RRI Green Planning Archives: New Zealand

Managing Resources in New Zealand

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Australian and New Zealand Society for Ecological Economics, Inaugural Ecological Economics Conference, Coffs Harbour, NSW, November 19-23, 1995

Abstract

This survey of New Zealand natural resource management for space reasons cannot cover the whole spectrum. Necessarily whole important areas have been omitted or given only brief mention. Topics treated in more depth cover the sweeping reforms of the 1984-90 period, the restructuring of the environmental administration of New Zealand, the Resource Management Act 1991 and marine, particularly fisheries management.

Human Impacts on the New Zealand Environment

New Zealand's Gondwanaland history and prolonged evolutionary isolation has left the biota particularly vulnerable to human disturbance - whether that be fire, introduced pests, habitat destruction or pollution. Except for the now rare bats, New Zealand does not have indigenous terrestrial mammals, with invertebrates such as the weta taking the ecosystem niches occupied elsewhere by mammals.

Maori settlers arrived in New Zealand about 950 AD, the Europeans (Pakeha), about the year 1800. Maori and Pakeha alike introduced alien species. The Maori introduced Polynesian dogs and the rat kiore. It was Maori use of fire for moa hunting that probably accounted for the loss of considerable amounts of forest. Fire, hunting and predation accounted for the extinction of several species of birds (Glasby, 1991, 63)

New Zealand's Treaty of Waitangi was signed in 1840 by many but not all Maori chiefs, and the British Crown. The Crown represented and sought to gain some control over those who had come to New Zealand for whales, fur seals, Kauri spars, gum, land and a new start.

The Pakeha impact was profound with the conversion of natural ecosystems for pastoral agriculture, for plantation forests, for human settlement and for other purposes. The introduction of alien plants and animals, especially mammals to ecosystems not evolved to cope, has been devastating to the New Zealand environment.

Species loss has been considerable. At least 27 indigenous species are documented as extinct, of which 17 are bird species. New Zealand bird species feature strongly in the list of endangered, threatened and rare species produced by IUCN- the World Conservation Union. Meanwhile the fabric of this geologically young land is disintegrating with erosion; waterways are degraded by sediments, eutrophication, pollution and invasion by alien species. Many indigenous ecosystems are in collapse, often from pests and other pressures.

Terrestrial Impacts

Prior to humans arriving in New Zealand, about 78% of the total land area of 27.1 million ha was covered in forest, 14% in alpine vegetation (Statistics NZ, 1993, 120) Only 1.2% of wetlands remain. Indigenous forest covered 70% of New Zealand when Pakeha arrived but it now covers only about 22% of the total land area (Glasby, 1991, 63).

New Zealand's population of about 3.5 million is 85% urbanised living on 2.7% of the total land area, but impacting much more with agriculture, forestry, horticulture and other activity. About half of the country is in agricultural - pastoral and arable production; 28% is in forests. Plantation production forests account for 4.8% of the total land area. The mostly pine forests produce timber and pulp, which account for the bulk of New Zealand's production and forestry product exports (NZOYB, 1994). However about two-thirds of employment is in the service sector (Statistics New Zealand, 1993, 97).

Protected status is afforded about 5 million ha or about 19% of the total land area but this tends to be alpine or high country. Lowland ecosystems have come under disproportionate pressure. Formal protection does not always mean actual protection as possums, goats, deer, rats, stoats, cats, invasive plants and sometimes miners wreak havoc inside boundaries of formal protection.

Coastal and Marine

As a country 1,600 km long and about 450 km wide at the widest point, the sea and coast are vital. The sea yields a great many products, services and ecological functions. It is the basis of much of our cultural identity and our climate. The isolation it has provided has been crucial to both our biological and our social evolution.

The marine and coastal environment is a major location for New Zealand recreation, sport and tourism. A 1987 survey showed that 17% of New Zealanders regularly fish recreationally (Statistics New Zealand, 1993, 143). Sailing, boating, swimming, whale watching and other passive marine and coastal pursuits are important to locals and tourists alike.

Marine mammal numbers have not recovered from the onslaughts of whalers and sealers. Even fur seals, dismissed by some in our fishing industry as "the rats of the sea" (Talley, pers comm) are only about 5% of their original biomass. There is a considerable problem of by-catch of marine mammals, with the Hector's dolphin being at risk. With Australia, we have experienced a decline in seabird numbers. Populations of albatross have declined dramatically, probably from mortality in the long line fisheries in the Southern Ocean.

Declared in 1978, the New Zealand EEZ is about 1.2 square nautical miles, one of the largest, very deep but not very productive. Marine reserves are still very limited. As befitting a people from an island culture, Maori tradition provided for many restrictions on the harvesting of seafood. Coastal reefs were the preserve of particular hapu, or family groups. Many of these have suffered from pollution and siltation.

Several of the 100 or so commercially exploited fish stocks have come under serious pressure in the last few decades. New Zealand exports about 90% of the commercially caught catch which earned revenues of about $NZ1.2 billion in 1993. About half of this was caught by foreign charter vessels, often with foreign crew (NZOYB, 1995,443 and ff).

Orange Roughy and the Oreos are examples of very slow growing, long-lived deep water species. Roughy's mean age at maturity is estimated at 33 years, but may live to 120-130 years old (Annala, 1995, 173). Stocks are well down in some populations, less than half of the estimated biomass at maximum sustainable yield, with catches well above those that are sustainable (ibid, 173 and ff). Oreos may live even longer than Roughy - one has been aged at 153 years (ibid, 204) .

It is not only deep water stocks that are, or have been, at significant risk of collapse: some of the inshore fisheries including snapper, paua (abalone) and rock lobster have been or are under serious pressure (Annala 1995a, 1995b).

Some other stocks, though heavily fished, appear to be in relatively good shape. Hoki, for instance, though fished in high volumes in the last 10 years (100,000 - 200,500 tonnes per year) is never-the-less estimated to have healthy stock levels (Annala, 1995,123 and ff).

As with the terrestrial ecosystems, pollution and degradation from human impacts have caused substantial modifications to the character of the coast and the marine ecosystem . Like Australia, New Zealand has its worries with exotic marine species arriving in ballast water or by other means. The reasons for pilchard deaths and possible viral infections are still unresolved but may well relate to environmental stress. Other species such as oysters are frequently affected by outbreaks of infections or parasites. Such outbreaks may be aggravated by fishing.

Energy and minerals

Oil and gas extraction is primarily from wells off the Taranaki coast. Coal, gold and silver, iron sands, aggregates and building materials are the main mined materials - Such mining is covered by the Crown Minerals Act which governs access and allocation, and the Resource Management Act 1991 which governs environmental and other impacts.

Energy intensity (energy per $/GDP) has increased against the OECD trend until just the last year or so. This reflects low electricity prices because of a base supply of hydro power (not of course costed to include environmental damage).

Atmosphere

Carbon dioxide, methane and ozone depleters are probably the most significant anthropogenic sources of global atmospheric pollutants emitted from New Zealand. There are other pollutants such as lead, particulates, tropospheric ozone, smelting emissions and rural air degradation from fires, primary product processing and spray drift.

