 7). Nonetheless, growth rates for the sector in New Zealand are exceeding global rates and there is the potential for export earnings to rise from NZ\$210m in 2000 to over NZ\$1 billion in 2020, with a corresponding increase in employment rates from the current estimated 2000 FTEs to more than 9000 FTEs by 2020 (Jefferies, 2003, p. 11).

The Northland aquaculture industry is currently worth around \$20 million for Northland and directly employs around 400 people (320 FTE) (Jefferies, 2003, p. 11). Although its potential in terms of Northland's economic development has long been recognised, regional growth rates for the sector are comparatively poor:

"In the last decade aquaculture globally has grown by around 130% in total value, Australia well over 300%, New Zealand at almost 750% and Northland only around 70 – 80%. This lower growth rate in Northland is despite the region being one of the first in the country to develop commercial aquaculture and also possessing some of the best natural conditions for aquaculture of any region in New Zealand. Achieving regional aquaculture growth at the national average would have provided Northland with a \$50M a year industry by 2000 and providing direct employment for as many as 2000 people (around 1600 FTE)." (Jefferies, 2003, p. 34)

Table 5 : Assessment of the Potential for Aquaculture Development in Northland

In 2003, NIWA produced the report "*Assessment of the Potential for Aquaculture Development in Northland*" which examined existing aquaculture activities and development opportunities, "...with the aim of identifying the best opportunities for commercial aquaculture development". The report was funded by Enterprise Northland Trust, Industry New Zealand and Te Puni Kokiri, and made the following recommendations:

1. That the regulatory regime recognises and incorporates "the development aspirations of the aquaculture industry".
2. That the local industry overcome fragmentation by developing "a regional identity, promote its current interests and develop a future vision," including professional coordination assistance.
3. That "consideration [be] given to establishing mechanisms to provide advice and support to iwi in developing their aquaculture investments and interests in Northland".
4. That attention be given to increasing skills development and training opportunities.
5. That negative public perceptions of the industry be addressed by "encouraging a range of activities and information resources for Northland that provide balanced, accurate local information on aquaculture."
6. That there be diversification in terms of species and aquaculture sites in Northland.
7. That the value of the aquaculture industry be increased "by integrating and promoting aquaculture with tourism and other seafood initiatives for the Region."
8. That attention be given to maintaining and improving water quality and that consideration be given to encouraging regulatory agencies and the aquaculture industry to work together more closely.
9. That stronger links be developed between aquaculture, pastoral and forestry sectors in terms of enhancing potential synergies, "such as helping to address issues such as rural roading and energy supplies." (Jefferies, 2003, pp. iv-vi)

Under the Aquaculture Reform Bill of 2004, all new aquaculture operations must be restricted to Aquaculture Management Areas ("AMAs"), being areas zoned specifically for marine farming purposes; 20% of such farming space is to be allocated to iwi (Ministry for the Environment, 2005a). AMAs are established by means of a change to a regional coastal plan. These may be initiated by the council, by any other party ("Private Plan Change"), or councils may invite Private Plan Changes. In the latter case,

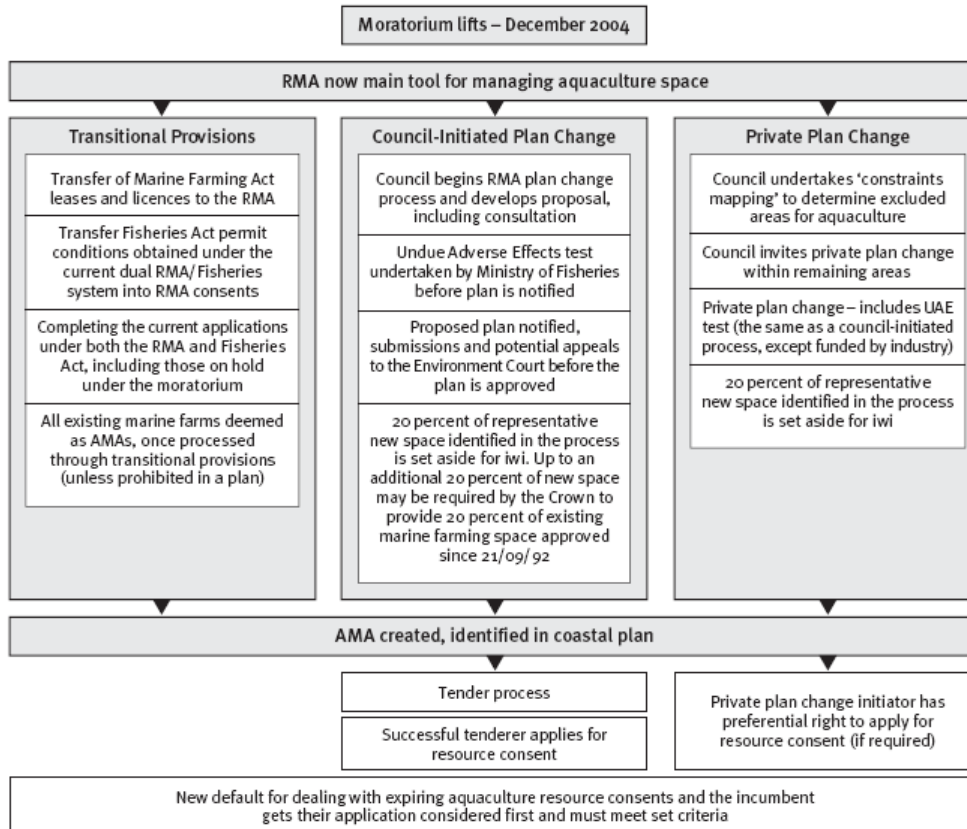
"...councils may choose to identify excluded areas, locations where [Invited Private Plan Change] applications cannot be made. Any proposal then follows the normal plan change submission and appeal process." (Auckland Regional Council, 2006)

The process is summarised in **Figure 4**. Northland Regional Council has indicated that it will abandon its original plans to establish 18 AMAs (although these 18 areas have been subjected to a benthic survey to establish their potential as AMAs) and to adopt the option of Invited Private Plan Changes ("IPPC"):

"...would-be marine farmers – not Northland's ratepayers – will have to pay the considerable costs of having areas zoned as an AMA, a move expected to save ratepayers hundreds of thousands of dollars." (Northland Regional Council, 2006)

Auckland Regional Council's Regional Strategy and Planning Committee has indicated that it too is "further [investigating] the IPPC option" (Auckland Regional Council, 2006).

Figure 4 : AQUACULTURE MANAGEMENT AREAS ESTABLISHMENT PROCESS



(Ministry for the Environment, 2005b)

The Kaipara Harbour is currently home to a variety of marine farming ventures including 30-odd farms in the northern Kaipara (120 hectares in total, including several abandoned farms) and an oyster farm on the Taporā Peninsula (BioMarine Limited, 2005, p. 14). There is also a prawn pond culture farm and a tidal mullet farm at Shelley Beach in the southern Kaipara, although these are currently in abeyance due to a number of reasons, including consent issues.

The Kaipara Harbour is one of only two places in the Auckland Region deemed suitable for new marine farming activities and one of the areas identified as containing several sites with AMA potential by Northland Regional Council. There are currently five applications before the Auckland Regional Council for new operations in the southern Kaipara Harbour, although only two of these are currently able to proceed under the new aquaculture legislation. The two applications currently before the Environment Court, one for a 104 hectare oyster farm in the southern half of the harbour and another lodged by the same company for a 30 hectare mussel farm around 4km from South Head, were lodged prior to the 2001 moratorium (Auckland Regional Council, n.d.).

