The Fisheries Act 1996: Context, Purpose, and Principles

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I: INTRODUCTION

The ocean covers seventy-one percent of the Earth's surface and is extremely important to humankind as a source of food, a potential source of medicinal materials, a recreational resource, and a thing of aesthetic value. Despite the importance of the marine environment, many species and ecosystems are threatened by unsustainable practices. For example, it is widely believed that approximately seventy percent of the world's fish stocks are either fully exploited, overfished, depleted, or recovering from overfishing. In addition to unsustainable exploitation, the marine environment is threatened by pollution, the introduction of alien species, and the addition of substances to the atmosphere that increase ultraviolet radiation and alter the climate.

The sea and its resources do not obey human imposed state boundaries, hence the need for all states to co-operate in its management. In order to protect marine ecosystems, an integrated approach to such management is needed. The concept of sustainable development is an umbrella principle which has enabled some degree of consistency to be achieved between international treaties, regional agreements, and national legislation. This paper will first examine the extent to

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which the principle of sustainability has been incorporated into international treaties affecting the marine environment. Second, the effectiveness of New Zealand's legislation will be discussed. This will involve an examination of the quota management system (as introduced by the Fisheries Amendment Act 1986), and the purpose and principles of the Fisheries Act 1996.

II: THE SUSTAINABLE MANAGEMENT OF FISHERIES AT INTERNATIONAL LAW

Fish stocks, if managed sustainably, are a renewable resource. There has never been any question about whether they should be exploited for subsistence and economic gain. However, the exploitation which will inevitably take place needs to occur at a rate which maintains the stock's capacity for renewal. Since the late nineteenth century, scientists have attempted to formulate a mathematical framework for explaining the relation between a fishery's biological productivity, the level of fishing effort, and the rate of fish mortality. In 1954, Milner B Schaefer presented a logistics model which "estimated the proportion of the stock or biomass that would be removed by a single unit of fishing, while also taking into account the intrinsic ability of the stock to increase and the maximum size it could theoretically attain. These estimates could then be used to predict both the maximum average yield the stock could support on a sustained basis and the average yield for any level of fishing effort."[1] The concept of maximum sustainable yield ("MSY") is widely regarded as the most useful fisheries management tool available today.

The concept of MSY recognises that no renewable resource can carry on increasing *ad infinitum*. The number of fish in a given stock will multiply quickly when the population level is low. However, as the fish begin to compete for food supplies the rate of growth will slow down. Eventually, the fish stock will converge on some maximum level - the ecosystem's carrying capacity for that species. Theoretically, if fishers take the MSY from a fish stock, it will regenerate to its population maximum, allowing the MSY to be taken from it next time round, and so on. The concept of MSY is attractive in environmental and economic terms: the resource survives in perpetuity and the fishers get the maximum from it each season. Maximum sustainable yield is thus promoted as a perfect marriage of conservation and development objectives.

The concept of MSY has, however, been criticised for failing to take adequate account of environmental impacts unrelated to fishing effort. As explained by James McGoodwin:[2]

1 See McGoodwin, *Crisis In the World's Fisheries* (1990) 70.

2 Ibid, 72.

> Most fisheries managers acknowledge that the MSY goal is flawed because of the simplistic assumption on which it rests - that is, the assumption that for a particular marine stock there is a level of fishing effort that can be sustained year after year, one in which the recruitment of new fish to the fishery will be neatly balanced by the overall catch. While this might be possible in a few cases, most marine stocks live in a complex and constantly changing environment that produces what sometimes seems to be random or chaotic fluctuations in their populations, the ultimate causes of which are often only dimly known. Thus many marine stocks undergo boom-and-bust cycles that are entirely independent of fishing effort. Because marine environments do not exist in a steady state and MSY is predicated on biological equilibrium, for all practical purposes there is little chance of ever achieving maximun yields in an ocean ecosystem year after year.

The concept of MSY has also been criticised for treating the exploited fish stock independently of other species sharing its ecosystem. In short, the concept of MSY cannot on its own ensure that the biological diversity of the world's oceans is maintained.

Some of the concerns that scientists have about the concept of MSY can be met, at least in part, by:

(i) The adoption of a systems approach towards the marine environment ("ecosystem" approach);
(ii) Significant investment in research and monitoring of marine ecosystems; and
(iii) The adoption of the precautionary approach.

The following part of this paper will discuss the extent to which UNCLOS, the Straddling and Migratory Fish Stocks Agreement, the Biodiversity Convention, and the FAO's Code of Conduct have acknowledged the need to complement calculations of MSY with other environmental considerations.

III: THE 1982 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA[3]

The negotiations leading to the adoption of the third United Nations Convention on the Law of the Sea ("UNCLOS")[4] occurred between 1973 and 1982; a time of increasing awareness about the damage unsustainable fishing practices were having on high seas fisheries. The freedom-of-fishing doctrine, which still dominates the exploitation of fish stocks on the high seas, had led to overfishing and overcapitalisation. The process by which this occurred has been

3 21 ILM 1245 (1982).

4 Initially UNCLOS was signed by 159 states and other entities including the European Economic Community ("EEC"). The 1982 UNCLOS has been in force since 16 November 1994.

explained by James McGoodwin:[5]

> First, when fishers initially enter an open-access fishery, they experience high catches and high profits. Second, this attracts other fishers to the fishery, which in turn prompts the fishers who were already there to increase their investment in vessels, gear, and other capital items. Third, a point is eventually reached at which the fishery becomes over fished, as manifested in dwindling fish stocks, reduced catches for a given level of effort, a climate of cutthroat competition among fishers who are intensifying their efforts to catch the dwindling stocks. Fourth, and finally, catch rates and profits fall to the point where at best most fishers can only break even. At this point, any further increase in effort will bring about losses and force some fishers to leave the fishery. This fourth stage in a fishery's development is known as its *bioeconomic equilibrium*, and however benign that tag may sound, it implies a disastrous situation indeed ... unless there is a reduction in fishing effort, the fishery will remain indefinitely at this low equilibrium point and will be unable to recover - either biologically or economically.

The first United Nations Convention on the Law of the Sea had made the freedom-of-fishing doctrine subject to the obligation to conserve stocks at a level which would allow the optimum sustainable yield to be maintained.[6] However, many important fishing states, including Japan and the USSR, never became party to the 1958 Convention. Further, the total lack of an ecosystem approach, the inadequacy of scientific data, and the inability of coastal states to enforce the obligations meant that unsustainable fishing on the high seas continued. With world fish stocks predicted to reach their bioeconomic equilibrium around the turn of the century, it was vital that UNCLOS III enacted effective fishery management controls.[7]

Instead of creating an international body to ensure that the world's fish stocks were managed in a sustainable manner, the Convention gave coastal states the right to establish an exclusive economic zone ("EEZ"). An EEZ is an area of up to 200 nautical miles (371 kilometres) from the baselines from which the breadth of the territorial sea is measured.[8] Within this zone, the coastal state has sovereign rights for the purpose of exploring, exploiting, conserving, and managing living and non-living resources.[9] It also has exclusive jurisdiction for the purpose of protecting and preserving the marine environment.[10] The effect of the establishment of EEZs has been to remove about eighty-five percent of the world's exploitable fish stocks from the high seas freedom-of-fishing or common property regime. It is almost certain that the right to establish an EEZ has passed into customary law, due largely to the consensus led approach which characterised the development of UNCLOS. It is now up to individual states to make effective use of this opportunity to conserve fisheries on a sustainable basis.

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5 Supra at note 1, at 71.