Contaminated Sites

New Zealand has only in the past few years begun to address the problem of contaminated sites. We have still only a vague idea of both how many we have and what to do with them. desk-top study for the Ministry for the Environment in 1992 concluded that there were over 7,000 potentially contaminated sites. These were not actually contaminated sites. It omitted some categories of site that might have been included.

It is plain that there are many primary products processing sites, particularly timber treatment sites, sheep dipping and other agricultural as well as the more obvious industrial sites that are contaminated. New Zealand has not yet sorted out how to deal with this legacy.

The Treaty of Waitangi

Expectations and interpretations of the Treaty of Waitangi have differed ever since the Treaty was signed. New Zealand is now in a major period of adjustment as the effects of the Treaty of Waitangi emerging from popular and judicial disregard become felt. Not only is the Treaty now referred to in most recent resource legislation, but it has gained a much more secure political foothold: albeit that foothold is still slippery! This is forcing a major change in resource allocation and resource management decision processes. Claims are being made to protected areas and most resources. The ensuing debate has usually been highly anthropocentric.

The Treaty of Waitangi has now become judiciable, and references to it or its principles can be found in modern New Zealand resource legislation. There is still considerable debate in New Zealand over both the meanings of the English and Maori versions of the Treaty and of the principles variously derived from them. The meanings and practical requirements of biculturalism, partnership and settlement of grievances are central to these discussions. The Minister of Justice issued a set of proposals for the settlement of Treaty claims which have been hugely controversial. The Tainui people reached a settlement with the government in October 1995.

Resource Management In The Decade Prior to 1984

Prior to the election of the reforming Labour government in 1984, there was a confusing patchwork of laws and rules relating to resources. Prime amongst these were the Town and Country Planning Act of 1977 which provided for the zoning and regulation of activities, and the Water and Soil Conservation Act of 1967. Air, mining, rivers and other aspects of the environment were controlled by a host of Acts and regulations, each with different purposes, procedures, public participation rights, and time lines. There was no sense that the environment was a whole to managed as such; no sense that consistency of purpose or process would aid the unwary who wanted to go about economic activity or even to build a garden shed.

The "Think Big" era of the late 1970s and early 1980s began with a push by the then Minister of Fisheries to promote movement of fishing effort from the over-fished inshore fisheries to the deeper water of the recently declared EEZ. It "blossomed" into a series of government initiated, energy intensive, export oriented, "development" projects - most of which were fairly clearly going to be a disaster in terms of their economic and development objectives and for the environment.

Government was ad hoc, with heavy-handed intervention. At times there was significant favouritism. There were many distortions from ad hoc economic interventions, regulations, subsidies and so on, few of which could claim any sensible rationale in equity, environmental protection or efficiency. Environmental damage by government policies was endemic.

Land development encouragement loans encouraged the draining of wetlands and the destruction of native vegetation. These and other subsidies masked the decline in the real comparative advantage of farming. Instead of encouraging better product mixes, input controls and subsidies distorted production method choices and disguised the underlying price trends.

In the "Think Big" Muldoon era, environmentalists used to urging environmental sanity, found there was neither economic nor environmental sense in many public sector decisions. Primary production subsidies and the major energy projects were being rammed through by the government despite the protest of economists and environmentalists alike.

The public sector was dominated by secretive powerful "development" departments whose activities were often driven by supply rather than demand. The very powerful Ministry of Works and Development continued to build hydro dams long after the populace had concluded that these were not wanted more than the wild and scenic qualities of the rivers that they dammed.

The Department of Lands and Survey became stuck in a time warp as it flattened ever scarcer native forest or drained wetlands in pursuit of its mission to settle young New Zealanders on the land - even as the country side emptied of people with post war urbanisation and the move to a service economy.

The New Zealand Forest Service (NZFS) saw itself as something of a fairy godmother to declining areas of the country, investing heavily in burning or otherwise destroying native forest in order to plant pines even when the economic return to the NZFS was considerably less than one dollar for every $ 12 spent. Such regional "development" programmes were a colossal economic burden and destroyed native forest too.

The New Zealand Electricity Department, succeeded by the Ministry of Energy, made wild projections of future demand but the reality of the situation was that their electricity generation plans were largely supply driven, rather than demand driven. They ignored environmental costs, demand management and alternative supply options.

Each of these major departments had "little green dots" - forlorn and usually demoralised environmental units that struggled against the prevailing ethos of "development" (in the worst Antipodean sense). A Commission for the Environment existed but only by Cabinet Minute.

When it tried to challenge the major projects or other directions of government it was threatened with disestablishment. Similarly economists and environmentalists who challenged the Muldoon government's decisions were vilified and attacked, as were all the government's critics.

It is little wonder in this situation that interventionist government got a bad name! It is really no wonder that New Zealand has had a strong reaction and many people have easily been persuaded that government failure is a major problem.

The Reforms from 1984

In 1984 a reforming Labour government introduced profound changes to New Zealand. These included new macroeconomic policy, microeconomic reforms, legislative and institutional changes with a major reform of the law and institutions governing the environment, and a substantial restructure and shrinking of the public sector. Local government bodies were reduced and their boundaries redefined, primarily on a catchment basis.

At the heart of these changes were a range of agendas, with a redefinition of the role and modus operandi of government predominant, but also a move to greater environmental as well as economic sense.

The macroeconomic reforms have seen a commitment to repaying the national and external debt at the expense of high unemployment and the welfare state. Since 1990 there has not been a parallel commitment to tackle the legacy of environmental damage. As part of the overhaul of fiscal policy, most of the special concessions have been removed, marginal tax rates reduced and COST introduced to widen the tax base. Inflation reduction has kept interest rates and the exchange rate high, and so checked economic activity though in the last two years traditionally measured GDP growth rates have been high. The principle of even-handedness in tax matters established from 1984-90 has been eroded since, and special tax concessions have returned for petroleum exploration and plantation forestry.

It is only recently that the government has, with little political commitment, produced policies that reflect concerns for the kind and quality of economic growth, and issues of sustainability in its "Environment 2010 Strategy", issued without fanfare in September 1995. New Zealand has made relatively little progress towards state of the environment reporting and environmental accounting.

Microeconomic reform has seen deregulation, and in some cases re-regulation along more rational lines; the removal of subsidies, input, output and import controls. However government has in this process removed itself from many fields including many areas that contribute to social and worker protection.

Subsidies for land "development" in the form of herbicide subsidies, drainage and clearance subsides have all gone, and this in itself has been enormously environmentally beneficial. An exception to this has been the National government's 1992 reintroduction of clearance subsidies on the East Coast of the North Island in the guise of regional development subsidies to promote

planting pine trees for erosion control. In practice this has involved the removal of regenerating native forest, and has been poorly targeted to the most eroding land.

Environmental Protection

The Labour government elected in 1984 had already been in substantial dialogue with environmental groups prior to its election and signalled its thinking on the need for environmental reform in a discussion paper "Environmental Administration in New Zealand: A Discussion Paper", November 1984. The major environmental groups issued their own version with a rather different administrative and legislative prescription. The debate was given a high profile with an "Environment Forum" at Parliament in March 1985.