In a 2006 NIWA report examining the potential impact of AMAs on benthic habitats in the Kaipara, the author notes that shellfish farming (such as oyster and mussel farming) can have direct and indirect negative impacts on coastal environments:

"Shellfish farming, if not managed properly, can potentially have direct or indirect adverse effects on the coastal environment. These effects can include loss of natural character and coastal space, presence of navigational hazards, interference with natural coastal processes, impacts on recreational and aesthetic values, and changes to the nature of benthic [sic] communities." (Elmetri et al., 2006, p. 12)

The report notes in particular the possible negative impact of aquaculture on seagrass populations, but goes on to note that this risk may be able to be controlled:

"...the main risks to [seagrass meadows near the eastern AMAs] are likely to be changes to the light environment resulting from shading effects beneath oyster baskets. It is our view that the greatest source of variability or uncertainty in the risk profile lies with the standard of farm operations, and this can only be effectively controlled through an adaptive management approach that incorporates a sound environmental management system." (Elmetri et al., 2006, p. 54)

The report also suggests that the establishment of marine farms would remove significant amounts of nitrogen (Elmetri et al., 2006, p. 53), one of the primary stressors of the harbour arising from the extensive pastoral agriculture on surrounding land, and therefore may positively contribute to the restoration of harbour water quality.

If appropriately managed, aquaculture has the potential to contribute positively to the economic well-being of Kaipara communities, as indicated in the Rodney Economic Development Trust's submission to the Environment Court (#206) in support of a proposed aquaculture development in the Kaipara Harbour:

"It has the potential to

- Generate substantial export and domestic revenues
- Offer sustainable and meaningful training and employment in line with Rodney Employment and Employability Strategy, Vision Rodney and A Living Vision for Rodney's Economy
- Add substance and value to Rodney's embryonic tourism industry
- Align with district, regional and national strategies
- Support Iwi economic development aspirations"

There are, however, significant barriers that will need to be addressed if aquaculture is to become a viable activity. For example, the cost to private individuals or companies of initiating the regional plan changes needed to establish AMAs will inevitably be a barrier to aquaculture development in the Kaipara. It is likely that only major operators will have the resources to pursue this. Restricting the access of smaller operators to aquaculture is unlikely to result in improved public attitudes towards the industry generally. There are also environmental concerns associated with aquaculture, some of which were touched on above. A phased development approach involving monitoring and mitigation of effects may help in this regard. This approach may also allay fears about the aesthetic degradation of the harbour by permitting small-scale developments in the first instance (we note that aesthetics are clearly critical when dealing with natural landscapes, however, the subjectivity of aesthetic criteria may dissuade parties from pursuing what is potentially

a significant economic activity for the region). Moreover, the industry must address negative public attitudes towards it. One way in which this might be achieved is through ensuring that aquaculture activities overtly and sustainably benefit those communities sharing the harbour.

Discussion

In the Kaipara Harbour region both the agriculture and horticulture sectors have knowledge and “know how” (tacit knowledge) advantages in production, quality management techniques, and in most cases resource advantages such as soil or climate conditions that provide a comparative advantage (for example in the production of kumara in the Ruawai area or year-round grass production due to a mild climate) but these are not absolute advantages by any measure. Within these sectors there are different market conditions (for example capsicums have different industry and market conditions from kumara or wine). However the common denominator, in terms of creating and maintaining competitive advantage in resource-based economies (both in terms of export development and in the defence of local markets) lies in capitalising on resource conditions through continued research and development. This helps to create new and value-added products, brand development and differentiation through [the perception of] quality and type and origin – in other words the human and innovative element added to resource advantages provides the key to continued competitiveness in these sectors.

Consumers are increasingly seeking authenticity and assurance of quality in the food and beverages they consume and in the experiences they wish to have. On a world stage New Zealand has the opportunity to provide those assurances but needs to be able to deliver on the promise. The Kaipara Harbour region has the platform to deliver on this promise, provided it invests in a renewal and revitalisation of its regional offering (the product), its reputation (brand) and by leveraging its natural resource advantages through technology (e.g. food technology, packaging and broadband providing global reach and up-to-date information), innovation (research and development), and a more concerted and coordinated approach to marketing the region internationally.

Dairy is a significant employer in the Kaipara Harbour region and will remain so in the foreseeable future. Not surprisingly, the survey responses clearly illustrated the importance of this sector to the region, as shown in **Figure 5**. However it is difficult to see how employment and/or production can grow significantly to provide increased employment opportunities in the future as most increases in productivity are due to technological advances not labour intensive activities. The infrastructure for creating innovative products does not currently exist in the region and is well catered for in other regions in New Zealand (such as the Waikato). Nevertheless, the dairy factory at Maungaturoto continues to be a stable and significant employer, and the dairy industry will continue to provide an economic base for the region.

Opportunities for creating a long-term competitive advantage, through innovation, value-added production and increased productivity may lie in building connections with Hamilton's innovation park rather than trying to build up its own research and development infrastructure.

Figure 5 : Food production

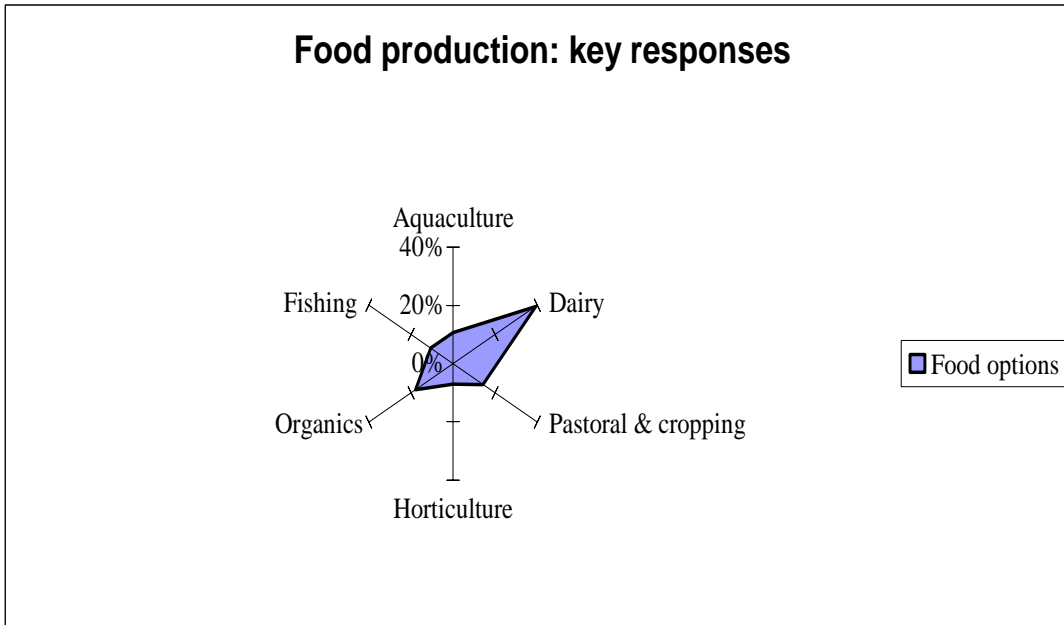


Figure 5 also shows significant support for the organics sector, in fact Rodney was declared 'Organics Friendly' in 2001. Organics production has gained a significant foothold in the Kaipara Harbour region, but is unlikely to be a major contributor to exports as production is constrained, in some instances by the produce itself (for example, perceptions relating to shorter shelf life, appearance, etc) and in others by sector values (for example, the reduction of "food miles" as a means of increasing sustainability and lowering environmental impact). Consequently, provision is oriented towards domestic markets, however this provides a significant opportunity to add to the attraction of the region's culinary and tourism offering. There is also opportunity for adding value to organics production, for produce with longer shelf life and fewer inputs (thereby offsetting food miles), within the region by specialising in high value niche export markets, such as the organic certification of oyster production, and exploring value added production such as nutraceuticals or functional foods.

Aquaculture is a significant economic development opportunity both in terms of export and employment. There is a burgeoning global market and the potential for New Zealand-branded produce to command a premium. The Kaipara Harbour region has the potential to take advantage of this opportunity because of its specific natural advantages in terms of scale and the quality of its waters. This is buttressed by the proximity of Auckland's infrastructure in the form of air and sea ports for export. Moreover Auckland is a ready domestic market. There are also opportunities to explore partnerships with Māori, who have identified aquaculture as a key

economic development opportunity, in exploring options such as combined production and packaging facilities and regional branding, in providing complementary seasonal work with horticulture, in organics certification or in reinforcing quality through traceability, and in adding to and diversifying the regional tourism and food offering. Environmental concerns could be substantially allayed by undertaking an adaptive management approach to monitor any potential adverse effects (this approach is detailed in the energy section and illustrated in Figure 9 below).