6 Pursuant to the Convention on Fishing and Conservation of the Living Resources of the High Seas, adopted at the 1958 United Nations Conference on the Law of the Sea.

7 See McGoodwin, supra at note 1.

8 UNCLOS III, Article 57.

9 Ibid, Article 56.

10 Ibid, Article 56.1(b)(iii).

Part V of the 1982 UNCLOS sets out the rights and obligations of states within exclusive economic zones, including the obligation to conserve the living resources within their EEZs. Article 61.2 provides:

> The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organisations, whether sub-regional, regional or global, shall co-operate to this end.

Article 61.1 provides that the coastal state shall determine the total allowable catch ("TAC") of the living resources within its EEZ. The TAC for each fish stock is to be set at a level which will maintain or restore the population at a biomass which will produce the MSY, as qualified by environmental and economic factors.[11] The Convention therefore acknowledges that the concept of MSY is a management tool rather than an end in itself. However, the qualifying factors listed as examples are more likely to increase the catch levels than to decrease them. For example, Article 61.3 states that the economic needs of coastal fishing communities and the special requirements of developing states are potential qualifying factors.

When setting TACs, coastal states are required to take into account the interdependence of stocks and the effects on species which are associated with or dependent on populations of harvested species. Although this obligation recognises the need for an ecosystem approach towards the marine environment, the preservation of associated and dependent species is not an absolute obligation. Coastal states are simply required to consider the matter with a view to maintaining or restoring such species above levels at which their reproduction may become seriously threatened.[12] UNCLOS also implicitly recognises the interrelationship between fisheries and pollution prevention.[13]

Article 61.5 of the Convention provides that available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be exchanged between states on a regular basis. The type of information which should be shared is not, however, specified. Some important information will be collected by fishing vessels in the process of exploitation, other information will be gathered by scientists as they conduct detailed research projects. In respect of the latter, coastal states have exclusive jurisdiction over marine scientific research conducted within their EEZs.[14] Pursuant to Article

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11 Ibid, Article 61.3.

12 Ibid, Article 61.4.

13 As indicated in the title of Part XII: "Protection and Preservation of the Marine Environment"; see Birnie and Boyle, *International Law and the Environment* (1992) 517. Article 192 also implies the need for a holistic approach by providing that states have a general obligation to protect and preserve the marine environment.

14 UNCLOS III, Article 56.1(b)(ii).

246.3, coastal states are required to grant their consent to research projects by other states in "normal circumstances".[15] As reliable scientific data is a necessary prerequisite for the establishment of sustainable TAC levels, this is a potentially harmful restriction, especially since the UNCLOS does not require states to adopt a precautionary approach when faced with scientific uncertainty.[16] Much will depend upon the willingness of coastal states to promote and facilitate the development and conduct of marine scientific research (as required by Article 239 of the Convention), to promote international co-operation (Article 242), and to create favourable conditions for the conduct of marine scientific research (Article 243).

IV: THE UNITED NATIONS AGREEMENT ON THE CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

UNCLOS has empowered coastal states to ensure that fish stocks within their EEZs are maintained in perpetuity. The rights of coastal states are less clear in relation to straddling stocks (those which occur both within the EEZ of a coastal state and in a high seas area adjacent to it), and highly migratory fish stocks (those which migrate long distances through the high seas and the EEZs of coastal states).[17] Articles 63 and 64 of the Convention require coastal states and other states which fish for the same stock, to seek agreement on the measures necessary for the sustainable management of those stocks. The lack of elaboration on the relationship between the freedom to fish on the high seas and the rights and obligations of coastal states in respect of fish stocks within their EEZs left a vacuum in the law of the sea. This concerned coastal states because if straddling or highly migratory stocks were overfished on the high seas, their EEZ fisheries would be adversely affected. In recognition of these problems, the United Nations

15 Exempt from this provision is research of direct significance for the exploration and exploitation of living or non-living resources (Article 246.5(a)). Pursuant to Article 257 all states have the right to conduct marine scientific research in the water column of the high seas, provided it is compatible with the Convention.

16 Article 62.1 provides that coastal states shall promote the objective of optimum utilisation. It could be argued that the optimal level of exploitation would be one with an inbuilt safety margin. However, although the Convention does not define the term, it is likely that "optimal utilisation" was intended to mean "full" use of the resource. This interpretation is supported by its context: the requirement for coastal states to allocate any surplus in their TACs. Further, Article 62.1 is subject to Article 61.3, which requires stocks to be maintained at a level which can produce MSY.

17 Definitions of straddling and highly migratory fish stocks are contained in Articles 63-64. In addition, Annex I of the Convention provides a list of highly migratory species.

Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks was convened in 1992. The objectives of the Conference as articulated by the New Zealand Minister of Fisheries, Mr Kidd, were: [18]

(i) To clarify the obligation of conservation in relation to both target and non-target species;
(ii) To define the duty to co-operate;
(iii) To describe the responsibilities of fishing nations to conduct research, to share data, and to attain conservation and management objectives; and
(iv) To define minimum standards to ensure effective compliance especially by the flag state.

In 1994, the United States agreed that a binding convention rather than a set of non-binding principles was needed. This paved the way for the development and adoption of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982, Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ("the Agreement").[19] It is an elaboration of the provisions relating to straddling and highly migratory fish stocks contained within UNCLOS and must be read consistently with the Convention.[20] The Agreement applies to the conservation and management of straddling fish stocks and highly migratory fish stocks beyond areas under national jurisdiction. Article 5 (general principles), Article 6 (application of the precautionary approach), and Article 7 (compatibility of conservation and management measures) also apply to the conservation and management of stocks within areas under national jurisdiction. In other words, coastal states must meet the requirements of Articles 5-7 when conserving and managing straddling and highly migratory fish stocks within their EEZs.

Article 5(b) of the Agreement requires states to adopt measures designed to maintain or restore stocks at levels capable of producing MSY, as qualified by relevant environmental and economic factors. This obligation is a repetition of that contained within Article 61.3 of UNCLOS. The Agreement further requires states to "take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources."[21] The Agreement is also stronger than the Convention regarding the need to adopt an ecosystem approach. Articles 5(d) and (e), provide that states shall:

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18 Powles, "The Law of the Sea: Recent Developments" (a speech to the Maritime Environment and Security Conference, 6 December 1995) 7.

19 34 ILM 1542 (1995). The Agreement was opened for signing on 4 December 1995 and will enter into force thirty days after the deposition of the thirtieth ratification.

20 The Agreement, Article 4.

21 Ibid, Article 5(h).

(d) [A]ssess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;

(e) adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened.

Article 5(e) of the Agreement requires states to adopt measures specifically designed to ensure the survival of associated and dependent species. In addition, Article 5(g) advises states to "protect biodiversity in the marine environment".

It is recognised that the marine environment cannot be sustainably managed unless it is adequately understood: [22]

> The timely collection, compilation and analysis of data are fundamental to the effective conservation and management of straddling fish stocks and highly migratory fish stocks. To this end, data from fisheries for these stocks on the high seas and those in areas under national jurisdiction are required and should be collected and compiled in such a way as to enable statistically meaningful analysis for the purposes of fishery resource conservation and management. These data include catch and fishing effort statistics and other fishery-related information, such as vessel-related and other data for standardizing fishing effort. Data collected should also include information on non-target and associated or dependent species. All data should be verified to ensure accuracy.

