

OBLIGATIONS TO PROTECT MARINE ECOSYSTEMS UNDER INTERNATIONAL CONVENTIONS AND OTHER LEGAL INSTRUMENTS

Transform Aqorau

South Pacific Forum Fisheries Agency, PO Box 629, HONIARA, Solomon Islands

ABSTRACT : Traditional approaches to fisheries management, which have been singular, species-based and non-sectoral, have failed to protect the world's fisheries resources. This has resulted in the overexploitation of fish stocks, displacement of fishing fleets and dislocation of fishing communities. The first attempts at international regulation of fisheries were simple, but premised on the notion that the ocean's resources were inexhaustible. This belief influenced attitudes towards exploitation of the fisheries resources, in particular, and conservation and management of those resources in general. Improved understanding of the ocean's and the exhaustibility of fisheries resources has resulted in a change both in the approach towards fisheries management, and the kind of responses developed by the international community. It is now accepted that it is not possible to simply manage a fishery by merely controlling the quantity of fish taken out of the oceans. Account must be taken of all factors affecting the resource, including the impact of human activities from land-based sources. New, more modern, comprehensive and holistic approaches have been developed in recent years to address fishery problems. One of these is the ecosystem management approach. This paper examines a number of key international instruments, which demonstrate the extent to which ecosystem management has been applied to conservation of fishery resources. The paper begins by outlining the major obligations of instruments of global applications which include, amongst others, the 1982 *United Nations Convention on the Law of the Sea* (LOSC)¹, and the 1992 *Convention on Biological Diversity*.² The paper also discusses a number of regional initiatives towards ecosystem approaches to fishery conservation and management, and highlights the problems impinging on the effective implementation of these initiatives. The paper concludes by pointing out that the most notable strengths of the international instruments studied for this paper, are the instruments themselves, as they attempt to establish a global framework for conservation and management of marine environments and resources. The inclusion of the ecosystem approach is a positive element as it moves away from the traditional species and stock focus.

Key words: International treaties, obligations, ecosystems approaches to fisheries management, enforcement

INTRODUCTION

The crisis in international fisheries has largely been caused by overexploitation of fisheries resources fuelled by the perception that fishery resources are inexhaustible and are common property. This has led to overexploitation of fishery resources. Improvements in fishing technology increased fishing effort, resulting in declines in stocks in many parts of the world.³ The FAO has warned that most of the world's fish stocks are fully exploited or are nearing levels of overexploitation. Because of their importance to world food supply, it is in the interest of the world community to ensure that the world's fish stocks are managed sustainably. Government attitudes towards proper management of fish stocks have not helped. A Report highlighting the failure of governments to embrace holistic approaches noted that:

“Governments have traditionally addressed human activities on a piecemeal basis, separating decision-making on environmental quality from decision-making on natural resource management or on social or economic issues. Even within the environmental field, agencies have traditionally managed air issues separately from those dealing with water, land or wildlife. An ecosystem approach to management is a holistic approach that recognises the interconnectedness of and addresses the linkages occurring among, air, water, land and living things.”⁴

By the late 1980s, the international community began to take serious action to address the crisis in international fisheries. These actions however were a little too late to save communities dependent on fishing. For instance, by 1992 the fishing community along the East Coast of Canada whose livelihood depended on the cod fishery

¹ United Nations, *The Official Text of the United Nations Convention on the Law of the Sea with Annexes and Index*, (New York: United Nations, 1983) (hereinafter referred to as “LOSC”)

² United Nations, *Convention on Biological Diversity*, (New York: United Nations, 1992)

³ UNGA, *Oceans and the Law of the Sea, UNGA Fifty-sixth session, 6 March 2001*, (New York: United Nations Office of the Law of the Sea and Ocean Affairs, 2001)

⁴ G. Tracy Mehan III, *Ecosystem Management in the Great Lakes Basin*, http://www.nmu.edu/sbp/ecomangt_MG.HTML

was disrupted by the collapse of the cod fishery, displacing thousands of fishers. This was a wake up call, albeit too late, for the international community. The piecemeal approach to fishery management had failed.