Tourism

Around 10% of Northland's workforce is employed directly or indirectly in tourism. Worth \$230-\$250 million per annum to the Northland economy (APR Consultants, 2002, p. 9), tourism is identified in the Northland Tourism Strategy as a "key driver of regional economic development" and "potentially the MOST important industry for future sustainable economic growth, development and employment in Northland" (original emphasis) (Enterprise Northland, 2003, p. 6).

Rodney's draft tourism strategy similarly describes tourism as a "lead sector with significant growth potential" (Rodney District Council, 2003, p. v), although one that is currently underperforming. The industry directly employs 5.95% of all FTEs and generates around 2.78% of the district's GDP (Rodney District Council, 2003, p. 12).

The Northland and Rodney Tourism Strategies list a number of sector strengths that are predominantly consistent across both areas, including:

- Cultural and heritage resources
- Attractive and diverse physical environments
- Good climate
- Proximity to Auckland
- The existing Twin Coast Discovery Highway¹⁴

In addition, the Northland Strategy points out as further strengths existing icons (e.g. Tane Mahuta and Cape Reinga), strong support for tourism by district and regional authorities, strong marketing and branding (e.g. Northland Naturally and Kai in Kaipara), and the attractiveness of the area to "Free Independent Travellers" and the "Ideal Traveller" identified by Tourism New Zealand.

Nonetheless, the tourism industry in Northland and Rodney faces a number of challenges including:

- Too many low-profitability operations with insufficient commissionable product
- Limited infrastructure
- High seasonality
- Shortage of accommodation
- Variable standards of service
- Inadequate traveller support (e.g. signage)
- Lack of research and/or information on visitors to the region and what currently exists for tourists

¹⁴ "A joint venture between Destination Northland, Tourism Auckland and local communities throughout Northland." (APR Consultants, 2002, p. 9)

The Northland and Rodney Tourism Strategies outline the following priorities and objectives for enabling the tourism industry to reach its potential:

Northland	Rodney
Product and industry development (including supporting the development of Māori tourism product)	Develop a district-wide tourism cluster encouraging networking and joint developments between individuals and organisations
Funding (secure long-term funding for tourism and other relevant organisations, including DOC to upgrade the Northern Conservancy)	Develop a comprehensive understanding of visitation to the district
Relationships (establish and/or develop strategic relationships between stakeholder organisations)	Encourage service delivery that meets the goal of economically, environmentally and socially sustainable tourism development
Infrastructure, planning and destination management (including increasing capability in terms of advocacy, policy, planning and product research)	Promote sustainable visitation to the district, and ensure availability of high quality information about the district and its tourism amenities, products and services
Marketing (e.g. via Northland Naturally brand, targeting international marketing at the Tourism NZ-defined "Ideal Traveller"; web development and a VIN strategy).	Ensure provision of appropriate policies, programmes and infrastructure to support sustainable tourism development
	Maintain strong relationships with strategic allies in the public and private sectors

In 2003, Northland secured \$2m under the New Zealand Trade and Enterprise Regional Partnership Programme for a Major Regional Initiative "to build the capability and lift the performance of Northland's tourism industry"; the focus of this MRI will be on professional development, product development, e-technology and inward investment (Enterprise Northland, 2005).

Culinary tourism

A key constraint on tourism in Northland is seasonality. The findings of a 2005 report on the domestic visitor market indicated that of the four broad types of visitors to the area, that is, culture seekers, wine and foodies, relaxers, and water lovers, the first two "hold the greatest potential for increased visitation in the off season" (Enterprise Northland, 2005, p. 1). To this end, Enterprise Northland drafted a document entitled "Northland Specialty/Niche Food and Beverage Sector Development" reporting on industry consultation¹⁵ and listing key objectives and key focus areas. The industry consultation consisted of workshops held in Dargaville, Kerikeri and Whangarei in 2005, and key stakeholder meetings. These revealed a series of barriers and opportunities for the industry as outlined in Table 6:

¹⁵ The sector is defined in the report as "specialty/niche food and beverage goods encompassing value added products such as gourmet cheeses, chilli products, handmade confectionary, olives, sub-tropicals and organically grown produce."

Table 6 : Barriers and opportunities to specialty/niche food and beverage sector

Barriers	
1.	Lack of consistency of supply, quality and availability of local produce
2.	Inability to access local seafood, shellfish and meats
3.	Seasonality of tourist season
4.	Lack of processing facilities
5.	Distance/cost to markets and lack of reliable transport
6.	Lack of council support for events
7.	No database of who is doing what and where in the region
8.	Geographical size of the region presents challenges for cooperative initiatives
9.	Perception and lack of recognition of value of the sector within communities and local government
Opportunities	
1.	Educating consumers about price/freshness, building loyalty and awareness
2.	Educate and support restaurants/cafes to use and promote Northland produce
3.	Better coordination of events around the region-calendar
4.	Changing perceptions regarding what Northland has to offer and the value of the sector
5.	Establishing a regional point of difference
6.	Leverage off current food experience eg markets, festivals, special events
7.	Improved and coordinated marketing activity
8.	Support and professional development to lift capability, quality, product innovation and market development
9.	Promote best practice, innovation and entrepreneurship
10.	Promote the region to visitors as a quality food and wine experience
11.	Promote Northland specialty/niche food sector to potential larger food companies, investors and distributors (Enterprise Northland, 2005)

The key objectives of the development plan are to:

1. "Lift capability of the sector to enable long term sustainability of speciality/niche food and beverage growers and producers
2. Develop a more commercial focused, innovative sector
3. Increase profile of Northland as a quality food and beverage destination
4. Promote Northland grown and produced amongst consumers and suppliers" (Enterprise Northland, 2005)

To this end, Enterprise Northland identified seven key focus areas as follows:

1. Development of a comprehensive database of who is doing what where.
2. Development of an on-line directory to allow users to source and access Northland product
3. Marketing and promotion of Northland food and beverage sector to visitors
4. Development of tools to increase intra-sector communication (e.g. newsletters and functions)
5. Develop opportunities for professional development within the sector
6. Develop a policy on how Enterprise Northland (and Destination Northland) can support events showcasing local produce
7. Setting up of a sector development group to advocate on behalf of the sector, provide support and provide leadership.

Harbour-based transport

There is the possibility of making greater use of the harbour for transportation and building new wharves (and improving existing ones) to enable this. The Ministry of Economic Development funded a series of studies to examine the feasibility of building such a wharf at Pouto Point including an economic, social and cultural impact assessment.

The cultural impact assessment, produced by Te Uri o Hau as tangata whenua, supports the wharf development provided that issues relating to toilet facilities, hazardous substances, erosion, stakeholder control, maintenance, safety and parking are addressed (Te Uri o Hau, 2003).