The requirements pertaining to the promotion, gathering, and exchange of information are more detailed than those contained within UNCLOS. The information to be collected and exchanged includes, for example, catch and effort statistics, discard statistics, and identification of fishing locations. Where appropriate, other relevant research is to be provided, including research on environmental factors affecting stock abundance.[23] Importantly, Article 5(j) introduces a new requirement for states to collect and share such information in a timely manner. In addition, Article 14 of the Agreement obliges flag states to ensure that vessels flying their flag provide full and accurate information to other states, including the coastal state.

Article 5(k) requires states to promote and conduct scientific research in support of fishery conservation and management. Nevertheless, as the Agreement is to be read consistently with the Convention, a coastal state could still refuse an application by another state to conduct research on stocks within its EEZ, if this research was directed towards the stocks' potential for exploitation. Fortunately, the Agreement addresses the potential problem of inadequate information by requiring all states to apply the precautionary approach to the conservation,

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22 The Agreement, Annex I, Article 1.1. Article 1.2 recognises that developing states must be assisted if they are to meet these information requirements.

23 Ibid, Articles 3 and 3(2)(c).

management, and exploitation of straddling and highly migratory fish stocks.[24] The traditional interpretation of the precautionary approach is set out in Article 6.2:

> States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

Article 6.3 provides that in implementing the precautionary approach states shall:

> (a) [I]mprove decision-making for fishery resource conservation and management by obtaining and sharing the best scientific information available and implementing improved techniques for dealing with risk and uncertainty;
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> (b) apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded;[25]
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> (c) take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socio-economic conditions; and
>
> (d) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.

These requirements, particularly the latter two, address concerns relating to the failure of MSY to give proper regard to environmental processes unrelated to fishing effort. Unfortunately, the requirement to apply the precautionary principle only applies in respect of straddling and highly migratory fish stocks. It has not been incorporated into the main body of UNCLOS.

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24 The Agreement, Articles 5(c) and 6.1.

25 Pursuant to Annex II, precautionary conservation and management reference points must be used to ensure that stocks are restored to or maintained at levels which generate MSY. The Agreement, Annex II, Article 6 provides that, when information for determining reference points for a fishery is poor or absent, provisional reference points shall be set. In such situations, the fishery shall be subject to enhanced monitoring until there is sufficient information available to adopt revised reference points. If reference points are exceeded, Article 6.4 requires that states take restorative action without delay. If a natural phenomenon has a significant adverse impact on fish stocks, Article 6.7 provides for the adoption of temporary emergency measures.

V: THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY

The aim of the United Nations Convention on Biological Diversity ("the Biodiversity Convention")[26] is to provide a broad framework for the development of measures to conserve the Earth's biological diversity, including the biodiversity of the world's marine environments. Pursuant to Article 6 of the Biodiversity Convention, states are required to develop a national strategy and plan a programme for conservation of biodiversity and suitable use of biological resources. Article 8(i) advises states to endeavour to provide the conditions necessary for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components. In addition, Article 10(e) requires states to encourage co-operation between governmental authorities and the private sector in developing methods for sustainable use of biological resources (such measures could include economic incentives pursuant to Article 11). The Biodiversity Convention therefore integrates developmental and environmental concerns in national strategies and programmes.

The Articles which deal with the sustainable use of environmental components do not undermine the Biodiversity Convention's adoption of an ecological approach. The definition of biological diversity itself necessitates a holistic system of management:[27]

> "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

The need for an ecosystem approach is supported by Article 8(d), which requires states to promote the protection of ecosystems, natural habitats, and the maintenance of viable populations of species in natural surroundings.

Like the treaties discussed above, the Biodiversity Convention recognises the important role that information and research plays in the protection of the environment. To this end Article 12 provides that the contracting parties, taking into account the needs of developing countries, shall:

> (a) Establish and maintain programs for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components and provide support for such education and training for the specific needs of developing countries; [and]
>
> (b) Promote and encourage research which contributes to the conservation and sustainable use of biological diversity.

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26 31 ILM 818 (1992). The Biodiversity Convention has been in force since 29 December 1993.
27 Article 2.

Environmental impact assessments are acknowledged as an important source of information and a tool for minimising the adverse effects of development on biological diversity.[28] Article 17 recognises that collecting information is of limited use in a global sense unless it is widely disseminated. Although the precautionary approach is not mentioned in the body of the Biodiversity Convention, the Preamble notes that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat. Together with UNCLOS and the Agreement on Straddling and Highly Migratory Fish Stocks, the Biodiversity Convention plays an important role in the development of national legislation concerning the marine environment.

VI: FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS CODE OF CONDUCT FOR RESPONSIBLE FISHERIES

The Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries ("the Code")[29] was unanimously adopted by the Food and Agriculture Organization of the United Nations ("FAO") Conference on 31 October 1995. It is another important source of principles which could guide the development of national legislation.[30] The Code is intended to be consistent with UNCLOS, the Straddling and Migratory Fish Stocks Agreement, and the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.[31] It is a voluntary instrument, directed toward:[32]

> [M]embers and non-members of FAO, fishing entities, sub-regional, regional and global organizations, whether governmental or non-governmental, and all persons concerned with the conservation of fishery resources and management and development of fisheries, such as fishers, those engaged in processing and marketing of fish and fishery products and other users of the aquatic environment in relation to fisheries.

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28 The Biodiversity Convention, Article 14.

29 For further reference see *Basic Texts of the Food and Agricultural Organization of the United Nations* (1994).

30 Article I(2)(c) of the FAO's Constitution requires it to promote and where appropriate to recommend national and international action with respect to "the conservation of natural resources and the adoption of improved methods of agricultural production." Fisheries and marine products are included within the definition of agriculture and agricultural products pursuant to Article I(1) of the Constitution.

31 The latter Agreement was adopted in November 1993 at the twenty-seventh session of the FAO Conference.

32 The Code, Article 1.2.

It is hoped that the Code will provide a framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment.[33]

One of the Code's objectives is to promote the protection of living aquatic resources and their environments and coastal areas.[34] This endorsement of the ecological approach is supported by Article 6.2, which provides:

> Fisheries management should promote the maintenance of the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations in the context of food security, poverty alleviation and sustainable development. Management measures should not only ensure the conservation of target species but also of species belonging to the same ecosystem or associated with or dependent upon the target species.

In addition, Article 6.8 requires the protection of fisheries habitats from pollution and other adverse impacts, and the rehabilitation of habitats which have been degraded or destroyed. The need to adopt an integrated approach toward the protection of the marine environment is recognised by Article 6.9 (which requires fishery management to be integrated into coastal area management), Article 8.7 (which deals with pollution prevention), and Article 8.8 (which recommends that states reduce emissions of greenhouse gases and ozone depleting substances). While the need to prevent over-fishing and excess fishing capacity is listed as a general principle,[35] the need to maintain stocks at levels which can produce the MSY is not. The Code returns MSY to its rightful place among other management objectives.[36]

Another objective of the Code is to "promote research on fisheries as well as on associated ecosystems and relevant environmental factors."[37] The adoption of the ecological approach toward fisheries management is thus carried through into the marine research requirements.[38] The Code's provisions on research and the collection of data are very similar to those contained within the Straddling and Migratory Fish Stocks Agreement (although Article 12 of the Code is more forthright in respect of the need for states to invest in research facilities, training programmes, and staff). The similarity between the Code and the Agreement extends to the requirement to apply the precautionary approach widely to the management of fishery resources.[39] The advantage of having these provisions contained within the Code is that they are applicable to the management of all fish stocks, not just those which are straddling or highly migratory. The disadvantage of the Code is that it is a voluntary instrument.