In an attempt avoid such problems, international instruments developed over the past two decades have included new obligations for management activities regulating uses of the oceans. The conventions (and codes) make explicit reference to protection of ecosystem features. The overarching convention in this respect is the 1992 Convention of Biological Diversity. Other international legal instruments include the UN Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 concerning the Conservation and Management of Straddling and Highly Migratory Fish Stocks⁵ and the FAO Code of Conduct for Responsible Fisheries.⁶

At the regional and national level, legislation and policies have been put in place to more explicitly incorporate ecosystem considerations within national ocean management regimes. It has been argued that a “healthy ecosystem is good for fisheries and good for the environment and contributes to quality of life”.⁷ This paper examines the provisions of selected international instruments.

INTERNATIONAL INSTRUMENTS WHICH APPLY THE ECOSYSTEMS APPROACH TO FISHERIES MANAGEMENT

The international instruments discussed are the: -

- 1982 United Nations Convention on the Law of the Sea;
- 1992 Convention on Biological Diversity;
- Jakarta Ministerial Statement on the Implementation of the Convention on Biological Diversity;
- 1995 UN Fish Stocks Agreement;
- 1995 FAO Code of Conduct for Responsible Fisheries;
- 2000 Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean;⁸
- 2001 Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean;⁹
- 1976 Convention on Conservation of Nature in the South Pacific;¹⁰
- Agreement for the Establishment of the Regional Commission for Fisheries (RECOFI);¹¹
- Convention on the Conservation of Antarctic Marine Living Resources;¹²
- Convention for the Establishment of the Lake Victoria Fisheries Organisation;¹³
- Agreement for the Establishment of the General Fisheries Commission for the Mediterranean;¹⁴
- 2000 Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, “Galapagos Agreement”,¹⁵ and
- Washington Declaration on Protection of the Marine Environment from Land-based Activities.

The agreements and instruments discussed in this paper is not an exhaustive list of applicable conventions. Their selection in this paper does not imply that they are the only instruments that give rise to obligations to apply the ecosystems approach to fisheries management. They are merely indicative of trends emerging in various parts of the world, and exemplify the shifts in approaches towards fisheries management evident in different parts of the world. Table A below describes the status of the various Agreements discussed in this paper.

⁵ United Nations, “Agreement for the Implementation of the Provisions of the United Nations Convention for the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks”, *International Fisheries Instruments with Index*, (New York: Division for Ocean Affairs and the Law of the Sea, Office of Legal Offices, United Nations, 1998), pp. 1-37 (hereinafter referred to as “UN Fish Stocks Agreement”)

⁶ *Ibid.*, pp. 51-77

⁷ David L. Fluharty, “Transition to Ecosystem-Based Fisheries Management”, School of Marine Affairs, University of Washington, (Washington: http://www.sma.washington.edu/transition_to_ecosystem.htm)

⁸ Forum Fisheries Agency, *Convention for the Conservation and Management of Highly Migratory Fish Stocks for the Western and Central Pacific Ocean*, (Honiara: Forum Fisheries Agency, 2000) (hereinafter referred to as the “WCPT Convention”)

⁹ FAO, *Convention for the Conservation and Management of Fishery Resources in the South East Atlantic Ocean*, (Rome: <http://www.fao.org/Legal/TREATIES/032t-e.htm>, 2001) (hereinafter referred to as the “SEAFO Convention”)

¹⁰ SPREP, *Convention on Conservation of Nature in the South Pacific*, (Samoa, South Pacific Regional Environment Program, 2000)

¹¹ FAO, *Agreement for Establishment of the Regional Commission for Fisheries (RECOFI)*, (Rome: <http://www.fao.org/Legal/TREATIES/0282-e.htm>, 2001)

¹² Convention on the Conservation of Antarctic Marine Living Resources, <http://www.oceanlaw.net/texts/ccamlr.htm>

¹³ FAO, Convention for the Establishment of the Lake Victoria Fisheries Organisation, (Rome: <http://www.fao.org/Legal/TREATIES/027t-e.htm>, 2001)

¹⁴ FAO, Agreement for the Establishment of the General Fisheries Commission for the Mediterranean, (Rome: <http://www.fao.org/Legal/TREATIES/003t-e.htm>, 2001)

¹⁵ Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific “Galapagos Agreement”, (<http://www.oceanlaw.net/texts/galapagos.htm>)