The social impact report, prepared by Social & Environmental Limited (based in the Waikato and Auckland), was neither strongly in favour nor against the proposed development. Residents consulted saw the potential for positive effects (e.g. recreational use and a “space for social interaction”, access to Auckland depending on cost and parking facilities) and negative effects (e.g. increased visitor numbers through the Point putting pressure on parking facilities and possible safety and environmental concerns). The report concludes that attention to safety and environmental issues would be essential, along with ensuring community involvement in wharf management. However, in order for there to be economic benefit, the report notes that:

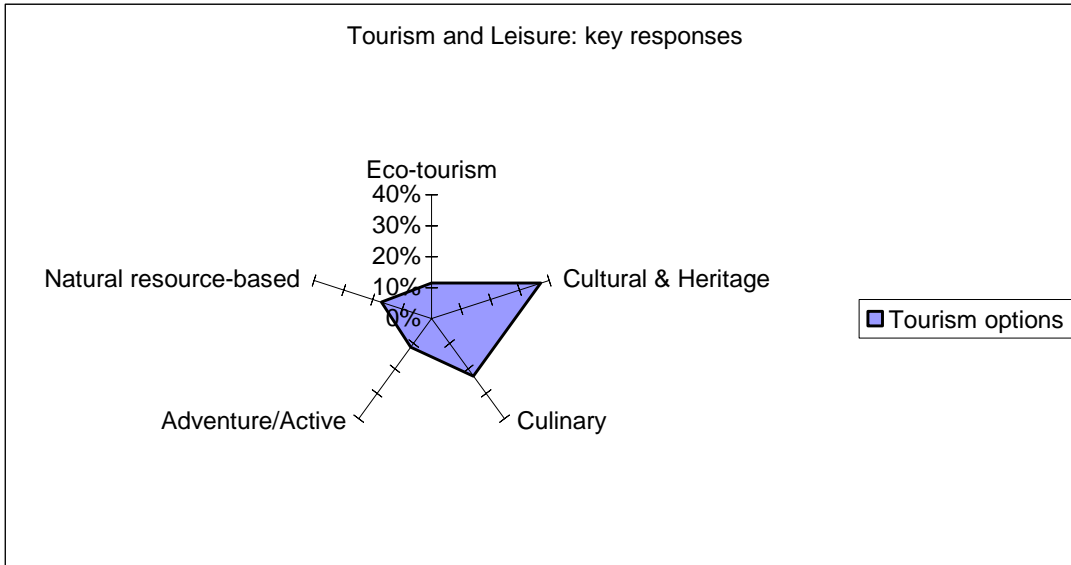
“The Kaipara District Economic Development Trust should take any additional steps it can to assist the Pouto community to take advantage of any economic opportunities arising from the wharf. If part of the aim of constructing the wharf is to economically benefit the local community the mere construction of a wharf will not necessarily be enough.” (Social & Environmental Limited, 2003, p. 3)

The economic assessment report focused on whether the wharf might generate additional tourist activity in the area, activity relating to horticulture and growth in holiday home development. The report concludes that the wharf would have a very minor impact on tourism and holiday home development, and none on horticulture, although construction would provide an “injection of expenditure in the Kaipara economy” provided it was built by local operators. Maintenance could be a cost to the community, depending on ownership of the wharf (Market Economics Limited, 2003). However the authors of this report contend that the building of a wharf at Pouto, along with other sites around the harbour, does offer potential for contributing to economic development in the Kaipara Harbour region, provided it is integrated into an overall strategy for the region, one which recognises that the harbour is one of the region's most valuable resources. The potential is in increasing accessibility to North Head, thereby allowing for growth and diversity of tourism product, and providing access to the north *through* the Kaipara Harbour region, rather than *around* it.

Discussion

During the consultation underpinning this report, the tourism and leisure sectors were clearly identified as providing key opportunities for economic development in the Kaipara Harbour region. They also generated the greatest diversity of responses, in terms of themes and direction, ranging from *agri-tourism* to *sports and recreation villages*. To help categorise the responses we have drawn on the advice of Simon Milne, Director of the New Zealand Tourism Research Institute; the results are illustrated in Figure 6 below.

Figure 6



Responses aggregated under the heading *cultural and heritage tourism* received the greatest endorsement, reflecting the historical significance of the Kaipara and the sense of place shared by its inhabitants. It is also reflected in the popularity of the Matakoho Museum and, for those that venture a little further, the Dargaville Museum. Respondents placed considerable emphasis on authenticity by respondents providing a wide base of support for proposals such as the Māori Village at Te Hana.¹⁶

Food or *culinary tourism* also attracted considerable support reflecting the comparative advantage of the Kaipara as a key food source [food basket] for Auckland and neighbouring districts. A number of respondents commented on the favourable reception to the 'Kai in the Kaipara' programme initiated by the Kaipara Development Agency (formerly the Kaipara District Economic Development Trust) in 2003/04. Growth in demand for culinary tourism has accompanied a greater awareness of food and where it comes from, popularised through programmes by celebrity chefs such as Peta Mathias' *Taste New Zealand* and *Taste Takes Off* and Rick Stein's *Taste of the Sea*. Increased attendance of farmers markets and field days also reflects this trend.¹⁷

Natural resource-based tourism, which draws on the natural advantages of the region in terms of the harbour, beaches, forests, lakes, etc., is currently the main draw for tourists to the Kaipara Harbour region. The sheer expanse of the harbour is, however, hard to appreciate from most vantage points and the Kai-iwi lakes, Pouto lighthouse and the untamed west coast tend to attract only the more intrepid tourists, given the distances involved, inaccessibility and lack of accommodation.

¹⁶ It is proposed that a Māori village be sited at Te Hana. The proposal is the initiative of the Te Hana Community Development Charitable Trust.

¹⁷ The Northland Field Days is hosted in Dargaville every March but there is limited awareness of them outside the region.

Closely related to the Kaipara's natural resources is *eco-tourism*, which is linked to the notion of *sustainable tourism*, and emphasises respect for the ecology of the region. This is an important factor to consider with respect to growing tourism in the region, in that such growth may undermine the very same features that attracted the tourists in the first place.

Active/adventure-type tourism, including fishing, builds on the notion of the Kaipara being a recreational escape from Auckland although much of this appears to rely on free independent travellers. The harbour also has a reputation for being *tricky* and suffers from lack of easy access.

There are a number of ways in which tourism adds value to a host region, including direct and indirect expenditure. The *Tourism Satellite Account* (Statistics NZ, 2005) suggests that the tourism multiplier in New Zealand is approximately 1.6, i.e. every unit of direct expenditure is accompanied by a further 0.6 of indirect expenditure. However, consistent with earlier studies, respondents to our survey communicated an acute awareness of the limitations of tourism as a basis for economic development, identifying seasonality, low wages and a lack of accommodation as challenges that need to be overcome if tourism is to benefit the region.

Two primary sources of tourists are readily identifiable: day/weekend trippers from Auckland and travellers on State Highway One (SH1), typically en-route to attractions in the Bay of Islands, the Kauri Forests and the Far North. These sources are primarily derived from the proximity of the Kaipara Harbour region to Auckland and Auckland International Airport; the challenge for the Kaipara Harbour region is to maximise the economic footprint of tourism, i.e. attract a greater number and retain them for longer.

Neighbouring areas such as Kumeu and Matakana demonstrate the potential of the Auckland market for tourism and recreation. Kumeu has developed a successful wine trail which is now being complemented by other commercial food and beverage operations such as cafes, restaurants, localised beer and honey production. Matakana has developed and grown a thriving farmers market, is popular for food and wine tasting and provides access to the scenic marine reserve at Goat Island.

Situated further north, the Kaipara District has a more challenging task to entice tourists into the region and to a great extent is more reliant on those heading north on SH1 to other attractions. Matakohe Museum illustrates the potential of this source, benefiting from its close proximity to SH1. The proposed Māori Village at Te Hana would also be able to draw directly on this source, particularly given that it is favourably placed mid-journey between Auckland and the Bay of Islands.

The Twin Coast Discovery Highway is designed to encourage tourists to explore both coasts and has the potential to draw more tourists into the Kaipara but feedback suggests that its potential has not been realised primarily through lack of, or lack of awareness of, tourism product and accommodation.

Encouraging day/weekend trippers from Auckland is more challenging given the distances involved but potential rests in growing tourism product, including the establishment of a culinary food-trail, a farmers market and greater promotion of the Northland Field Days. Enabling infrastructure such as investment in harbour wharves and the introduction of a car ferry could quite literally bring the Kaipara 'closer' for day trippers and create a feasible alternate route north, in other words help realise the potential of the Twin Coast Discovery Highway concept.