One of the main aspects of the debate was whether it was better to have large, development oriented departments with internal environmental units, "little green dots", or to have environmental protection collected together in stronger environmental agencies.

New thinking on the part of the Treasury and some Ministers about the role of government and the need for clear management objectives, coupled by the push by environmental groups for the environment to be given better protection, saw major restructuring.

In line with the view that the development departments were supply driven and were providing neither economically nor environmentally sound outcomes, the restructuring separated out the commercial and trading objectives from the natural estate protection, regulatory and policy functions. The Treasury was keen too for much better asset management and accountability, more modern management structures and clarity of purpose. The public wanted better environmental outcomes, more openness and an end to government sponsored environmental destruction.

The Restructuring

The turf wars that broke out between agencies through all of this were substantial, but by the 5 November 1984 the Minister for the Environment recommended to the Cabinet Policy Committee that a new Ministry for the Environment be created with 'control' functions and the job of overhauling the nation's planning and environmental law (Minister for the Environment, 1984) . The control function meant "it would have the responsibility to report to Government on the environmental implications of proposed policies and projects. Such reports would be mandatory for all decisions involving the allocation of natural resources". A staff ceiling of 130 was recommended. A new parliamentary Commissioner for the Environment, not under Ministerial control was also recommended (ibid, p2) and indeed, like the Ministry for the Environment was created and now exists.

The New Zealand Forest Service and the Department of Lands and Survey were disestablished. Instead the Department of Conservation was created with responsibility for the ecologically significant areas that these had previously managed. This included protected areas and "stewardship" land.

Lands allocated for extractive or "productive" use were transferred to the corporate structures, Land Corp and Forest Corp. Most of these assets have since been privatised. Survey and residual land and functions were transferred to the new Department of Survey and Land Information.

Other restructuring saw the transfer of the planning and water laws to the Ministry for the Environment and their replacement with the comprehensive law reform which emerged as the Resource Management Act (RMA), eventually passed in 1991 after surviving a change of government. From it was sloughed off the Crown Minerals Act, a vestige of chapter on Energy and Minerals which was removed from the RMA under lobbying pressure from the Ministry of Commerce and the mining industry.

After the creation of the Ministry for the Environment, the Parliamentary Commissioner for the Environment, the Department of Conservation and the two corporate entities for lands and forests, the government set about dismantling the Ministry of Works and Development and the Ministry of Energy.

The Ministry of Works and Development, one of the most powerful in the Muldoon era was dismantled into corporate entities. The administration of law covering planning and water and soil conservation transferred to the Ministry for the Environment.

Energy regulatory functions and the administration of the Crown's minerals were transferred to the Ministry of Commerce. The operational sections of coal mining and electricity production were separated and corporatised into Coal Corp and Electricorp. In each case, as there had been with the dismantling of the other departments, there were huge reductions in staff and in uneconomic activities. The "Think Big" era, dubbed by those concerned at the massive addition to the national debt and the environmental effects, the "Sink Big" era was no more - though of course the environmental costs and the fiscal deficit remain to this day.

Through all of these reforms there were huge turf wars and strong pressure from a range of interests. The huge departments fought for self preservation; the Treasury fought against the Ministry for the Environment's control function and when it lost this, took care that both the Ministry and the Department of Conservation have progressively been starved of resources. The Ministry recently lost the control function. Further, the Ministry for the Environment is only a policy agency, albeit with overall responsibility for legislation in its area, particularly the Resource Management Act 1991 (RMA) and legislation on Hazardous Substances and New Organisms (HAZNO). This last has been very slow to emerge because of lack of political will by the National government and the lack of resources of the Ministry. The Parliamentary Commissioner was established on a very slim budget, well below that originally suggested. Several elements of the reforms were never given effect.

An example of structural elements of the reforms which were never implemented are that no environmental watchdog agency with the resources and mandate to put the environmental case in hearings by local government exists. Thus there is no regular official scrutiny of environmental impacts of projects except by local government. The skills are often not available at this level to make good assessments. The result is that this scrutiny has fallen to non-governmental

environmental and community groups. In effect, there has been a shift here, as in other areas, from public regulation to private regulation.

The Labour government had a Legal Services Bill as a companion to the Resource Management Act to provide legal aid to non-governmental organizations (NGOs). This was hastily dropped by the National government when it assumed power in late 1990. The Labour government too promised a law to give statutory force to the "Environmental Protection and Enhancement Procedures" which required environmental impact assessment and auditing, but never did so. Some such reporting is required by the Resource Management Act but this is not complete and does not cover all activity.

Fisheries was omitted from the Resource Management Act, as are a number of matters connected with energy, minerals and the whole area beyond the 12 nautical mile territorial limit out to the 200 nautical mile EEZ. These are significant omissions. Fisheries will be dealt with in more detail below.

Public participation in the changes was assisted greatly by the passage in 1982 of the Official Information Act, and of the Local Government Official Information and Meetings Act in 1987 which freed up access to information from government.

The Labour Government had a much more participatory style of government than its predecessor or successor. This has been a hall mark of the Ministry for the Environment, which however defined itself as "the Ministry in the Middle" rather than a clear advocate for the environment. This Ministry drove the Resource Management Law Reform process, perhaps the biggest law reform in New Zealand. Both the process and the resulting law are innovative. As well as the usual public input by written submissions, the Ministry set up tolls free numbers for telephone submissions - even at this, many people who tried could not get through.

Local Authority Reforms

The Resource Management Act reforms were accompanied in 1989 by redesign of local body boundaries, amalgamations and the abolition of a host of special purpose authorities. Gow (1990) records there being over 800 territorial and special purpose authorities when the local government reforms began in 1988. Most of the special purpose boards such as rabbit boards had their functions reassigned or dispensed with, and they were abolished. There are now 12 Regional Councils, 4 unitary authorities and 74 territorial (district) authorities, 154 Community Boards, and 6 special authorities (NZOYB, 1995, 75). Local authorities have very significant resource management powers and also operate trading enterprises which deal with water, electricity and waste management.

The reformed regional council boundaries were largely based on catchment boundaries. Thus though at times the two sets of reforms were out of kilter, the underlying environmental logic of the reform to local government was maintained as well as the agenda for reducing the number and duplication of authorities.

The Resource Management Act

The Resource Management Law Reform process had been a key part of the Labour Government's policy. From about 1987 the reform process began in earnest and though the Resource Management Bill was before Parliament in 1990, it was not passed until 1991, after a government change.

The RMA was the product of a range of agendas. Key ministers and the Treasury wanted to curtail government, to devolve responsibility (but often not funding) from central to local government, to streamline processes and to reduce "social engineering" in planning. Business wanted a single process, with consideration of consents all in a "one stop shop". Many people sought a less prescriptive, rule-bound approach, wanting instead one focussed on controlling adverse environmental and social impacts. The public and community groups wanted a process that was open and publicly accountable.

Almost everyone wanted a policy backdrop to give context, integration and greater certainty to consent decisions. The public wanted to be involved in such policy development. In an attempt to move away from the extraordinary fragmentation of decision making and authority. The Act's one-stop-shop approach means the whole project and its impacts on the environment are considered, together, a vast improvement on the previous situation.