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33 Ibid, Preface, vi.
34 Ibid, Article 2(g).
35 Ibid, Article 6.3.
36 Ibid, Article 7.2.1.
37 Ibid, Article 2(i).
38 See also Articles 6.4, 7.2.3, and 7.4.2.
39 The Code, Article 6.5.

VII: REFORM OF FISHERIES LAW IN NEW ZEALAND

In the early 1970s, New Zealand's fisheries were subject to an open access regime. Deep water fish stocks were predominantly exploited by distant water fishing states, while inshore fish stocks were exploited by both foreign and domestic vessels. Between 1970 and 1977, yield from New Zealand fisheries increased from 50,000 tonnes per annum to 500,000 tonnes. This increase was mirrored by a growing concern that existing levels of fishing effort were unsustainable.[40] It had become increasingly clear that only a property rights regime could ensure that fish stocks were sustained in perpetuity. Many coastal states, including New Zealand, established an EEZ when it became clear that the concept would be recognised under UNCLOS. In 1977, New Zealand passed the Territorial Sea and Exclusive Economic Zone Act, bringing open access fishing to an end. Section 11 of the Act required the Minister periodically to determine in respect of every fishery within the EEZ, the total allowable catch. The TAC was defined in s 2:

> "Total allowable catch", with respect to the yield from any fishery, means, the amount of fish that will produce from that fishery the maximum sustainable yield, as qualified by any relevant economic or environmental factors, fishing patterns, the interdependence of stocks of fish, and any generally recommended subregional, regional or global standards.

This definition repeats the goal of MSY and the qualifying factors (with the exception of the special requirements of developing states) set out in Article 61.3 of the UNCLOS. This is not surprising considering the Act was passed in anticipation of the Convention.[41]

The establishment of an EEZ gave New Zealand the opportunity (and the responsibility) to ensure that our marine resources were sustainably managed. It has also had important economic consequences:[42]

> New Zealand has already derived significant economic benefit from the marine resources we were conferred with by virtue of [the EEZ concept] .... New Zealand and its outer islands generates the fourth largest exclusive economic zone in the world, some 1.4 million square miles. Although it is difficult to put a monetary value on the benefits New Zealand has gained from its own zone, exports of fish have increased from 50.4 million in 1977 to 1.2 billion in 1994. The fishing industry has developed in that time from a small local endeavour harvesting our coastal waters principally for the domestic market to a sophisticated export-orientated industry.

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40 The Ministry of Fisheries, *Fisheries Management in a Property Rights Regime: The New Zealand Experience* (1996) 2.

41 Section 30 of the Territorial Sea and Exclusive Economic Zone Act 1977 stated: "The Governor-General may, from time to time, by Order in Council, limit any provision of this Act relating to the [EEZ] so far as it is necessary to do so to give full effect to any convention that is adopted by the Third United Nations Conference on the Law of the Sea".

42 Powles, supra at note 18, at 5.

The following part of this paper discusses the development of New Zealand's fisheries management regime since the enactment of the Territorial Sea and Exclusive Economic Zone Act.

1. The International and National Context for Reform

New Zealand signed UNCLOS in December 1982[43] and the Straddling and Migratory Fish Stocks Agreement in December 1995.[44] The latter governs New Zealand's management of the small straddling stock of orange roughy on the Challenger Plateau.[45] New Zealand has also ratified the Biodiversity Convention and the 1989 Convention on the Prohibition of Driftnet Fishing in the South Pacific. Finally, although it is not a binding document, the Ministry of Fisheries has acknowledged the importance of the FAO's Code.[46] These international law instruments have played an important part in the development of New Zealand's fisheries legislation.

The development of New Zealand's fisheries legislation has also occurred as part of the wider resource management law reform process. The principle of sustainability is intended to act as a unifying "golden thread", linking the management of fisheries (through the Fisheries Act 1996), forestry (through the Forests Act 1949, as amended in 1993), and other natural and physical resources (through the Resource Management Act 1991 ("the RMA")). The terms "sustainable management" and "sustainable utilisation" used in these Acts have been chosen over "sustainable development":[47]

> While the concept of *sustainable development* as defined in the Brundtland Report is concerned with sustainability in a broader global social, economic and environmental sense, *sustainable management*, as finally embodied in the *RMA* is more narrowly focused on the integration of principles of sustainability into domestic environmental and resource management policy-making processes and decision-making.

The concept of "sustainable utilisation" is narrower still, eliminating management techniques reliant on resource retirement or nonuse.

The review of New Zealand's environmental legislation was an integral

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43 The United Nations Convention on the Law of the Sea Act enabled New Zealand to ratify the Convention and has been in force since 1 August 1996.

44 For more detail see supra at note 18, at 4-11.

45 New Zealand waters are the southern limits of the migratory paths of a number of tuna species including southern bluefin, big eye, albacon, and skipjack. New Zealand's regional responsibilities, especially in regard to associated states such as the Cook Islands and Niue, were probably the primary motivation behind our promotion of the Agreement. Highly migratory tuna are the primary fish resource of the Pacific Island countries.

46 See The Ministry of Fisheries, *Changing Course - Towards Fisheries 2010* (1996).

47 Grinlinton, "Natural Resources Law Reform in New Zealand - Integrating Law, Policy and Sustainability" (1995) 2 The Australasian Journal of Natural Resources Law and Policy 1, 23.

component of the wider economic reforms, initiated by the fourth Labour government in 1984.[48] Consequently, other "golden threads", with their roots in liberal economic theory, run through the legislation. They reflect the new emphasis on market mechanisms, coupled with a decreased role for the State, which underpinned the reforms. In the case of the RMA, this influence can be seen in the "enablist" wording of s 5(2).[49] People and communities are given the mandate to provide for their own wellbeing. Like the RMA, the development of New Zealand's fisheries legislation has been influenced by a desire to give more power and responsibility to the users of the resource, in this case the fishing industry, while ensuring that our marine ecosystems are sustained for future generations. While the Government is committed to exploring the potential of market mechanisms as a means of ensuring resource sustainability, intervention is necessary in some instances. The Ministry of Fisheries has acknowledged that: [50]

> Future generations are not traders in the market, yet many consider that they should have fair access to resources. Their ability to meet their own needs should not be compromised in decisions made today;
>
> The links between economic activity and ecosystem damage are often indirect and highly uncertain. Cumulative and indirect impacts on the life-supporting capacity of ecosystems can arise if appropriate limits are not in place;
>
> Environmental effects and risks are not equitably spread and unforeseen impacts may be irreversible. This inequitable impact is not easily resolved either through the market or by regulation;
>
> Many consider that the environment and non-human species have intrinsic value (that is, they are "valuable" in their own right).

Further, the market will only work to protect the environment if resource users are required to internalise the costs which they impose on New Zealand's environment. This is often termed the "polluter pays" principle. However,

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48 See Castles, Gerritsen, and Vowles (eds), *The Great Experiment: Labour Parties and Public Policy Transformation in Australia and New Zealand* (1995); Bollard, *New Zealand: Economic Reforms 1984-1991* (1991); and Memon, *Keeping New Zealand Green: Recent Environmental Reforms* (1993).

49 The enablist wording of s 5 of the RMA can be contrasted with its much more directive predecessor, s 4(1) of the Town and Country Planning Act 1977 ("the TCPA"). The purpose of the TCPA was expressed to be:

> The wise use and management of the resources, and the direction and control of the development, of a region, district, or area in such a way as will most effectively promote and safeguard the health, safety, convenience, and the economic, cultural, social and general welfare of the people, and the amenities, of every part of the region, district, or area.

An earlier version of s 5 of the RMA (clause 4 in the Bill) retained this directive flavour. The first part of s 5(2) provides for 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".