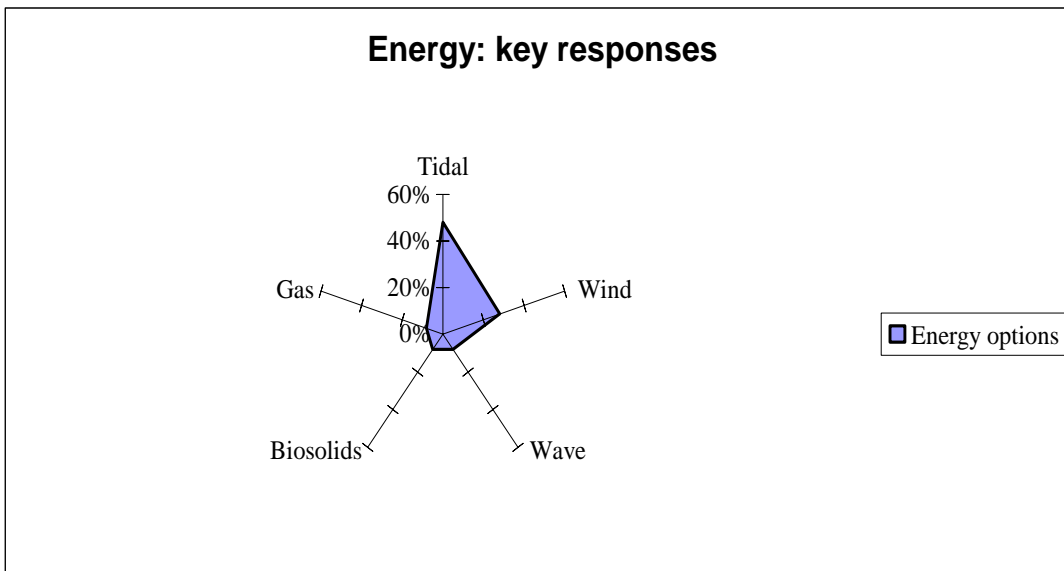
Clearly the link between tourism and other economic activities is also key to developing opportunities in this area building on the notion that 'your everyday life is someone else's adventure'.¹⁸ For example, growth in tourism may accompany enterprises such as aquaculture (part of a food trail), tidal power (visitors centre, especially if this was accompanied by development of a wharf near Pouto, which would also underwrite the feasibility of lighthouse operations and opens up the West Coast), as illustrated by the spike in tourism associated with the recent commissioning of the wind generation farm in Taranaki. As noted earlier, agriculture and horticulture will provide the basis for sustainable economic development in the Kaipara (and wider) region looking ahead. Higher value tourism and the ability to capture tourist spend will also be dependent upon maintaining and building upon the comparative advantages of these sectors through the development of value-added food production and culinary experiences.

¹⁸ Personal communication with Simon Milne, Director of New Zealand Tourism Institute.

Energy

The energy sector was cited as an opportunity for economic development by a significant proportion of the individuals consulted. Sustainable forms of generation, in particular wind and tide, were the most commonly identified options (Figure 7):

Figure 7 : Energy - key responses



If energy generation is to contribute to the economic growth of the area, it should ideally fulfil two criteria: (a) it must provide security of energy supply to the Kaipara Harbour region; and (b) it must be consistent with – and contribute to – the social, economic and environmental aspirations of its residents.

Security of supply

Concerns about the security of energy supply to the Kaipara Harbour region have been raised by both Rodney and Kaipara District Councils (Kaipara District Economic Development Trust, 2002; Sinclair Knight Merz, 2006), along with Transpower:

"Based on the key planning demand forecast, transmission supply problems into the North Auckland and Northland areas are likely to be experienced from 2013 if there is no new investment in transmission, generation, or demand-side alternatives. These issues are likely to increase in severity with increasing demand." (Transpower, 2006, p. 18)

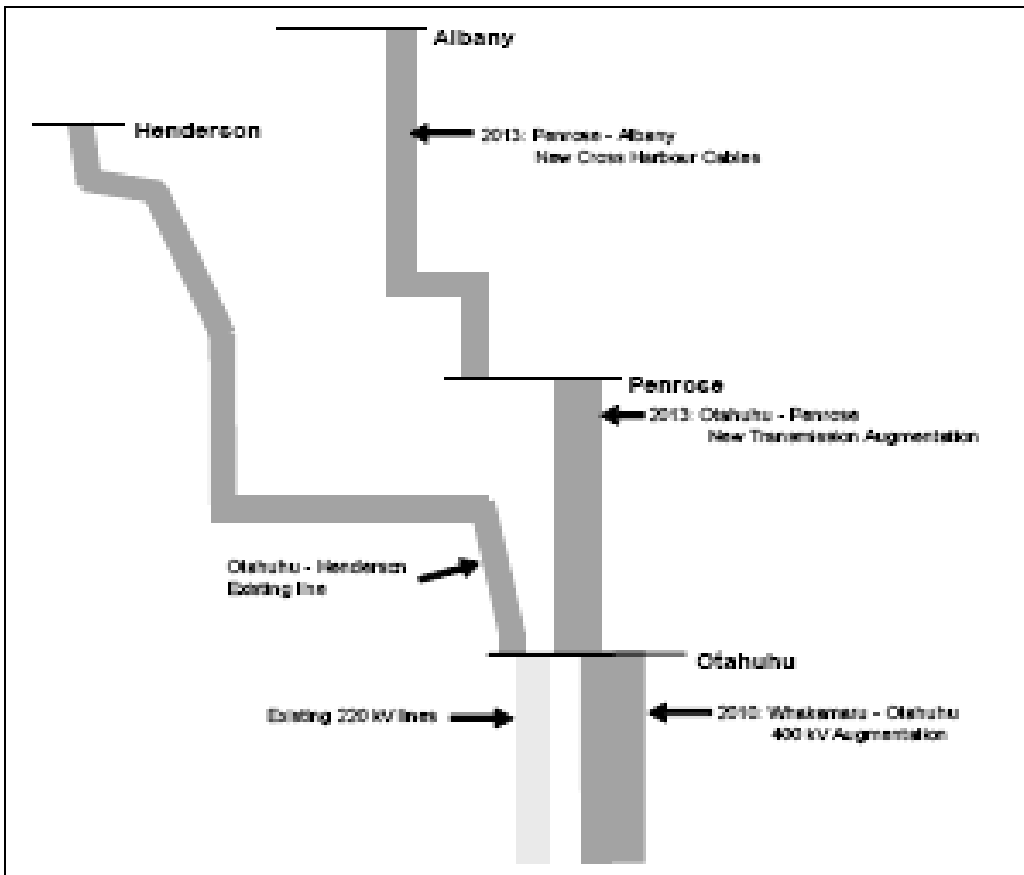
According to Transpower, in the event of such transmission supply problems, restrictions would need to be imposed on energy use in North Auckland and Northland during peak demand periods from 2013 onwards (Transpower, 2006, p. 2). Similar concerns have been voiced by Sinclair, Knight & Merz (2006) in their report, which was commissioned by the Rodney District Council in response to concerns raised by the Rodney Economic Development Trust about the negative impact repeated supply failure would have on business. The report stated that:

"Due to Rodney's relatively small demand and location within the electricity network system, the supply of electricity to the District will be very strongly affected by Auckland's demand growth and any developments to meet Auckland's power demand. ... Rodney is potentially exposed to predicted transmission constraints supplying electricity into Auckland from the south. It is also exposed to possible limitations of capacity in the transmission circuits around west Auckland that feed the North Shore, Rodney and the rest of Northland. ... Network reliability could become of wider concern if a significant portion of Rodney's predicted growth occurs in rural areas, possibly with an according growth in home businesses in keeping with the independent lifestyle of the District." (Sinclair Knight Merz, 2006, pp. 1-2)

The options for circumventing these problems (or delaying them) include increasing transmission infrastructure, increasing local generation or "demand-side management"¹⁹ (Transpower, 2006, p. 20).²⁰

As for the former, this would require increasing the capacity of transmission lines from the south into Auckland, as well as those running across Auckland to the north as indicated in Figure 8. Work has already begun on the northern stretch of this upgrade.

Figure 8 : Transmission lines from the south to the north



(Transpower, 2006, p. 33)

¹⁹ "Initiatives or mechanisms used to control electricity demand. Examples include ripple controls on water heating or contracted shedding of load (demand)." (Transpower, 2006, p. 45)

²⁰ In May 2006, Transpower has issued a Request for Information inviting submissions on alternatives to transmission upgrades (see Transpower, 2006).