Better environmental outcomes were expected to stem not only from the policy integration and project as a whole approach, but also from the change of ideas that the new purpose of sustainable management would require. The Act's provisions to internalise environmental externalities were designed to induce more environmentally sound decisions of both the private sector and the Crown, to which, innovatively, this Act now applies. The Crown is bound by the Act, as are the armed services, unless a special exemption is used.

The Resource Management Law Reform process was the epitome of the rational and comprehensive approach to policy and law reform. The four person task force (including the head of the Ministry's Maori unit) appointed within the new Ministry for the Environment began a three-phase reform process with a series of discussion papers designed to scope the need for reform from a "zero base'. Papers were commissioned to capture and disseminate the new thinking about environmental sustainability; the rights of future generations; the value, intrinsic and instrumental, of nature; an effects rather than activities based approach, and various other topics. From this debate were derived a series of principles for what was eventually styled 'the sustainable management of natural and physical resources' (Resource Management Act 1991 (RMA), s5).

The term "sustainable development" was dropped because the Treasury feared it would lead to "social engineering" which was anathema to an agency intent on rolling back the state. Environmental groups feared the term 'development' in its lay meaning of chopping, draining and supplanting ecosystems with concrete, would send the wrong messages to a New Zealand community unfamiliar with the meaning of the term from the international development literature.

The Purpose and Principles of the Resource Management Act

Part two of the Resource Management Act defines the Act's purpose and principles:

Part II: Purpose and Principles
5. Purpose

"(l)The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, "sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well being and for their health and safety while--
(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) Avoiding, remedying or mitigating any adverse effects of activities on the environment.

6. Matters of National Importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

(a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

(b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development:

c) The protection of significant indigenous vegetation and significant habitats of indigenous fauna:

(d) The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers:

(e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu [sacred sites], and other taonga [treasures, widely defined].

7. Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to

(a) Kaitiakitanga; [stewardship]
(b) The efficient use and development of natural and physical resources:

(c) The maintenance and enhancement of amenity values:
(d) Intrinsic value of ecosystems:
(e) Recognition and protection of the heritage values of sites, buildings, places, or areas:
(f) Maintenance and enhancement of the quality of the environment;
(g) Any finite characteristics of natural and physical resources:
(h) The protection of the habitat of trout and salmon.

8. Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (To Triti o Waitangi)."

The Policy Structure and mechanics of the Resource Management Act

The Resource Management Act sets up a policy making framework into which National and Regional Policy Statements, Regional and District Plans and rules, and National Environmental Standards are to be fitted. None of these may be inconsistent with the Purpose and Principles of the Act. District plans must be consistent with regional plans and policy, regional with national policy. Neighbouring regional and district policies or plans must mesh.

This framework was designed for coherent and integrated community decision making to provide for decisions in the context of agreed policies and plans, to reduce ad hocery in environmental management and to give developers greater certainty provided by the context of these policies, plans and rules.

These are all to be developed according to specified statutory processes of public notification and input and according to the Purpose and Principles of the Act plus matters that the Act prescribes must be considered by each level of government. The Act allocates functions to each level of government- thus regional governments' responsibilities include the sustainable management of water and soils, discharges and pollution, natural hazards, hazardous substances, and in conjunction with the Minister of Conservation, coastal management.

District territorial authorities are responsible for land management and the subdivision of land, hazardous substances, natural hazards, noise control and various other matters.

The Act was written with the intention that there would be over-arching National Policy Statements and Standards on matters such as energy and climate change, native forests. Each subsidiary council would have to ensure its own policies and plans were not inconsistent with these National Policy Statements and Standards.

The only mandatory National Policy Statement related to the coast. This is the only one that has been done. The signs are that the present government has no intention of developing any other National Policy Statements despite pleas from almost every quarter for such Statements on energy, climate change and transport. The apparent reason for this reluctance is a view that the statutory process is too demanding. Besides, the government dislikes such approaches: one

former Minister of Energy, John Luxton, told his Energy Advisory Group (of which the author was then a member) when it pressed for such a National Policy Statement that "that would be Stalinist Planning".

In an attempt to be less prescriptive the focus of the Act is on controlling externalities. To this end, impacts, rather than activities are the focus of control. This has lost some certainty of control, but may in the longer run provide more flexibility and efficiency. It does introduce some greater risk if impacts are not well anticipated. The Act requires environmental impact information, and also provides that policies or plans may prohibit some activities or allow others. In between, resource consents must be applied for with certain information disclosure required.

Not all such applications must be notified - indeed community and environmental groups are increasingly concerned that in the implementation of the Act the provisions for discretionary non-notification of applications are being over-used. We do not have recent data, but a Ministry for the Environment study of 10,000 randomly chosen resource consent applications in the period October 1991-September 1992, the first year of operation, revealed that Regional Councils were only notifying half of the applications made, territorial councils a mere 10% (Ministry for the Environment, 1994b). The effect of this parsimony of notification is to exclude public participation, vitiating a strength of the Act - its otherwise robust public participation rules.

Other instruments are included in the Act: Designations (special powers for utilities), Heritage Orders, Water Conservation Orders, rules for subdivisions and reclamations, the creation of esplanade reserves, and other provisions but space does not allow further discussion here.

Pressure on business and others to behave more environmentally was expected partly from the process of reform and the circulation of new ideas; the new decision criteria and bodies; the new purpose, principles and other policy embodied in the Act, and the policy documents created under it. But the Act also has new strict liability provisions which make principals liable for the acts of agents (s340). While many of us think the $200,000 fines, with $10,000 per day maximum fines are too low, these were much higher than before. There is further provision for a penalty of up to 2 years in prison. This has made the enforcement issues much more personal to managers and directors. It has given a strong incentive to take precautionary steps, and as a consequence the environmental audit industry has had much custom.

There are defences to the strict liability provisions, including that the person concerned did not know, nor could reasonably be expected to know, about the offence, or took all reasonable steps to prevent the commission of the offence. This gives a strong incentive to care: but also a strong incentive to avoid having to admit that the principal knew about the problem. Hence, though many companies are commissioning environmental audits, they are also looking for means to avoid disclosure of these in case the defence of not knowing is compromised by such an audit's existence (Buwalda, 1993).

There are of course other enforcement provisions, some new to New Zealand. Innovations include the provisions for applications by parties for enforcement orders to the Planning

Tribunal, the body of first appeal. These may be applied for not only against an errant operator, but also against a local authority or other body which fails to discharge its responsibilities.

For the first time, if a local authority takes legal action, the Court can decide that the authority concerned be paid 90%... ...While some might object to this on the grounds that it invites an industry of prosecutions, this has not happened: and it does at least diminish one large disincentive to enforcement, the costs to ratepayers.

The agenda of shrinking government and of forcing, particularly local government, to use less prescriptive policy instruments than in the past is best revealed in section 32, "Duties to consider alternatives, assess benefits and costs, etc". This section requires authorities acting under the Act, "before adopting any objective, policy, rule, or other method" to consider whether it is "necessary" for the purpose of the Act; along with other means for doing so, the reasons for and against doing it that way, and the costs and benefits of the proposed objective and those of the principle alternatives.