50 Supra at note 46, at 9.

cleanup costs are only part of the picture; other costs (such as those associated with preventative measures, research, and enforcement) must also be internalised. The fishing industry in New Zealand has become increasingly market driven with the creation of property rights in fish stocks. Consistent with this market-led approach, the collection of resource rentals from the fishers has been replaced by a cost recovery system.[51] The move to integrate developmental and environmental interests in New Zealand's fisheries law is discussed in detail below.

2. The Fisheries Act 1983

Prior to the enactment of the Fisheries Act 1983 ("the 1983 Act"), fishing practice was regulated through a comprehensive range of input controls. These included limited entry licensing of vessels and fishers, closed areas, seasonal closures, minimum fish sizes, requirements to land fish at specified ports, gear restrictions, and vessel controls. These measures were imposed via annual permits, issued to all commercial fishers. In addition, the Fisheries Amendment Act 1977 gave the Minister of Fisheries power to declare "controlled fisheries". Fishers who wanted to exploit a controlled fishery were required to obtain a controlled fishery licence in addition to a fishing permit. Every aspect of a controlled fishery could be regulated via these special licences. The purpose of the 1983 Act was to consolidate these input controls. They were to be given coherence through fisheries management plans, developed and implemented by the Ministry of Agriculture and Fisheries. The purpose of the management plans was set out in s 4:

> The purpose of any fishery management plan under this part of this Act is to conserve, enhance, protect, allocate and manage the fishery resources within New Zealand fisheries waters having regard to the need for —
>
> (a) Planning, managing, controlling, and implementing such measures as may be necessary to achieve those purposes:
>
> (b) Promoting and developing commercial and recreational fishing:
>
> (c) Providing for optimum yields from any fishery and maintaining the quality of the yield without detrimentally affecting the fishery habitat and environment.

Unfortunately, these plans were stalled in the consultation and planning process.[52] The urgent need to address problems of overfishing led the Minister to cancel all fishing permits held by "part-time" fishers:

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51 This did not, however, occur until 1994. The introduction of cost recovery has led the industry to argue that the services for which they are charged should be fully contestable.

52 No fishery management plan was ever adopted. The relevant part of the 1983 Act was finally repealed by s 9(1) of the Fisheries Amendment Act 1995.

> Some 2260 licence holders (about half of all people fishing commercially in 1983) were consequently excluded from the fishery. The amount of effort removed by this action was comparatively minor although it was argued that the potential of that group to expand their effort justified the action. One result of the cancellation of part time permits (which was incontestable) was the great bitterness which it generated amongst those affected.[53]

The 1983 Act's failure in both political and environmental management terms to adequately address the twin problems of overfishing and overcapitalisation, generated a period of intense policy debate: "A consensus emerged for the introduction of a rights based approach to fisheries management associated with the perceived success of a deep water quota scheme which operated in the early 1980s."[54] In 1986, an amendment to the 1983 Act introduced the quota management system ("QMS"), superimposing an output based regime onto the existing system of input controls.[55] With the introduction of the QMS, New Zealand's fisheries waters were divided into ten quota management areas ("QMAs"). Each exploited species of fish was separated into two or more management units, termed fish stocks.[56] Each fish stock had a total allowable catch ("TAC") that was reviewed annually. The TAC was defined pursuant to s 2 of the 1983 Act:

> The "TAC", with respect to the yield from a fishery, means the amount of fish, aquatic life, or seaweed that will produce from that fishery the maximum sustainable yield, as qualified by any relevant economic or environmental factors, fishing patterns, the interdependence of stocks of fish, and any generally recommended sub-regional or regional or global standards.

Having defined the management units and determined the first annual TAC, quotas for each fish stock were allocated to commercial fishers. These allocations were termed individual transferable quotas ("ITQs").[57] ITQs were tradeable and transferable property rights (subject to some restrictions on foreign ownership and maximum holdings) which were allocated in perpetuity.[58] ITQs were initially denominated as a specific tonnage (measured in greenweight) of a fish stock. They were quantified according to the fisher's catch history, commitment, and dependence.

In the late 1980s, it became clear that the Government would need to buy back

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53 Supra at note 40, at para 2.21.

54 Ibid, para 2.23.

55 Iceland and Australia have also made widespread use of individual transferable quotas ("ITQs") while the United States and Canada have implemented such rights in individual fisheries.

56 Currently, there is a total of 179 different fish stocks within the QMS. Fish stocks can range across more than one QMA.

57 The initial ITQs were allocated free of charge.

58 Generally, quota holders may not hold more than thirty-five percent of the TAC for offshore fisheries and twenty percent of the TAC for inshore fisheries (although the limit for rock lobster is ten percent). Individuals must be citizens of New Zealand in order to hold quota while corporations must be at least seventy-five percent New Zealand owned.

substantial shares of the quota in respect of overfished orange roughy stocks:

> For a number of heavily fished inshore Fishstocks the sum of the ITQs was greater than the biologically based TAC. To reduce the sum of the ITQs to the level of the TAC, a voluntary buyback scheme for quota was implemented. Government spent NZ $45 million to buy back 15 800 t[onnes] of the desired catch reductions of 21 500 t. The remaining quota was removed by pro rata administrative reductions across all remaining quota holders.[59]

This predicted expense led the Government to introduce a proportional system of quota allocation. In 1990, the status of ITQs was changed from a fixed tonnage right to a fixed percentage of the relevant TAC.[60] Under the proportional system, fishers would no longer be compensated for reductions in TACs. On the other hand, fishers stood to gain extra quota free if the TAC was increased. This amendment gave the users of the fish resource a powerful incentive to sustain and enhance "their" fish stocks:[61]

> Before the advent of proportional quotas, any reductions in TACCs [total allowable commercial catch] would be compensated by the Crown and any increase in TACCs would be tendered. That system potentially created incentives for fishers to fish right up to any TACC set because they would be compensated for any stock collapse. Incentives for conservation were eroded because fishers would not capture the benefit of higher stocks - instead the Crown would tender off any increases in TACCs. With proportional ITQs, fishers bear the cost and reap the benefit of changes in TACC.

By creating property rights in fish stocks, the Fisheries Amendment Acts 1986 and 1990 provided fishers with new incentives to adopt sustainable fishing practices. Other advantages associated with the quota management system included:

(i) An easing of the "race to fish" with the following consequences:[62]
   (a) Reduced overcapitalisation;

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59 Annala, "New Zealand's ITQ system: have the first eight years been a success or a failure?" (1996) 6 Reviews in Fish Biology and Fisheries 43, 45.

60 The proportional system removed the need for the Crown to pay compensation for quota reductions, although, as part of the agreement which secured industry approval for the transfer of risk, the Government compensated industry for TAC reductions made between 1 October 1989 and 30 September 1994. This compensation was paid out of the pool of money collected from resource rentals. An additional contribution of the Fisheries Amendment Act 1990 was the redesignation of the TAC as the total allowable commercial catch ("TACC"). This concept acknowledges, in a more specific manner, that recreational and traditional takes must be recognised and provided for in the TAC equation.

61 Fisheries Task Force, *Fisheries Legislation Review: Public Discussion Paper* (1991) 22.

62 The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 provided Maori with NZ $150 million for the purchase of fifty percent of Sealord Products, New Zealand's largest fishing company (which had twenty-five percent of total allocated fish quota), the transfer of twenty percent of the quota for all new species entering the QMS, and regulations which recognise and

(b) Greater industry freedom and flexibility;
(c) A switch from maximising the quantity of the catch to maximising the quality;[63]

(ii) Greater industry responsibility with reduced government intervention;[64] and

(iii) An opportunity for the Crown to meet its obligations to Maori pursuant to the Treaty of Waitangi Act 1975.