As for increasing local generation, if it is to meet peak Auckland demand, the energy must be reliable, that is, available during those periods of high demand. Sinclair, Knight & Merz considered a range of energy options which could be located in Rodney: wind, solar, biomass, geothermal, gas, co-generation, municipal solid waste, coal, tidal, wave, solar photovoltaic and nuclear. Of these, the proposed gas and coal-fired plants (near Helensville and Marsden Point respectively) have the potential to reliably meet peak demand. The proposed wind and tidal current operations, on the other hand, do not: the intermittency of these technologies²¹ means that power will not necessarily be generated at the time it is needed:

"The intermittent nature of [marine technologies] means that, in isolation, they cannot be relied upon to meet peak electricity loads. As with wind energy, the development of back-up generation options would be required to provide a balanced power supply to Rodney District." (Sinclair Knight Merz, 2006, p. 39)

Nonetheless, the Kaipara Harbour region has the resources to support renewable energy generation, including wind and tidal current generation, which could help meet future increases in demand for the district with the potential to export surplus output to Auckland. Wind power is a tried and tested technology; tidal is in its infancy, however the development of that technology in the Kaipara Harbour could generate significant interest both nationally and internationally (Sinclair Knight Merz, 2006, p. 4). This could be accommodated through an adaptive management approach as discussed below.

There may be opportunities to partner with relevant governmental/scientific agencies nationally and internationally in terms of research, development and monitoring of this technology and its impact on the environment.

Social, economic and environmental contribution

In addition to ensuring security of supply, any power generation plant must also be a net contributor to the social, economic and environmental aspirations of the region's residents. Both Councils are in a position to influence the development of power plants through the consent process and to negotiate terms which maximise benefit to the region.

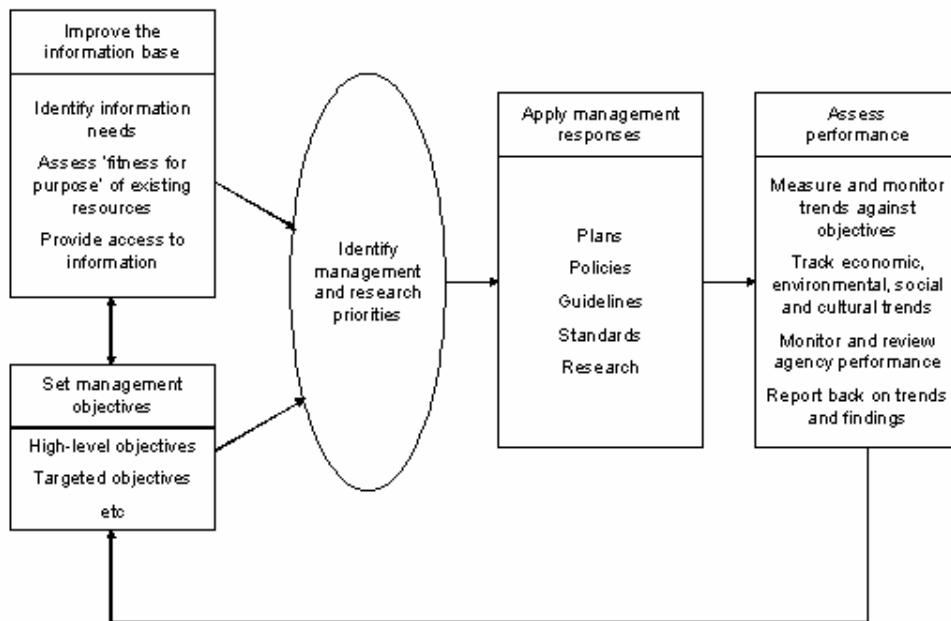
Such benefit might accrue through, for example, ensuring that local businesses are involved in the construction and operation of the plant and that employment and training is offered to residents. Contributions by generation companies to local infrastructure might also be negotiated, such as roading, the building of public wharves and related amenities; similarly, development companies might be willing to engage in activities that contribute to the sustainability or preservation of natural resources, such as replenishing fish stocks, providing artificial reefs and estuarine recovery projects. There are clear possibilities in terms of the integration of some forms of sustainable energy

²¹ Tidal current is of course predictable, hence the timing and quantities of power generated are also predictable; the tidal current proposal currently being investigated for the Kaipara Harbour would operate for around 16 hours per day (Crest Energy, n.d.).

production with tourism via public viewing areas, information centres and so on (see, for example, New Zealand Wind Energy, 2005). Models of private/public ownership or partnership (including co-ownership or shareholding by residents) should also be investigated, along with other vehicles for returning benefits to the region such as scholarships, grants and trusts.

Although renewable energy sources such as tidal current and wind have advantages in terms of sustainability and the non-emission of greenhouse gasses, they too impact on the environment. Wind generation brings with it noise and visual impacts, and the potential for bird strikes (Ministry of Economic Development, 2006, pp. 8-5) while tidal current generation could impact on harbour flows and sand deposits, marine flora and fauna, and necessitate harbour use restrictions. The adoption of a phased, adaptive management approach (see Figure 9) would allow the trialling of these technologies to be conducted in parallel with close monitoring – and mitigation – of environmental impacts.

Figure 9 : Adaptive Management Approach



(Ministry for the Environment, 2005c, pp. 1-3)

The adaptive management approach with respect to managing our ocean resources is detailed in the box below; however, this approach could be applied to any proposal where environmental concerns need to be considered.

"[Figure 9] illustrates an adaptive approach to managing New Zealand's ocean, by which we mean an integrated approach to improving ocean management over time, based on best available data, information and know-how. An adaptive approach is desirable because it provides:

- a way to make decisions in the context of uncertainty, *with a view to*
- minimising the risk of adverse changes to ecosystems *and*
- responding quickly to adverse changes where they do arise along the way.

The main components of the adaptive approach outlined in [Figure 9] are:

- improving the information base
- setting management objectives
- identifying management and research priorities
- applying management responses
- assessing performance against management objectives
- reporting back on trends and performance.

(Ministry for the Environment, 2005c, pp. 1-3)

Discussion

Whether energy generation will contribute to the sustainable economic development of the Kaipara Harbour region depends upon the rationale for its development. If the priority is security of supply through meeting peak electricity demand, then thermal generation options may be the most promising. However, concern over greenhouse gas emissions could be a considerable barrier to this type of energy production gaining resource consent and thermal options may not be consistent with the aspirations of the region's residents.

On the other hand, if the priority is to contribute to sustainably meeting the region's future demand growth (though not necessarily peak demand in the short term), then wind, tidal current and possibly wave technology might be worth serious consideration. These technologies are also in keeping with the Government's promotion of sustainable energy. It may also be worth investigating a combination of the two, with some form of reliable energy generation (possibly peaking plant) providing security of supply until sustainable options are far enough advanced to provide that security.

Whatever the priority, the key is that there must be a clear return to the region for hosting any power generation developments; in the absence of transmission upgrades and/or reductions in demand, it is imperative that energy generated in the region improves its security of supply. It is also imperative that all discussions about Auckland's energy needs and transmission issues include consideration of the needs of Rodney and Northland. To this end, district and regional councils must be actively involved as key stakeholders in these discussions.