This is a substantial requirement. When some of us at the time suggested it could be the Treasury economists drumming up work, or could lead to a burden of assessment disproportionate to the gains from doing so, so violating the neo-classical equation of marginal costs and benefits, a clause was inserted to make the assessment "appropriate to the circumstances".

Environmental interests, including those of us literate in economics, made sure too that the definition of costs and benefits includes "monetary and non-monetary" costs and benefits.

Coastal management is the joint responsibility of the Minister of Conservation who has developed, as the Act requires, a National Coastal Policy Statement. This is done by a substantial process of public consultation and inquiry. Responsibility for implementation is delegated to the Regional councils which also have statutory authority in this area. In some cases, especially where the district and regional authorities have been merged into one as "unitary authorities", there is concern at potential conflicts of interest. These may arise where the local authorities also own the port companies. They or their customers may want to do activities that may have adverse environmental impacts.

The case of the Marlborough District Council (a unitary authority) and the controversy over the impact of fast ferries in the Marlborough Sounds (at the top of the South Island) is one that has raised the profile of this issue. In this case a local group and Maori applied for a declaration under the Act (s311) from the Planning Tribunal regarding alleged environmental damage. The regulatory authority owned a port company used by the ferries. The groups lost their case in the Planning Tribunal and were unable to proceed to appeal for lack of funds. (Marlborough District Council v Save the Sounds Stop the Wash Inc. and Te Atiawa, Manuwhenua Ki Te Tou Ihu Trust; W40/95)

This raises the general question of the service and utility provision by local authorities. These have been set up as "LATES", local authority trading enterprises, companies which provide services, supposedly at arms length from the regulatory functions of local government.

The Treaty of Waitangi

The RMA deliberately eschews the question of ownership of resources. It does not address resource ownership conflicts. Section 8 of the Act does require authorities to "take into account the principles of the Treaty of Waitangi". This innovation is still being worked through by the authorities for there is neither agreement on what these principles are or on the meaning of "take into account" in this context. What is clear though, is that Maori will have much more input than in the past - if they can manage to cope with all the demands on them.

Implementation of the Resource Management Act

Because of the sweeping nature of the law changes and fact that most of the time since the passage of the Act in 1991 has been the designated period of transition, the jury is still out as to the success of the Act. What can be said, is that whereas the law reform was "rational and comprehensive", its implementation has been far more incremental.

The Planning Tribunal

It was expected that there would be a huge flood of legal cases testing the Act as soon as it was passed. So far this has not happened, though cases are starting to mount up - but many of them not testing the law, rather they are on disputes as to fact. The Act is designed so that the Planning Tribunal, a semijudicial body, is the body of first appeal, with points of law appealed to the High Court.

The Resource Management Act provides for pre-hearing meetings and allows for processes designed to avoid recourse to the Tribunal. The Tribunal too has been innovative, using telephone conferences for preliminary discussions and the hearing of interim enforcement orders.

Opposition to the reforms was expected, especially from some aspects of business and from those local government people who had become set in their ways. What was not expected was the vigour of the opposition from senior members of the planning profession, especially the lawyers. Even more unexpected has been the trenchant opposition to the reforms from some of the Planning Tribunal judges. This opposition was expressed while the reforms were being developed, intensified during the passage of the Bill and in the case of one Judge, has continued in fora outside the Tribunal, despite the fact that it is his job to administer the Act (Tread well, 1994).

The current Minister for the Environment is at times clearly irked by this behaviour and makes statements to counter some of this judicial campaigning (Upton, 1994). Law professor, Sir Geoffrey Palmer, who was Minister of the Environment and then Prime Minister when the Act was developed, is far less guarded. Speaking in 1995, Palmer said: "... the extrajudicial utterances by some judges of the Planning Tribunal suggests that some of those judges at least have seriously lost the plot". He then criticises the same judge for trying to hang on to outdated concepts from the past and says "I cannot recall such a swinging attack from a judicial officer upon legislation which it is his function to administer. If the Planning Judges share that attitude there is little chance that the Act will ever work. In my view the failure of the Planning Tribunal

to get to grips with some of the wider features of the legislation has been a serious problem" (Palmer, 1995, 2)

The Tribunal's lack of engagement with key issues of interpretation of the Act has also been criticised by other academic legal commentators (Phillipson, 1994).

It is plain that some of the other judges of the Tribunal who do not follow the Treadwell approach attempt to give greater effect to the thinking behind the Act. The Environment and Conservation Organisations of New Zealand (ECO), asked the original Select Committee of Parliament to dissolve the Planning Tribunal and create new Resource Management Tribunals with officers attuned to the RMA. This may yet be necessary.

Barriers to Public Participation in the RMA's Judicial Processes

The Purpose and Principles of the Act have not yet been strongly tested in either the Tribunal or the courts of appeal. There are several reasons for this. The first is the Tribunal's own apparent reluctance to engage with these key issues. The second is that though many people would like to test the provisions, most cannot afford to.

Those who want to challenge whether certain councils are really sustaining the potential of the natural and physical resources to meet the reasonably foreseeable needs of future generations; whether the life supporting capacity of air, water, soil and ecosystems is safeguarded (s5), or whether the intrinsic value of ecosystems has been had regard to (s7), are faced with the usual lack of resources attendant on non-rival and non-excludable services. The loss of the Legal Services Bill is keenly felt. The Legal Services Bill's environmental aid section was designed with the idea that environmental protection is, in both the economic and the lay sense, a public good.

A further reason for not taking such cases is that the present government is not generally sympathetic to the environment, so that cases that took the Act in that direction might give the government ideas for changing the Act. There are already powerful lobbying forces of miners, farmers and other resource users pushing to have the Act modified.

Public participation under the policy making functions of the Act has been reasonably robust in the last few years as councils develop their policy statements and plans. The quality of these documents varies, and some councils are more receptive than others in their hearings. The scale and pace of change in central and local government has left many people active in their communities exhausted.

The costs of participation in the judicial and quasi judicial processes under the Act, including the Planning Tribunal and Boards of Inquiry, is such that many who can make submissions or objections in the first round, cannot go to these bodies. Research on the barriers to public participation is under way now in academic circles and at the Ministry for the Environment. Those in non-governmental organisations are already clear that the increasing use of threats of and actual claims for costs against those who seek to review council decisions in the Planning

Tribunal or in the High Court are discouraging public participation (ECO Annual Conference, August 1995, Piha).

The mining industry particularly, is using the threat of applications for costs against non-governmental groups as a weapon. On several occasions they have brought pressure to bear to have objections withdrawn by threatening applications for costs in the event that community groups lose their cases. This is particularly effective where groups have not incorporated.

The Planning Tribunal in the past has only rarely awarded costs against such groups if their case was well made, even if lost. This seems to be changing. In a recent case with Peninsula Watchdog, Ceour Gold was allowed to pursue costs even though the Judge recorded that the Watchdog case had merit (though it failed) and was professionally presented and not frivolous or vexatious (Peninsula Watchdog Group Inc., Waikato Regional Council; A26/95, 414/95). The Waikato Regional Council voted by a narrow margin not to pursue costs. The mining company concerned estimated its costs at $NZ 435,748 and asked for 20-30% to be paid by the Peninsula Watchdog Group. This group has few financial resources.