Despite the advantages associated with the introduction of the QMS, problems with the 1983 Act remained. First, the environmental objectives of the legislation were not clearly stated or defined. The Minister was required to set the TAC for each fish stock at a level which would produce from that fishery the MSY, as qualified by any relevant environmental or economic factors, fishing patterns, the interdependence of stocks of fish, or any other regional, subregional or global environmental standards. The phrase "as qualified by" was ambiguous, as it was not clear whether a TAC could be set at a level which was too high to promote the MSY because of economic or socioeconomic concerns. This ambiguity was the subject of argument in *Greenpeace New Zealand Inc v Minister of Fisheries*.[65] Greenpeace had applied for review of a Minister of Fisheries decision which was made on 23 September 1993. The Minister's decision stated:[66]

> The TACC for Orange Roughy Quota Management Area 3B (ORH 3B) for the 1993/94 fishing year will remain unchanged, including the current catch restriction of 14 000 tonnes on the Chatham Rise.

In response to scientific evidence which suggested that the Chatham Rise orange roughy stock had been overfished, the Minister announced that, if there was no dramatic improvement in the stock assessment over the coming year, the TACC for the 1994/1995 year would be reduced to 10,000 tonnes. Greenpeace believed that the Chatham Island orange roughy TACC for the 1993/1994 year was unsustainable and would not produce the MSY. It argued that the MSY is the dominant concept of the Act and that the TAC must be such that the MSY is not

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provide for customary food gathering. The Government intends this settlement to be full and final; consideration of the legitimacy of this intention is outside the scope of this paper.

63 Fishers are attempting to catch more of their quota throughout the year. This improves the quality of the catch and allows fishers to make the most of high "out-of-season" market prices.

64 Examples of increased industry responsibility include quota holders in one of the paua fish stocks asking for, and taking, a voluntary ten percent reduction in TAC because of their concern about the state of their fish stock; quota holders in the west coast hoki fishery developing a voluntary code of practice for reducing bycatch; and the funding of various research projects by fishers. For more detail see supra at note 59, at 49.

65 High Court, Wellington, 27 November 1995, CP 492/93, Gallen J. (Reported in [1995] 2 NZLR 463.)

66 Ibid, 2.

affected either by the decision as to TAC in any year, or in the longer term by the TAC as set. In contrast, the Minister maintained that it is possible to place a greater emphasis on any modifying factor(s), in arriving at a decision as to the TAC in a particular year. As a consequence of the particular significance of a modifying factor in that year, the TAC may be in excess of the MSY assessed for that year. The New Zealand Fishing Industry Association Inc and the Exploratory Fishing Company (ORH 3B) Ltd[67] took a more extreme view. They argued that the sustainability of the resource is only one of the fundamental purposes of the 1983 Act which is designed to cover both management and conservation. They submitted that sustainability must be considered in the context of facilitating and encouraging the efficient utilisation of a valuable and renewable resource. Justice Gallen opted for the middle ground:[68]

> [T]he Minister is entitled to rely on economic or environmental factors, fishing patterns, the inter-dependence of stocks of fish or any other sub-regional, regional or global standards to justify setting a TAC and consequently a TACC which will not in that year move the fish stock towards a level which will support the MSY, provided that the TACC so set does not have the effect of preventing the attainment of the MSY over a reasonable period.

Justice Gallen held that, in arriving at what is a reasonable time period, all factors must be considered. These factors will always include acceptable scientific evidence which takes into account biological and environmental factors, as well as economic and socioeconomic factors.[69] The ability of economic and socioeconomic factors to override the attainment of the MSY in a particular year was a significant weakness of the 1983 Act.

The 1983 Act also failed to adopt an ecological approach towards the management of New Zealand's marine environment. The definition of the TAC provided that the interdependence of stocks of fish was a matter to be considered when setting a TAC. However, the need to preserve associated and dependent species which were not commercially exploited, was not recognised. The 1983 Act's nearest acknowledgment of the marine environment's interconnectedness was s 84, which dealt with marine pollution. Section 84(2) provided that it was an offence to:

> [I]njure, poison, kill, or detrimentally affect any fish, aquatic life, or seaweed in New Zealand fisheries waters by casting, discharging, or allowing to fall, flow or percolate into such waters any chlorinated hydrocarbons, biocides, pesticides, or toxic or other substances.

In addition, Schedule 1E of the Act (which was inserted in 1992) provided, inter alia, that the Crown was to contribute fifty percent of the funds needed for

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67 Second and Third Respondents.

68 Supra at note 65, at 32.

69 Ibid, 29.

"environmental research". This term was defined to include research projects which aimed to develop and apply methods to ensure fisheries resource use took account of the impacts on associated species and the aquatic environment including the impacts of diseases, exotic species, and species protected by New Zealand law. Consequently, the fate of associated and dependent species rested entirely upon the amount of environmental research that the Government and Fishing Industry decided to fund. Even then, there was no guarantee that the methods developed by such research would be implemented. The failure of the 1983 Act to clearly and firmly state its environmental objectives became more obvious when the purpose-led RMA was adopted. In 1991, the Minister of Fisheries appointed the Fisheries Task Force to review all fisheries legislation and to develop a coherent, practical, and integrated fisheries management system. The Task Force agreed that environmental objectives were not well stated in the 1983 Act, and expressed its concern: [70]

> Some environmental concerns are not well protected by existing legislation and processes. In particular, the effects of fishing activities on non-target species including birds and marine mammals, the monitoring and control of the development of new fisheries and modifications to the marine environment caused by fishing.

Another weakness of the 1983 Act was its inherent bias in favour of maintaining or increasing TAC levels. This bias was a result of legislative provisions which made it more difficult to reduce TACs than to increase them. Section 28D(1)(a) provided that, when setting or varying any TACC, the Minister should have regard to the TAC, the noncommercial interests in the fishery and any amount determined under s 12 of the Territorial Sea and Exclusive Economic Zone Act 1977 as the TAC for foreign fishing craft. The Minister was therefore constrained only by the s 2 definition of the TAC, the decision of Gallen J in *Greenpeace v Minister of Fisheries*, other interests in the fishery, and his obligation to consult pursuant to s 28D(2) of the 1983 Act. However, s 28D(1)(b) set out an additional procedure for the Minister to follow when he or she was considering a reduction in a TAC:

> Where considering any reduction in a total allowable commercial catch, [the Minister shall] have regard to —
>
> (i) Whether or not the imposition of other controls under this Act on the taking of fish would be sufficient to maintain the fish stock at a level where the current total allowable commercial catch could be sustained; and
>
> (ii) Whether or not a reduction in the level of fishing could be achieved by the Crown's retaining or obtaining the right to take fish under any appropriate quota and not making those rights available for commercial fishing.

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70 Supra at note 61, at i.

The research requirements of the Fisheries Act were also very weak. Section 87(1) provided:

> The Minister may from time to time enter into agreements or arrangements with any person for the purposes of joint research and development work on fishery resources; and any such agreement or arrangement may include the use of facilities owned by that person.

Section 87 was merely an enabling provision; it contributed little to New Zealand's international obligations to facilitate and encourage marine research. As a consequence, information on fish stocks within New Zealand's fisheries waters is seriously inadequate. For example, the status of fifty percent of New Zealand's fish stocks relative to the level which will support the MSY remains unknown.[71] This lack of information was identified as a primary concern by the Parliamentary Commissioner for the Environment and the Auditor General when they conducted a review of the QMS in 1989:[72]

> [R]esearch is narrowly focused on a limited number of species, which are subject to the greatest fishing interest. Consequently, it is not developing a knowledge base of the minimum essential information for every stock.