Light manufacturing & secondary industry

Discussion

The Rodney District Council also has plans for a high-tech business park in Silverdale that is currently constrained by the Metropolitan Urban Limit, the lack of high-speed internet access and a focussed science and business infrastructure to support it. All of these factors are able to be overcome, however the first two are planning and infrastructure processes, whereas the third factor requires urgent attention if a technology park is the intended outcome rather than a generic business park. A technology park has at its core the notion of integrating research and development with commercial opportunity. Successful science and technology parks (STPs) exhibit certain characteristics. In a report commissioned by NZTE in 2004 (Kirk & Catts, 2004) outlined some key success factors that included:

- Clarity of vision and purpose
- The central involvement of at least one major research organization that:
 - Understands that STPs are a unique engine for high technology economic growth;
 - Has strong knowledge transfer capabilities; and,
 - Takes a collaborative approach that accommodates the needs of industry.
- A high value placed on the research institution connection in branding the Park and shaping its culture;
- Strong interaction between the host academic/research campus and Park. This is often distance sensitive and tends to work best when the sites are nearly adjacent;
- A project champion (individual/group) with a clear and practical understanding of the Park's purpose and the benefits it will bring;
- A STP Manager with strong leadership skills and a background in R&D rather than property management;
- The effective economic and social integration of the STP with the community and region;
- Government playing a key leadership, facilitation and enabling role;
- Sufficient capitalisation to ride out any adverse effects of the business and property cycles without having to compromise the 'door policy' or other mission elements.
- Financial self-sufficiency over time;
- A multi-phased, development period of 15 or more years; (Kirk et al., p14)

One of the key issues they identified affecting the performance of STPs is 'the regional technology setting, including the state of the sub-regional knowledge economy'. They go on to state that:

"From the outset, STPs should have a clear purpose and measurable objectives embodied in a strategic plan. An early step in the design of a Park is to decide on the development objectives for the project – a clear sense of why the project is being pursued. Different economic conditions exist in different local environments,

and often the development objectives in a metropolitan economy will be different from those in a regional economy." (Kirk & Catts, 2004, p. 26)

And

"Science and Technology Parks are essentially economic development tools so the Park's vision statement should capture the intended impact on the region's economic base five, ten and fifteen years into the future and the outcomes that can be directly attributed to its successful operation." (*ibid*)

Our research for this project found little appetite for an STP however these economic development tools are most often strategic decisions made by local / regional authorities to support and to bolster the local economy. Therefore aside from the planning regulatory and logistical considerations for Silverdale, if there is to be an investment of this kind it must support and reinforce the region's economic base and it must be considered whether that economic base will remain competitive in a global context either as a result of the continued research and development or simply because the economic activity is underpinned by some natural or comparative advantages.

Other sectors

Other sectors such as forestry and sand extraction were cited by a number of the respondents as opportunities for economic development in the Kaipara. However other respondents questioned the sustainability of these activities. For example, on the one hand, forestry is a significant economic sector in Northland and parts of the Kaipara Harbour region; on the other, as an economic development opportunity for the Kaipara Harbour region as a whole, it is limited in terms of providing long-term sustainable employment. It may be very significant for land (although some long-term leases are far from optimal) and forest owners. However the region does little in the way of timber processing and/or added-value activity and pays a heavy price in terms of road and infrastructure maintenance to support the industry (for example approximately 70% of KDC's operating costs are gobbled up by roading and RDC similarly has disproportionate roading costs). Continued forestry activity on the Pouto Peninsula, for example, needs to be looked at in this light; if there is to be continued forestry activity after the forthcoming harvest the opportunity cost, in terms of alternative economic opportunities, needs to be accounted for. In some areas, particularly coastal, native reforestation may actually provide more advantages to the region by contributing to cleaner waterways, increased high-value/low-impact tourism opportunities, carbon credits etc. If the most optimal and productive land use is still exotic forestry then the local actors should consider increased contributions from the beneficiaries of the activity towards infrastructure upgrades that would enable other economic opportunities, such as coastal restoration, public access through wharf and road upgrades and maintenance, and the promotion of rail transportation to ports.

Other considerations

As noted in the Methodology section above, the focus of this report is on opportunities for sustainable economic development. Respondents were also asked about constraints to such development. The constraints identified included competing land use, isolation, skilled-labour shortages, and infrastructure, issues which face most rural districts in New Zealand. However, nearly all respondents raised concerns unprompted about the governance of the Kaipara Harbour and its environs at local, regional and national levels.

Governance of the Kaipara Harbour and environs

In 2005, the Northern Inter-Regional Committee recommended that a scoping report be prepared identifying issues relating to the management of the Kaipara Harbour. The report was released in August 2006 setting out "the values of the Kaipara coastal environment, the issues facing it and [providing] a range of response options, including preferred options" (Auckland Regional Council & Northland Regional Council, 2006, p. 1).

The issues identified in relation to harbour management were (a) the number of statutory agencies involved in its management (including two regional councils and four district councils); and (b)

environmental issues requiring attention. In relation to (a), the report notes that integrated management depends on both consistency across statutory documents (Regional Policy Statement, Regional Coastal Plans, other air, land and water-based Regional Plans and District Plans) (or alternatively if there are “joint RMA plans”) and an ecosystem/catchment-based approach:

“Accordingly a critical factor in achieving integrated management is having a consistent policy and rule regime, as well as appropriate governance arrangements and/or agreements to ensure consistency in Plan policy/rule interpretation and decision-making.” (Auckland Regional Council & Northland Regional Council, 2006, p. 4)

In relation to (b), the report cites increasing development pressure from subdivision, land use and development, and coastal marine activities (including sand extraction and marine farming) as a key concern, given their potential to impact negatively on water quality and other characteristics of the area.²²

The options suggested for enabling integrated management of the Kaipara Harbour are listed in Table 7.

Table 7 : Options for enabling integrated management of the Kaipara Harbour

- | | |
|----|--|
| 1. | Review of existing information: Identify and centrally record all of the work that is being undertaken and/or has been committed to within the Kaipara coastal environment by the regulatory and government agencies. |
| 2. | Gap analysis of research information: Undertake a gap analysis having considered the “Review of existing information” above. Determine what significant information gaps are a barrier to being able to make informed and robust decisions. |
| 3. | Review of statutory policy and planning documents: Review the Regional Policy Statements; Regional Plans including Regional Coastal plans of [Northland Regional Council] and [Auckland Regional Council] to determine if they are consistent with each other and likely to ‘deliver’ similar environmental outcomes. |
| 4. | Agreements to work cooperatively together: Establish joint protocol(s) to work cooperatively together to ensure the integrated management of the Kaipara coastal environment. |
| 5. | Development of integrated plans, strategies and governance arrangements: Consider a range of options (once 1, 2 and 3 are completed) from non-statutory strategies to jointly preparing statutory plans. (Auckland Regional Council & Northland Regional Council, 2006, pp. 6-9) |

The preferred approach outlined in the report is that actions 1 – 3 be completed thereby providing a basis for determining the next appropriate actions (Auckland Regional Council & Northland Regional Council, 2006, p. 11).

There are clearly environmental concerns associated with the specific nature of the Kaipara Harbour and certain east coast ecosystems; these must be accounted for if other major economic development opportunities are to be realised. An integrated management plan for the Kaipara is one key objective, whereby a ‘healthy and productive’ harbour can be achieved through balancing competing uses. In parallel with this objective a shift towards a “managed and monitored” approach is desirable rather than the current RMA regime which is costly, tends to

²² Including loss of or reduction of “natural character, landscape values, significant indigenous vegetation and fauna, ecological habitats and biodiversity, public access to and along coastal marine area[s], the relationship of Māori and their culture and traditions, historic heritage, amenity values including visual amenity”

produce "yes/no" outcomes based on limited criteria, and tends to prolong processes even when unproven assertions are made. An alternative managed approach would mean that some time would need to be spent monitoring the effects of a small-scale operation as a prerequisite to any larger commercial operations. Of course scale and scope effects would also have to be accounted for, however putting the onus on aquaculture operators to provide sustainable management plans that are independently monitored would go some way towards providing comfort on both sides that the long-term sustainability of the ecosystem is preserved (and ergo its long-term productive viability) while at the same time providing investment and economic opportunity for residents.

THE WAY FORWARD

The Kaipara Harbour itself is under immense pressure from various groups and vested interests who wish to maintain access to or develop further commercial operations. At the same time the Kaipara Harbour has been identified as a site of significant wildlife interest (SSWI) with a ranking of outstanding wildlife habitat value.²³

Currently there are no up-to-date studies that accurately establish the water quality within the Kaipara or the effect various land-based activities have via sedimentation or leachate. Similarly there has been little monitoring of water-based activities such as aquaculture, fishing or sand extraction. This does not mean that the Kaipara Harbour is not capable of sustaining significant economic activity. It just means that more work needs to be done on monitoring and managing the effects of economic activities.