In another case, the mining company contacted the 82 members of an unincorporated society and threatened them with costs should the objection proceed and fail. The group withdrew. Corporate fight back tactics, many being imported via Australia from the USA, are on the increase in New Zealand. These include a range of threats of legal action and physical violence against property and person. Defamation and other legal "SLAPP" writs appear also to be on the increase, as do industry front groups.

Industry applicants have boosted cases with many expert witnesses and legal firepower so that participation for objectors becomes very burdensome. In the case of the Whanganui water hearing on minimum water flows, electricorp's budget is reputed to be $4million. All non-governmental organizations withdrew because of the resource constraint. This discourages future as well as current participation.

The High Court has required substantial monetary bonds from groups in case there is commercial damage or costs from cases that might fail. This is a severe barrier. There have been several cases where important grounds for appeal have not been pursued because of these barriers (eg the Save the Sounds, Stop the Wash case cited above). The result is a lack of High Court cases to clarify the law. The irony is that whereas these contingent costs requirement are imposed on community groups, there is no parallel contingent liability for environmental damage caused while the case is under way.

Councils

On the ground, many local authority people have not really changed their mind-sets or their perceptions of the range of policy instruments. Many are still thinking in very prescriptive terms: and indeed, sometimes this may be the best approach. But sometimes there are far more innovative possibilities than they have thought about. The quality of the policy and regulatory documents produced by authorities differs widely between councils, with some still floundering and others starting to get the bit between their teeth in this matter of sustainability.

Water

Water management is the prime responsibility of regional councils. National and (higher) regional standards are provided for. The Act prescribes qualitative standards of a general kind such as not having a significant adverse effect on aquatic life, having objectionable odour, or conspicuously changing the colour or visual clarity (s70). Schedule Three also lays down water classification standards. There is no parallel set of detailed environmental standards for other media such as air.

Water trading systems are allowed but not prescribed. Such trading may occur only if expressly allowed for in the prevailing policies or plans. Implementation require many decisions on allocation and whether the domain of trade should be constrained to allow for differences in impact of taking water at the head or the mouth of a river and other locationally sensitive effects. The Act allows trading across a whole catchment, which could have significantly varying effects if allowed unchecked. Some authorities are beginning to experiment with water trading.

Assessment of the Resource Management Act

Assessment of the Act must still wait for a longer bedding down period. It has not yet fulfilled its potential, but some of the reasons for this are transitional. Its implementation is hampered by the loss of designed structural supports: environmental legal aid and National Policy Statements and Standards that were to provide financial help and context for resource consent decisions. This has been a particularly serious obstacle to sensible decision making in transport, energy and greenhouse gas control. Finally, the determined opposition from legal sources and the inertia at ground level are serious sea anchors to the operation of the RMA.

Management of Marine Resources

Like the patchwork of laws on land before the RMA, New Zealand's marine administration is a confusing collection of Acts and bodies, none of which see the sea as an ecosystem - still less one with intrinsic value or ethical standing. In fisheries, significant restructuring, policy changes and law re-writes have been underway for much of the last four years but it has been a chaotic process. During 1995 Fisheries was filleted from the Ministry of Agriculture and Fisheries. Further, the research functions were separated from policy and compliance and sent to NIWA, a Crown Research Institute, a profit seeking entity. New law is due to complete its journey through Parliament this year. Cost recovery for fisheries management has been introduced but resource rentals were abolished.

Maritime safety is the responsibility of the Maritime Safety Authority; marine mammal and seabird protection that of the Department of Conservation; management of coasts primarily that of the Department of Conservation and local authorities under the Resource Management Act. The Ministry of Transport, the Ministry of Foreign Affairs and Trade and the defence agencies have further responsibilities. There is little sense of sea as an ecosystem receiving integrated management.

New Zealand's fisheries management has been frequently cited by policy officials as a success story since the introduction of tradeable rights (eg Clark et al, 1988). Tradeable quota was introduced first in the deep water fishery in a limited fashion in April 1982. In October 1986 29 species in the inshore fishery were brought into the Quota Management System (QMS). This sets total allowable commercial catches (TACCs) and sometimes total catches, and then allocates these TACCs to individuals as Individual Tradeable Quotas (ITQs). The TACCs are adjusted annually. For an account of this see Sissenwine and Mace, 1992. (For an official and pithy summary of New Zealand's fisheries and their management see the NZOYB, 1995, p443 and ff).

When New Zealand first decided in the late 1970s and early 1980s to reduce fishing effort and over capitalisation in the overfished inshore fisheries, she did three things. First, in 1978 she declared a 200 nautical mile limit. Ministers encouraged domestic fishers to "Think Big" and to buy larger vessels for the deeper water. This was done with special incentives and rhetoric. Second, she encouraged New Zealand companies to get into joint ventures with foreign vessels to fish in the New Zealand EEZ.

Third, the government quite arbitrarily cut out of the inshore fishery about 80% of the vessels. The rule used was that all those who got either less than 80% of their income or less than $10,000 from the fishery had to leave. This was done without any compensation. It ruined many carefully patched together seasonal livelihoods: and only reduced the fishing effort by about 5%.

Quota Management

After this debacle—which looked impressive on vessel numbers, but did little to reduce catch, the officials thought again. After trialing transferable quotas as part of the deepwater trawl policy, the government rewrote the Fisheries Act and in 1986 introduced the Quota Management System (QMS) for New Zealand. Quota was "grand parented" to those who fished, on a formula based on the average of the best two of the last three fishing years.

The allocations of individual transferable quota once made, were then the subject of a buy-back of quota in order to reduce the total effort. The government spent $42.3 million on this, taking bids from fishers as to the buy out price they would need to retire their quota. About 15,000 tonnes of quota was retired this way. (See Clark et al, 1988, or Sissenwine and Mace, 1992 for the mechanics of how this was done).

Positioning behaviour was rife in the lead-up to the allocations of quota. Because the policy was debated prior to implementation, fishers fished furiously to stack up a catch history, thus exacerbating the problem the policy was designed to relieve. Incentives to mis-report were also high. There was also much fisher indignation at the reversal of incentives to cheat from understatement for tax purposes to overstatement for quota allocation. Changes in cheating incidence and directions can hugely distort catch figures and hence stock estimates and catch limits. Moral hazard was also present in the great pressure on officials by fishers in order to influence the final allocation formula chosen.

Quota allocations were a major transfer of wealth from the community to quota recipients. Mostly the government did not auction or tender quota. It just gave them away. It did require an

annual resource rental. These were set very low. The result was that the recipients capitalised unrecovered resource rents in resale prices. Quota prices are now about $NZ200,000 per tonne of rock lobster, about $40-60,000 per tonne of snapper (depending on the area of the stock), and about $12-15,000t of Orange Roughy. These of course are capital prices for access to the resource, not annual charges. The high prices reflect scarcity and expectations of future rents. They also give strong incentives to bootleg fishing.