In their opinion, this information deficiency provided little confidence that fish were being harvested at a sustainable rate.[73] The weakness of the Act's research provisions were not offset by any statutory recognition of the need to adopt a precautionary approach when information was inadequate. However, in *Greenpeace v Minister of Fisheries*, Gallen J held that decision makers should be cautious when faced with uncertainty or ignorance:[74]

> It is correct that the statute does not of itself require the imposition of a precautionary approach, but the statute reflects the international obligations which New Zealand has accepted and I accept, that there is in that context at least a movement towards a view that in questions of such moment, a degree of caution is appropriate. At the same time I note as counsel did, that in the end this is a weighting and not a decisive factor.

It is a reflection of the commercially orientated nature of the 1983 Act, that the precautionary principle had to be "read in" by a judge. Although UNCLOS does not specifically mention the principle, New Zealand has a responsibility to apply it in order to preserve marine biodiversity pursuant to the Biodiversity Convention 1992.

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71 Supra at note 40, at para 2.42.

72 Parliamentary Commissioner for the Environment and the Audit Office *Marine Fisheries Management* (1990), para 917. The review was conducted under the authorities contained in the Public Finance Act 1977 and the Environment Act 1986.

73 Ibid, para 1203.

74 Supra at note 65, at 32.

Other weaknesses of the 1983 Act included:

(i) The complexity of the bycatch and TAC overrun provisions;
(ii) The large number of commercially exploited species which remained outside the QMS; and[75]
(iii) The continued management of recreational fishing outside the QMS.

These problems cannot be discussed within the scope of this paper.[76]

3. The Fisheries Act 1996

The Fisheries Act 1996 ("the 1996 Act") was enacted on 13 August 1996. It reforms and restates the law relating to fisheries resources and recognises New Zealand's international obligations relating to fishing. The 1996 Act retains both the QMS, as the primary management tool, and a range of input controls.[77] Like the 1983 Act, the 1996 Act requires the Minister of Fisheries to set the annual TAC and TACC for each fish stock. The definition of the TAC has been removed from s 2, allowing for a fuller treatment of the concept in s 13. Section 13 distinguishes between stocks which are at a level able to produce the MSY and stocks which are being rebuilt or fished down. In respect of the former, the Minister is required to set a TAC that:[78]

> Maintains the stock at or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks.

While the 1996 Act has retained the interdependence of stocks as a relevant consideration, the other qualifying factors (including economic factors) have been deleted.[79] Section 13(2)(a) does not, therefore, provide for economic considerations to override the MSY in any given year. However, the situation is less clear in relation to stocks which are being rebuilt or fished down (in other

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75 Some 117 commercial species are currently managed outside the QMS by a system of permits and regulations. Commercial catches of some of these species is constrained by an overall catch limit which can be competitive or allocated amongst individual fishers. At present, there is a moratorium on the issue of permits for non QMS species in order to control effort prior to introducing these species to the QMS. See supra at note 40, at para 2.35.

76 Section 18 of the Fisheries Act 1996 provides for new stock to be made subject to the QMS. It is the Government's intention to bring all commercially exploited species into the QMS. For information on the 1996 Act's simplification of TAC overrun provisions, see supra at note 40, at 19 and Primary Production Committee, *Fisheries Bill: Commentary* (1996) iii-iv.

77 The input controls are set out in s 11(3)(b)-(e).

78 Section 13(2)(a).

79 Another important deletion is the extra procedures which the Minister had to comply with under the 1983 Act when decreasing a TAC. The 1996 Act makes no distinction between maintaining, increasing, or decreasing a TAC. See ss 11, 20, and 21.

words, stocks which are not at a level which can produce the MSY). In respect of stocks which are below the MSY producing level, the Minister is required to set a TAC which:[80]

> (b) Enables the level of [the stock] ... to be altered —
>
> (i) In a way and at a rate that will result in the stock being restored to or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks and any environmental conditions affecting the stock; and
>
> (ii) Within a period appropriate to the stock and its biological characteristics.

The inclusion of environmental considerations as a relevant consideration specifically addresses scientific concerns that the concept of MSY fails to take adequate account of environmental impacts unrelated to fishing effort.[81] However, s 13(2)(b)(ii) introduces an element of ambiguity. The Minister has a broad discretion to determine the time period over which stocks are rebuilt (or fished down pursuant to s 13(2)(c)). Section 13(3) simply provides that the Minister shall have regard to such social, cultural, and economic factors as he or she considers relevant. It would seem, therefore, that the decision in *Greenpeace v Minister of Fisheries* remains valid in respect of stocks which are above or below the MSY producing level. In other words, economic factors could override the MSY in any given year, provided that the TAC does not have the effect of preventing the attainment of MSY over a reasonable period. The stronger emphasis placed on economic and socioeconomic factors in relation to stocks which are above or below the MSY producing level is problematic. First, there is often inadequate information to determine the relationship between the stock's biomass and the level which would produce the MSY. Second, stocks which are below the MSY producing level are in trouble. Their chance of rebuilding should never be compromised because of economic or socioeconomic factors.

Fortunately, the Minister's decision must also be consistent with the purpose and principles of the 1996 Act. These have a much stronger environmental focus than the provisions of the 1983 Act. Section 8(1) sets out the purpose of the 1996 Act:

> The purpose of this Act is to provide for the utilisation of fisheries resources while ensuring sustainability.

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80 Section 13(2).

81 Environmental factors are also included in the s 2 definition of "maximum sustainable yield" which provides:

"[M]aximum sustainable yield", in relation to any stock, means the greatest yield that can be achieved over time while maintaining the stock's productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock.

Section 8(2) further defines "Ensuring sustainability":

> (a) Maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
>
> (b) Avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment;

and "Utilisation":

> [C]onserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being.

The decision to use "utilisation" in preference to "management" (as contained within the RMA and the Forests Amendment Act 1993) was criticised at the Select Committee stage. The Parliamentary Commissioner for the Environment argued that there is danger in introducing new words that essentially should be giving effect to the same intent.[82] The Environment and Conservation Organisations of New Zealand ("ECO") took a slightly different approach, arguing that "utilisation" incorrectly implied that all aquatic resources were potentially commercially extractable.[83] However, the Primary Production Committee observed that the term "utilisation" reflected the fact that the 1996 Act aimed to facilitate the activity of fishing.[84]

Although the term "utilisation" was retained, other parts of s 8 were significantly altered after submissions on the Bill were heard. An earlier version of s 8 (s 6 in the Bill) is set out below:

> (1) The purpose of this Act is to provide for the sustainable utilisation of fisheries resources.
>
> (2) In this Act, "sustainable utilisation" means conserving, using, enhancing, and developing fisheries resources in a way, or at a rate, which enables people to provide for their social, economic, and cultural well-being whilst having regard to the need to —
>
> (a) Sustain the potential of the resources to meet the reasonably foreseeable needs of current and future generations; and
>
> (b) Avoid, remedy, or mitigate any adverse effects of fishing on the aquatic environment; and
>
> (c) Safeguard the life-supporting capacity of the aquatic environment from the effects of fishing.

While the earlier version of the purpose clause is closer in structure to s 5 of the

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82 Parliamentary Commissioner for the Environment "The Fisheries Bill" 1 BRMB (1995) 148.