The current regulatory situation under the Resource Management Act (RMA) seems to produce “either/or” outcomes rather than monitored and well-managed sustainable economic development.

Both the Kaipara Harbour region and the harbour are governed by no less than four local government organisations (Kaipara District Council (KDC), Rodney District Council (RDC), Northland Regional Council (NRC), and Auckland Regional Council (ARC)); it is within the jurisdiction of a number of central government agencies and the focus of attention of non-government organisations such as The Guardians of the Kaipara and Forest & Bird. Alongside this, Te Uri o Hau (hapu of Ngati Whatua) have been granted Kaitiakitanga (guardianship) of the harbour as part of their Treaty of Waitangi settlement with the Crown.

The ARC is currently conducting the “Kaipara Harbour coastal environment - scoping report on integrated management” in partnership with the NRC. Te Uri o Hau in partnership with Nga Rima o Kaipara (southern hapu in the Kaipara Harbour region) are leading a process around the “integrated catchment management for a healthy and productive Kaipara Harbour”. Both of these processes are steps in the right direction and both recognise that some form of ‘integrated management’ will be crucial for the sustainability of the Kaipara Harbour.

This research suggests, as does the Te Uri o Hau process, that economic development for the region also depends on some form of integrated management for the harbour. As will be seen through this report an Integrated Management Plan (IMP) will require all of these groups (and others) to work in

²³ Kaipara Harbour Coastal Environment – Scoping Report on Integrated Management, ARC, August, 2006.

new ways in order to gain the best outcomes, including the prioritising of infrastructure development, for the Kaipara Harbour region and its inhabitants.

We suggest further that leadership and better regional identity for the Kaipara Harbour region (KDC and RDC) as a whole is an opportunity. Our assertion is that the [economic] geography lends itself to encouraging better collaboration and coordination between local authorities, Māori and the neighbouring regional economies of Auckland and Northland.

Perhaps not surprisingly, our recommendations focus on a more cohesive and coordinated approach to sustainable development within the Kaipara Harbour region, acknowledging its proximity to and interconnection with both the Auckland and Northland regions. Economic development strategies carried out in isolation cannot gain advantages of scale or scope. This does not mean that localities should not build upon their distinctive character and advantages, but it does mean that they need to recognise the wider regional, national, and indeed international contexts within which they can develop.

It is apparent in this report that the political boundaries do not align with a sensible economic geography of the region. Therefore for either the Rodney District or the Kaipara District to build upon their distinctive advantages and to capitalise on their natural resource and economic base they will need a more collaborative and coordinated approach. The proximity of the lower reaches of the Kaipara Harbour and environs to New Zealand's largest city is an opportunity. The proximity of the upper reaches of the Kaipara Harbour to Northland's largest city (Whangarei) and one of the most successful tourism regions in the country is also an opportunity. The east side of the Kaipara Harbour region (KDC and RDC) is home to some of New Zealand's premier lifestyle and leisure destinations along with [planned] significant cultural, leisure, food, and tourism economic activity.

The basis for sustainable economic development for the Kaipara Harbour region therefore lies in a shared sense of place with a distinctive regional offering that builds upon its current economic base. This should also provide a platform for understanding the interrelationship with neighbouring regions, taking advantage of its proximity to Auckland, and providing reasons for visitors (both domestic and international) to experience all that the Kaipara Harbour region has to offer.

APPENDICES

APPENDIX 1

Focus groups:

Two focus groups were held during August 2006, the first with representatives of the Kaipara District Council and Kaipara Development Agency (10 August) and the second with representatives of Rodney District Councils. The attendees were:

Kaipara District Council & Kaipara Development Agency (10 August)

- o Peter King (Mayor)
- o Cr Richard Alspach (Deputy Mayor)
- o Cr Julia Sutherland (also Trustee, KDA)
- o Alex Nathan (Trustee, KDA)
- o Claire McInness (Communications and Services Leader, KDC)
- o Ngawini Hall (Trustee, KDA)

Rodney District Council (14 August 2006)

- o John Law (Mayor)
- o Cr Dr Grahame Powell
- o Craig Pratt (Policy Advisor, Natural and Coastal Environment))
- o Suzanne Weld (Project Manager (Western Sector) Strategic Developments)
- o Warren McLennan (Director of Strategy and Planning)
- o Anthony Dow (Manager Economic & Community Development)

Interviews:

During August and September 2006, the researchers interviewed key stakeholders and industry/business representatives from the Kaipara and Rodney Districts. Interviews were conducted either face-to-face (individually or in small groups), by telephone or by postal survey. The individuals consulted were:

Name	Sector	Organisation
o Jim Dollimore	Aquaculture	Director, BioMarine Limited
o Olaf van Daal	Boatbuilding	CEO, Calibre Boats NZ Limited
o Suzi Phillips	Conservation	Convenor, Kaipara Forest & Bird
o Wayne Walden	Conservation / farming	Chairman, Guardians of the Kaipara
o Jim Wintle	Conservation / heritage	[Role] , Mangawhai Harbour Restoration Society, Mangawhai Historical Society
o Vern Dark	Economic development	Business Consultant
o Richard Drake	Economic development agency	Trustee, Kaipara Development Agency
o Jo Douglas	Economic development agency	Enterprise Northland
o Dr Anthony Bellve & Nick Eady	Energy	Executive Director/Director, Crest Energy
o Peter Philips	Energy	Dialogue Consultants

- | | | |
|--|------------------------|---|
| o Jane Sherard | Iwi | CEO, Ngati Whatua Nga Rima o Kaipara |
| o Alex Nathan, Trevor Birch,
Isobel Hutchins, Thalea
Pompey, Delwyn Hewson,
Erana Clarkson, Oriana Te Rore
Taoho | Iwi | Trustees, Te Roroa |
| o William Wright | Iwi | Trustee, Te Uri O Hau Settlement Trust /
Trustee, Kaipara Development Agency |
| o Mook Hohneck | Iwi | CEO, Ngati Manuhiri / Ngati Wai |
| o Linda Clapham | Iwi / tourism | Trustee, Te Hana Trust |
| o Jack McKerchar | Local government | CEO, Kaipara District Council |
| o Graham Taylor | Local government | Councillor, Kaipara District Council |
| o John Pearce | Organics | Shelly Beach Farms |
| o John McCallum | Sand extraction | Managing Director, McCallum Brothers |
| o Brandon Orr-Walker & Judy
McIntosh | Viticulture | Owners, Kaipara Estate Vineyard |
| o Anthony Blundell | Agriculture | Managing Director, Kaipara Kumara |
| o Hamish Alexander | Horticulture | Southern Paprika |
| o Neil Waller | Conservation / farming | Former Chair, South Kaipara Landcare |
| o Greg Gent | Dairy | Chairperson, Fonterra / Trustee, Kaipara
Development Agency |
| o Anonymous respondent | Manufacturing | |
| o Hayden Prujean | Manufacturing | Operations Manager, Irwin Industrial Tool
Company Limited |
| o Gary Dunn | Tourism | General Manager, Parakai Springs Trust |
| o Sharley Haddon | Tourism | Owner/Manager, Pakiri Beach Horse Rides |

Appendix II

Interview / postal survey questionnaire

Demographic information

1. Name of participant
2. Name of organisation
3. What is your position in the organisation?
4. What does your organisation do?

Current perceptions of economic development in the Kaipara Harbour region

5. How does your organisation contribute to sustainable economic development in the Kaipara Harbour region?
 6. What plans/priorities does your organisation have over the next 3-5 years?
 7. What are the major constraints to sustainable economic development in the Kaipara Harbour region?
 8. What are the key opportunities for sustainable economic development in the Kaipara Harbour region (e.g. which sectors offer the best opportunities)?
 9. If you could change one thing in the Kaipara Harbour region today in order to achieve sustainable economic development, what would it be?
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Appendix III

Focus group questionnaire:

1. What are the major constraints to sustainable economic development in the Kaipara Harbour region?
 2. What are the key opportunities for sustainable economic development in the Kaipara Harbour region and why?
 3. Given limited resources, what are the priorities?
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