One problem for containing effort came from the appeal provisions of the QMS. People who had for one reason or another been associated with the fishery but through illness, vessel repairs, education or other reason been temporarily absent, arbitrarily missed out. Appeals were allowed to the Quota Appeals Authority which decided the case largely unconstrained by Total Allowable Catch - so that in some cases the fishing effort ballooned again. There were many appeals. The QMS was originally designed so that when the individual tradeable quota were set, fishers had rights of access in absolute tonnages. As environmental conditions, information and stock estimates changed, adjustments to total quota were to be effected by the government standing in the market and either buying or selling quota. The problem was that this put a huge fiscal burden on the government since baseline stock estimates of significant high value species turned out to be too high, especially in some deep water species which turned out to live much longer than first thought. The government did not buy-back quota and fishing pressure persisted.

Economist Lee Anderson's proposal that the ITQs be transformed from a right to an absolute tonnage of fish, to a percentage share of the TACC, was eventually adopted. This is in many respects a great improvement. One problem that has emerged is of fisher resistance to TACC reductions. Fishers with proportional quota now share the risk from stock fluctuations and hence changes in the TACC. Before the government absorbed this. Now the fishers seem more resistant to TACC reductions. This appears from their behaviour in TACC setting rounds (in which the writer participates). Thus for all their expected long term interest in stock viability, New Zealand fishers frequently and insistently press for catch levels above those recommended by scientists. This behaviour has put certain fisheries at risk.

Not all the commercially fished species and stocks are under the QMS. The government proposes to add another 60-100 species soon.

Stock assessments involve open scientific discussions between the government commissioned scientists, the industry, recreational fishers, environmental interests and, on occasion, Maori interests. The stock assessment process is followed by TACC setting rounds which also consider allocations for Maori customary purposes, for recreation, and for environmental needs. Formal allocations for these purposes are not usually made, but they are implicit in the TACC setting. Bag limits and other controls may be placed on recreational catches, and similarly a variety of gear, area, seasonal and method restrictions may apply to the commercial extractive catch. Ecosystem relationships are not commonly examined except in the context of bycatch.

"Input controls", restrictions on method, gear, place and season of fishing effort, have steadily reappeared in the armoury of the New Zealand fishery managers. Yet when the QMS was introduced, it was thought such an "output control" that would replace other measures. It was posited that with their new ownership stake in the fisheries, fishers would have a greater

incentive to protect the resource. There are a few cases where such enlightened behaviour has been apparent (eg the Gisborne fishers) but behaviour around the TACC setting table, and the state of the fish stocks suggests that other forces are at work. The industry still takes significant risks with the resource—even just in terms of extractive values.

Stocks

Excessive fishing pressure has stressed the snapper, paua, rock lobster, oreo and Orange Roughy and several other fisheries. Bycatch issues are a serious problem for marine mammals, sea birds, and a number of other fish stocks.

Stock declines have been very severe in the Orange Roughy and oreo dory stocks. These species live long and reproduce slowly, yet their prices are high. These are well known conditions for commercial "mining" of fisheries. Ecological relationships and non-market values are likely to be sacrificed.

There are several different stocks. In the Chatham Rise Orange Roughy fishery the mid-season 1994-95 biomass estimates ranged from 10-16% of the original. The fisheries management target is 29%, the maximum sustainable yield (Annala, 1995a, 181). The document summarising the stock assessment plenary and workshop discussions, and so already reflecting industry input, says "the low productivity of Orange Roughy makes rebuilding rates slow. To achieve rebuilding to BMSY (the safe stock level) by 2001-2002 would require a substantial reduction in catch, and may not be possible even if fishing ceased" (Annala, 1995a, 181).

Some other stocks are not in such bad shape, some are worse. What is clear from the fact that there are a number of stressed fisheries is that the Quota Management System is not enough on its own to give the fisheries protection from over exploitation. High discount rates and competitive behaviour lead members of the industry to exert heavy political pressure on TACC setting and to overfish the resource.

In 1995 for the first time in five years, the Minister has set TACCs at rates calculated to allow a reasonable opportunity of rebuild of stocks. The response of the fishing industry has been to take the Minister to court on judicial review. The previous year Greenpeace took similar action for the opposite reasons.

Law reform

The law under which the fisheries are being administered have been under review and reform and a new bill is now before Parliament. Until now the primary emphasis of New Zealand public policy has been on the extractive values of the marine environment, as well as the transport system it offers. There is no single unifying law that sees the sea as a whole.

Environmental non-government organisations have tried to broker non-market, non-extractive and ethical values into decision making. This has been a piece-meal affair. It is worsened by the mismatch of resources between the resource rent rich fishing industry organizations and the resource starved environmental organizations. Such groups' services are both non-rival and non-

excludable. They suffer the usual fate of free loading as they try to broker these values into official decisions.

Disagreement on catch rates reflect differences of recognition of non-market values, the ethical standing of nature, the need to protect ecological functions, intergenerational equity, and time horizons. Such differences also underpin debate on the Purpose and Principles of the new law.

The Parliamentary Select Committee has not, at the time of writing, reported back, so we have not seen what position Parliament will take in the revised Fisheries Bill. Various forms of words, some based on the Resource Management Act and focussing on impacts and environmental and ethical constraints, others focussing more on extractive value, have been in competition with each other. The version in the Bill when it was introduced leant towards extractive values. It also provided for the Minister to set TACCs at levels above maximum sustainable yield. Public participation provision was well below the benchmark established in other recent legislation, including the RMA. Ecological and intergenerational matters, constraints in the RMA, were demoted to considerations in the introduction copy.

The Bill also re-designs elements of the QMS, especially in relation to annual balancing and transferability. Information disclosure and the question of how institutional re-arrangements may generate industry capture of science by the fishing industry have been points of dispute in other aspects of the reforms.

Cost recovery

New Zealand has also recently introduced a requirement that the fishing industry pay for some of the costs of the management of the fishing industry on an "avoidable cost" basis. The idea here is that the industry should pay for the services of government incurred in the management of the fishery. This cost recovery policy has led to two different views.

To the industry, user pays implies a client relationship. It wants user pays to lead to "user says". As part of the industry and the Treasury's agenda, the restructured Ministry of Fisheries has had a policy/provider split. The research unit has been re-located to NIWA. The industry argues that it should have a major say in the determining the research agenda, and the Ministry's functions including policy, registrations and data management. The Cabinet has agreed to prepare the ground to contract most of these off and to make them contestable. The fishing industry wants to bid for research contracts itself.

Environmentalists in the New Zealand debate see user pays as analogous to the polluter pays principle of the OECD and elsewhere. Thus the fishers, as those impacting on the marine environment, should pay for the management of their impacts and for research on this, in the same way that polluters should: but that does not mean that they should have the dominant say in what research and management is done. Further, ECO and other groups worry that specification of research and other fishery management services is so difficult that biases from vested interests doing the work cannot be excluded. They fear industry capture of research, policy and other services. They fear too, that ethical limits may be sidelined and non-market values both ignored and diminished.