Table A: Status of Agreements

Treaty	Area of Application	Date of Adoption	Entry into force	Contracting States
United Nations Convention on the Law of the Sea	Global	10 Dec. 1982	16 November 1994	138
Convention on Biological Diversity	Global	22 May 1992	23 December 1993	182
UN Fish Stocks Agreement	Global	5 Sep. 1995	11 December 2001	31
Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	Regional (Western and Central Pacific)	4 Sep. 2000	Not in force	3
Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean	Regional (South East Atlantic)	20 April 2001	Not in force	Nil
Convention on Conservation of Nature in the South Pacific	Regional (South Pacific)	12 June 1976	28 June 1990	6
Agreement for the Establishment of the Regional Commission for Fisheries (RECOFI)	Regional (Gulf States)	11 Nov. 1999	26 February 2001	5
Convention on the Conservation of Antarctic Marine Living Resources	Regional (Antarctic and Southern Oceans)	20 May 1980	7 April 1982	27
Convention for the Establishment of the Lake Victoria Fisheries Organisation	Regional (Southern Africa)	30 June 1994	24 May 1996	3
Agreement for the Establishment of the General Fisheries Commission for the Mediterranean	Regional (Mediterranean)	24 Sept. 1949	3 December 1963	21
Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, "Galapagos Agreement"	Regional (South Pacific)	14 August 2000	Not in force	

Source: <http://fao.org/legal/TREATIES>

The United Nations Convention on the Law of the Sea

The LOSC was opened for signature on 10 December 1982 and entered into force on 16 November 1994. The LOSC is the basic legal framework that governs the uses of the oceans and seas. The LOSC also establishes a framework for the development of conservation and management measures concerning marine resources and scientific research within the exclusive economic zone (EEZ) of a State, as well as on the high seas. It is accepted that most provisions of the LOSC reflect customary international law.

Protection and preservation of the marine environment

Fundamental to the management and conservation of fisheries resources is the protection and preservation of the marine environment. Part 12 of the LOSC outlines provisions for the protection and preservation of marine ecosystems. These provisions are very broad and so are applicable to fisheries on a global scale. All States have a duty to undertake measures to protect the marine environment and to control, reduce and manage pollution of the sea.¹⁶ Although the provisions in this part of Convention, do not specifically refer to fisheries, they are relevant in the sense that they urge States to prevent, reduce and control pollution of marine ecosystems through any source,¹⁷ and this could include debris and waste from fisheries operations. The provisions relating to the protection and preservation of the marine environment emphasise the importance of cooperation between States and the need for States to undertake surveillance of activities that they permit or engage in, in order to determine whether these activities are likely to have significant adverse impacts on the marine ecosystem and its various components.¹⁸

Conservation of the living resources within the EEZ

With respect to the living resources, Parties are required to establish measures for the conservation and management of marine living resources in their EEZs. These measures must take into account *inter alia* the effects of harvesting target species on species that are associated with or dependent upon the harvested species whilst ensuring that living resources are not endangered by overexploitation.¹⁹ In addition, the LOSC addresses highly migratory species, marine mammals, and anadromous and catadromous stocks to ensure that these species are conserved and managed in their State of origin and external areas.²⁰

Conservation of the Living Resources of the High Seas

The LOSC provides that all States have the right for their nationals to engage in fishing on the high seas provided that they do not contravene the LOSC's objectives and are consistent with Articles 63(2) and 64-67, as well as with provisions dealing with the high seas.²¹ States are obliged to undertake measures to conserve the living resources of the high seas and, in doing so, must cooperate with each other and establish regional or subregional fisheries organisations as appropriate, to promote this objective.²²

The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) was signed on 5 June 1992 and entered into force on 23 December 1993. The CBD provides an international framework for the conservation and ecologically sustainable development and use of biodiversity. The Convention does not specifically address fisheries. However, it applies to all terrestrial and marine biodiversity and thus affects fisheries. The Convention outlines *inter alia* measures for conserving biodiversity which include general, *in situ*²³ and *ex situ*²⁴ conservation measures. General measures for conserving biodiversity and ensuring ecologically sustainable development include developing national policies, strategies and programs that should amongst others reflect the principles espoused in the CBD.²⁵ The CBD also urges Parties to integrate biodiversity conservation policies and strategies with cross-sectoral plans.²⁶

¹⁶ LOSC, Art. 192 & 194

¹⁷ *Ibid.*, Art. 194(1)

¹⁸ *Ibid.*, Art. 204(2)

¹⁹ *Ibid.*, Art. 61(2) & (4)

²⁰ *Ibid.*, Art. 64 to 67

²¹ *Ibid.*, Art. 116

²² *Ibid.*, Art. 118

²³ Convention on Biological Diversity, Art. 2, "in-situ conservation" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.