83 Environment and Conservation Organizations of New Zealand (Inc), *Clause by Clause Commentary on the Fisheries Bill* (1995) 13.

84 Primary Production Committee, *Fisheries Bill: Commentary* (1996) viii.

RMA, the later version is much stronger in environmental terms. For example, pursuant to s 8 of the Act, sustainability is to be *ensured.* This objective compares favourably with the RMA's statutory purpose - to *promote* the sustainable management of natural and physical resources. It is certainly much stronger than the requirement to "have regard to" sustainability, as contained within the early version of s 8. The use of a strong term like "ensuring" supports the view that the "utilisation" of fisheries resources is subservient to the environmental bottom lines set out in ss 8(2)(a) and (b) of the 1996 Act. This interpretation is now widely accepted in respect of s 5 of the RMA.[85] Other noteworthy changes include the deletion of "current" generations from s 8(2)(a) and the deletion of the requirement to safeguard the life-supporting capacity of the aquatic environment.

Section 9 of the Fisheries Act 1996 sets out environmental principles which provide further detail on what it means to ensure the sustainability of fisheries resources:

> All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:
>
> (a) Associated or dependent species should be maintained above a level that ensures their long-term viability;
>
> (b) Biological diversity of the aquatic environment should be maintained;
>
> (c) Habitat of particular significance for fisheries management should be protected.

These principles were drawn from UNCLOS and the Biodiversity Convention. Consequently, they reflect the ecosystem approach towards fisheries management that was embraced by these Conventions. To its credit, the Ministry of Fisheries is further developing and refining an ecosystem approach for New Zealand fisheries waters through its strategic document, entitled *Changing Course: Towards Fisheries 2010.* "[The Ministry] believes that it is time to view the management of fisheries in the context of the aquatic ecosystem environment."[86] Unfortunately, decision makers under the 1996 Act are only required to take the Act's environmental principles *into account.* This is a weak obligation compared with the requirement to "recognise and provide for" the matters of national importance set out in s 6 of the RMA. The Primary Production Committee justified the use of this phrase in the following terms:[87]

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85 See, for example, *Shell Oil New Zealand Ltd v Auckland City Council,* Planning Tribunal, Auckland, 2 February 1994, W 8/94, Kenderdine J.

86 Supra at note 46, at 8.

87 Supra at note 84.

> The nature of the environmental principles is such that a value judgment will be made about the extent to which they are necessary to achieve the purpose of the Act. In these circumstances "recognise and provide for" places too strong an obligation on persons exercising functions under the Act, possibly forcing them to undertake vast amounts of research to meet the obligation. The words "take into account" provide more appropriate discretion for the decision maker, while clearly setting out his or her responsibility.

Arguably, the information principles set out in s 10 of the 1996 Act, together with the s 2 definition of the "best available information", would have ensured that decisions were not unduly delayed because of inadequate information. As a result of the Committee's decision, the ecosystem approach does not have the weight it should have in light of New Zealand's international obligations. The matters set out in ss 9(a), (b), and (c) could be considered and disregarded by functionaries acting under the Act. Such decisions could only be challenged on the grounds that they would fail to sustain the resource in question for future generations; or that the adverse environmental effects of the activity in question could not be mitigated to an acceptable level. As shown by the application of the RMA, many activities will not be caught by these two environmental bottom lines. Fortunately, the Ministry seems committed to an ecosystem based management approach. This makes it more likely that any regulations or environmental standards developed under the new Act will reflect the need to manage fish in the context of the environment in which they exist.

Notwithstanding the adoption of the phrase "take into account", the final version of s 9 is stronger in environmental terms than the earlier version (s 7 in the Bill). For example, the original version required associated and dependent species to be restored to levels above those at which their reproduction may become seriously threatened. However, species existing at levels just above those at which their reproduction may be seriously threatened would be extremely vulnerable to environmental fluctuations. Consequently, their long-term viability could not be ensured. The relative indifference of the earlier version of s 8 to the ecosystem approach was also reflected in its requirement to conserve biological diversity, *as far as possible.* In addition, s 9(c) which relates to habitat protection, was not part of the original version.[88] Section 10 of the Fisheries Act 1996 sets out information principles which must be taken into account by decision makers under the Act:

> All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following information principles:

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88 Only habitats of particular significance for fisheries management are included in s 9(c) because the RMA controls the adverse environmental effects of fishing activities (as well as other activities) within the territorial sea. This is also the reason behind the deletion of the requirement to safeguard the life-supporting capacity of the aquatic environment from s 8 of the Act. Any pollution occurring beyond the territorial sea is regulated by international instruments (although it is an offence pursuant to s 234 of the Act to use hazardous substances to catch or destroy fish).

(a) Decisions should be based on the best available information:

(b) Decision makers should consider any uncertainty in the information available in any case:

(c) Decision makers should be cautious when information is uncertain, unreliable, or inadequate:

(d) The absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.

Despite the weakness of the phrase, "take into account", s 10 represents an important development in New Zealand's environmental legislation. It is the first time that a statute has given express recognition to the precautionary principle. The need for a precautionary approach towards the marine environment was acknowledged by the New Zealand Coastal Policy Statement, produced under the RMA. The principle was not, however, mentioned in the RMA itself. It is appropriate that the precautionary principle has first been applied to the marine environment and its resources. In general, far less is known about marine ecosystems than terrestrial ones, and it is this uncertainty and ignorance which necessitates a precautionary approach.

Unfortunately, the Fisheries Act 1996 pays less attention to the need to enhance our understanding of the marine environment. There are provisions regulating the collection of data. For example, s 189 requires users of the fishery resource to keep records and returns, and Part XII of the Act establishes an observer programme. However, there is nothing in the Act which promotes and facilitates the development and conduct of marine scientific research, as required by Article 239 of UNCLOS and Article 12(b) of the Biodiversity Convention. The Ministry of Fisheries has acknowledged that more information is required, especially if we are to manage the marine environment according to an ecosystem approach: "More information is needed about the relationship between the population dynamics of species and the health of the ecosystem."[89] Unfortunately, the amount of resources devoted to marine scientific research will depend upon the political clout of the Ministry. There is no provision in the new Act which could be used to back up a request for increased funding. Consequently, the lack of information which has plagued the operation of the QMS in New Zealand is likely to continue. Inadequate information also undermines the Minister's ability to accurately assess recreational fishing takes when determining a TACC. Eventually, recreational fishing should be subject to a QMS which runs parallel to the commercial system. However, the first priority for fisheries management in New Zealand should be the plugging of existing information gaps.

89 Supra at note 46, at 8.

IX: CONCLUSION

The Fisheries Act 1996 contributes to New Zealand's international obligations under the United Nations Convention on the Law of the Sea and the United Nations Convention on Biological Diversity. The strengths of the new Act lie in its recognition of the need to adopt an ecosystem approach towards the marine environment, and its adoption of the precautionary principle. Unfortunately, decision makers under the 1996 Act are given a great deal of discretion to determine the weight which these concepts are given. Pursuant to the purpose of the 1996 Act, fisheries resources must, however, be maintained for the reasonably foreseeable needs of future generations. This requirement, along with the obligation to avoid, remedy, or mitigate adverse environmental effects of fishing, should ensure that the biological diversity of the marine environment is maintained. The Fisheries Act 1996 clearly states its environmental objectives, and this in itself is a vast improvement on previous legislation. The challenge for the future is to ensure that people charged with implementing the QMS and the purpose and principles of the new Act have the information which they need to ensure the sustainability of New Zealand's fishery resources. Greater certainty in information will lead to greater consensus and, consequently, more constructive decision making.