Competition

The fishing industry has taken a case to the Commerce Commission to try to overturn the transitional arrangements under which the newly separated policy Ministry of Fisheries has awarded the fisheries research contract for 2 years to the scientific team that has done the work in the past but which is now in the Crown owned NIWA research entity. The concern of the Commission is with anticompetitive practices. The Commission's report is not yet public.

Such application of anti-competitive law to public policy and research raises many constitutional and other questions. (A survey of the New Zealand experience in government by contract is in Boston et al, 1995). From a public policy and institutional economic point of view, fisheries research specification, conduct, management and avoidance of capture clearly involve many questions beyond competitiveness. The Commerce Commission has a limited brief designed for the private sector. Application of competition regulation in the administration of a public resource with many non-market values and significant vested interests is unlikely to produce balanced resource management.

After the passage of the Treaty of Waitangi (Fisheries claims) Settlement Act 1992, a Maori holding entity called the Treaty of Waitangi Fisheries Commission was endowed with a fishing company and fisheries quota in recognition of aboriginal and Treaty of Waitangi rights. Arguments on the appropriate distribution of these assets has not been resolved.

Once in possession of the quota, Maori pursued the logic of their case and argued that they should not pay resource rentals on that which was always theirs. The government's response was to abolish resource rentals for all. Thus society at large does not get payment for the fishers' use of this scarce resource.

Other Marine Extractive Resources

Fisheries matters are administered through the Fisheries Act, the coast through the Resource Management Act. Aquaculture straddles both. Mineral extraction from the sea floor, and other sea based activities which could have strong environmental impacts are not covered by the RMA beyond the coastal area, or at the most out to the 12 nautical mile limit (depending on the activity). Activities out to the 200 mile limits are covered by statutes that are outdated, have no provisions for public notification, disclosure or submissions. Nor do they provide for the protection of the environment.

The UN Convention of the Law of the Sea places an unqualified obligation on states "to preserve and protect the marine environment" (Art 192). There are other obligations and rights of exploitation - but these are constrained by Article 192. New Zealand has not yet fully ratified UNCLOS. New Zealand domestic fisheries law may require modification to conform to UNCLOS and to other international conventions, including MARPOL, the Bonn Convention and others.

Non-extractive values

New Zealand marine management has focussed largely on extractive and instrumental values. Seabirds and marine mammals have species protection in law but often not in fact, despite reporting and observer requirements. There is a pressing need to unify and integrate ecosystem based management of New Zealand's marine environment. This will require changing public sector entities and their missions, new ecosystem management principles, new law and new mind sets.

One example of ecosystem based principles of marine management can be found in the Convention on the Conservation of Antarctic Marine Living Resources, CCAMLR. It is a difficult task to take these and make them operational but the CEMP working group of CCAMLR has had a decade of thought about this and has made some progress.

Matters Omitted

Resource Management in New Zealand is a very wide field and this paper has by no means touched on all the matters at issue. For reasons of space but not lack of importance, I have said little about the massive rejigging of the electricity sector where the government has forced changes including the creation of a wholesale electricity market and has fractured the monolithic Electricorp, in a quest for competition. Demand side management, alternative power sources and saner transport policies all demand attention but cannot have it here for lack of space. Hazardous substance and new organisms legislation is before Parliament but New Zealand is still developing policy on contaminated sites of which there are potentially many.

New Zealand's response to Agenda 21, to the Biodiversity Convention, and to many other international matters have not been dealt with here. This is not to suggest that they are unimportant, only that a paper such as this requires selectivity.

Generic Issues

Standing out in the New Zealand resource management reforms are a number of points:

1. Initially protection of the environment, including ecosystems and biophysical functions received considerable attention during the Labour years from 1984-90. That attention has now waned in practice, though the National government recently approved and announced with little fanfare a document of government policy called Environment 2010 Strategy. Much work went into it, but the present government has shown little commitment to the environment;
2. New Zealand environmental law is mostly fundamentally anthropocentric. Yet intrinsic value of ecosystems has statutory recognition in the Environment, Conservation and Resource Management Acts. These Acts do not spell out the implications of this recognition, nor do they reveal how conflicts between intrinsic value and other matters given the same status in the statutes are to be resolved. It is unlikely to be recognised in the Fisheries Act.
3. The needs of future generations have a strong but ambiguous position in the Purpose of the Resource Management Act, and there will be some reference to these in the Fisheries

Act. In the latter though, the reference is likely to be demoted from a constraint on present day activity to only a consideration.

4. Equity between and within generations is a major element of the conundrum of how to settle Treaty of Waitangi claims by Maori to resources. Farmer pressure has caused the government to promise not to use private property in settlements. This has put pressure on the "public" conservation estate and the government owned corporate assets - which it is hastily selling off, in order to retire the national debt and because of its ideological commitment to privatization and the shrinking of the state.
5. Intra-generational equity is not obviously a major preoccupation of the present government.
6. Governments since 1984 have tolerated high unemployment, interest rates and the exchange rate for economic stabilisation at a macro level: but this means economic destabilization often for those most vulnerable. The microeconomic reforms have probably removed many arbitrary inequities, but the re-channelling of decision making on resources to market forces is bringing its own inequities. It will also select for privately appropriable environmental services at the expense of collective benefits.
7. In the resources field, increasing use of market instruments may help with the internalization of some environmental costs and provide some advantages. Unless very carefully designed, tradeable rights select for privately appropriable, rival and excludable services from nature at the expense of collective consumption of joint products. These include ecological functions, public goods for recreation, amenity, biodiversity and the like.
8. Tradeable rights systems are likely to encounter serious problems of thinness of markets, specification, monitoring and capture of the process for setting total allowable quotas. The New Zealand fisheries experience has revealed many problems that are sensitive to the precise institutional arrangements.
9. In the New Zealand political discourse, certainty for business has become a largely unchallenged goal of public policy. This seems extraordinary at a time when there has been such fundamental change and restructuring of public life, but in many of the resource debates, the preservation of existing uses, under very outdated conditions on consents that could last 60-80 years, has become a sacred cow. No such sacredness has attached to the expectations of the clients of the welfare state. Assertions that certainty in an uncertain and learning world should not be regarded as a free good is a rare heresy.

   Certainty of conditions for industry usually means risk for the environment. What is required is a new system of permitting with a mix of long, short and medium terms as there is in the bond market. Those who want certainty would either have to pay for the resource equivalent of long term bonds, or accept short terms and the opportunity for society to change the allocations. Even for long term permits there should be regular reviews.
10. Internalisation of externalised costs is gradually being achieved in New Zealand, but not at the pace of destruction. New Zealand is losing species and biodiversity at a rapid rate. The full potential of the Resource Management Act has yet to be realised.
11. An assessment of New Zealand's marine management must be that it is fragmented and not unified or integrated around the idea of the sea as an ecosystem. Urgent refocussing is required.

12. The past decade in New Zealand has seen a major government preoccupation with limiting government and its failures. There has been merit in this enterprise and benefit to the environment. But in the rolling back the state certain vital elements of environmental protection, social equity and cohesion have been lost.
13. New Zealand's resource administration overwhelmingly is based on instrumental values. Ethical constraints though do have a foothold in recent resource law and in many New Zealanders' thinking.

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