²⁴ *Ibid.*, Art. 2, "ex situ conservation" means the conservation of components of biological diversity outside their natural habitat.

²⁵ Convention on Biological Diversity, Art. 6(a)

²⁶ *Ibid.*, Art. 6(b)

In situ conservation

Measures outlined for in situ conservation of biodiversity encompass certain key issues. These include inter alia protected areas, ecosystems and habitats. With respect to protected areas and ecosystems, the CBD imposes the following obligations on all Contracting Parties:

- Protected areas
- establish a system of protected areas for conserving biodiversity; and
- develop guidelines for the selection, establishment and maintenance of protected areas.
- Biological resources
- regulate and manage biological resources that are important for conserving biodiversity within protected areas and in ex situ circumstances; and
- promote ecologically sustainable development in areas adjacent to protected areas with a view to protecting these areas to complement protected areas
- Ecosystems and habitats
- rehabilitate and restore degraded ecosystems, inter alia through the development and implementation of management plans and strategies;
- promote the (in situ) protection of ecosystems, natural habitats and the maintenance of viable populations of species; and
- eradicate, prevent or control and manage alien species that threaten native habitats and species.²⁷

The Parties are obliged to regulate and manage threatening processes affecting or likely to affect biodiversity in an adverse manner.²⁸ Additionally, Parties must develop and implement measures to control and manage the risks associated with potentially threatening activities, such as the use and release into the environment of organisms that have been modified through biotechnology.²⁹

Ex situ conservation

In addition to outlining measures for in situ conservation of biodiversity, the CBD recommends that all Parties undertake activities to ensure the protection of biodiversity in ex situ circumstances, although such activities should complement the in situ conservation measures articulated in the Convention.³⁰ The CBD requires Parties to undertake the following ex situ biodiversity conservation measures:

- establish and maintain facilities for ex situ conservation of, and research into, biodiversity in the country of origin of the biodiversity in question;
- adopt measures to ensure the recovery and rehabilitation of threatened species, and the re-introduction of such species into their natural habitats under appropriate conditions;
- regulate and manage the collection of biological resources from habitats to ensure that the survival of in situ species, populations and ecosystems is not threatened; and
- cooperate in providing financial and other support for ex situ conservation measures, particularly to developing nations.³¹

The Jakarta Ministerial Statement on the Implementation of the Convention on Biological Diversity

The Jakarta Ministerial Statement on the Implementation of the Convention on Biological Diversity (Jakarta Mandate on Coastal and Marine Biodiversity) was issued during the second meeting of the Conference of Parties to the CBD (COP 2), held in Jakarta in November 1995, as a result of the Conference of Parties (COP) identifying marine and coastal biodiversity as a high priority issue. The Mandate essentially reaffirms the importance of the conservation and ecologically sustainable use of coastal and marine biodiversity and urges the COP to initiate the immediate development and implementation of actions concerning this issue.

The Mandate specifically links conservation, the use of biodiversity and fishing activities, and establishes a new global consensus on the importance of marine and coastal biodiversity. The Mandate identifies the following areas as being of critical importance:

²⁷ Ibid., Art. 8(a)-(f),(h)

²⁸ Ibid., Art. 8(l)

²⁹ Ibid., Art. 8(g)

³⁰ Ibid., Art. 9

³¹ Ibid., Art. 9 (a)-(e)

- integrated management of marine and coastal areas;
- marine and coastal protected areas;
- ecologically sustainable use of marine and coastal living resources;
- mariculture; and
- alien species.³²

A Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) was established following the Ministerial Declaration, with marine and coastal biodiversity appointed as the first key sector to be investigated by the SBSTTA.³³ The SBSTTA was responsible for inter alia a resolution calling for a reduction in overcapacity and subsidies to fisheries.³⁴ This resolution was endorsed at COP 2.³⁵ Furthermore, the SBSTTA was also responsible for the following:

- establishing a roster of Experts on Marine and Coastal Biological Diversity;
- applying the precautionary approach to biodiversity; and
- implementing integrated marine and coastal area management.³⁶

The UN Fish Stocks Agreement

The failure of the LOSC to prevent the overexploitation of fish stocks especially highly migratory and straddling fish stocks on the high seas, led to negotiations which resulted in the conclusion of the UN Fish Stocks Agreement. The UN Fish Stocks Agreement provides a level of detail not found in the LOSC, for the management and conservation of highly migratory and straddling fish stocks. The fundamental objective of the UN Fish Stocks Agreement is to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of the LOSC.

The UN Fish Stocks Agreement imposes certain obligations on Parties with regard to the protection of the marine environment. In general, the Agreement requires that States ensure the sustainable utilisation of fish stocks, and that they assess the impacts of fishing on the marine environment. For instance, Parties must assess the impacts of fishing, other human activities and environmental factors on target species, species that are part of the same ecosystem, and species that are associated with or dependent upon target species.³⁷ In doing so, Parties must take into account the precautionary principle and uncertainties relating to data used in the development of conservation and management measures.³⁸ Furthermore, data collection and research programs must be established for assessing the impacts of fishing on non-target (fish and non-fish) species.³⁹

Parties must adopt appropriate conservation and management measures to maintain or restore populations of species that are a part of the same ecosystem as target species or are associated with or dependent upon target species.⁴⁰ Parties must also establish conservation and management measures for habitats of special concern.⁴¹ Parties must minimise discards, waste and by-catch of target and non-target species through various measures, including the development and use of selective fishing gear and techniques.⁴² Where stock populations of target species and populations of non-target species are of concern, Parties must enhance monitoring of those species and review their management and conservation status.

Parties are also obliged to collect and share all relevant and up-to-date fisheries data.⁴³ Annex I of the UN Fish Stocks Agreement provides standard requirements for the collection and sharing of data. Data that can be collected includes information on vessel position, catch and yield statistics, composition of catch, including target and non-target species,⁴⁴ fishing gear description, etc. States are also required to establish mechanisms

³² B. M. Tsamenyi and A. McIlgorm, 1999, *International Environmental Instruments: Their effect on the Fishing Industry*, (Wollongong: University of Wollongong & AMC Search Ltd), pp. 23-24

³³ *Ibid.*, p. 24

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ UN Fish Stocks Agreement, Art. 5(d)

³⁸ *Ibid.*, Art. 6(c)

³⁹ *Ibid.*, Art. 6(e)

⁴⁰ *Ibid.*, Art. 5(e)

⁴¹ *Ibid.*, Art. 6(d)

⁴² *Ibid.*, Art. 6(f)

⁴³ *Ibid.*, Art. 5(j)

⁴⁴ *Ibid.*, Annex I, Art. 3

for verifying fisheries data; mechanisms include scientific observer programs for monitoring details of fishing operations such as catch composition (target and non-target species).⁴⁵

Management strategies aimed at restoring or maintaining populations of species associated with or dependent upon target species must do so at levels consistent with precautionary reference points.⁴⁶

Flag States are obliged to record and report catch and vessel information.⁴⁷ Flagged vessels must also have their catch of target and non-target species verified through measures such as observer programs and inspection schemes.⁴⁸ The fishing activities of flagged vessels must be regulated to ensure compliance with sub regional, regional or global by-catch reduction measures.⁴⁹ The UN Fish Stocks Agreement is a departure from the traditional species based approach to fisheries management. Its implementation will strengthen global application of ecosystems based fisheries management.

FAO Code of Conduct for Responsible Fisheries

The Code of Conduct for Responsible Fisheries addresses specific impacts of fisheries on the marine and aquatic environment, including by-catch, and marine resource protection. The Code is not legally binding, but links other international fisheries obligations, including those established under LOSC. The general principles of the Code suggest that fisheries management measures should ensure the protection of not only target species but also of non-target, associated or dependent species.⁵⁰

Under the Code, States are urged to apply the precautionary principle in conserving, managing and exploiting fisheries resources.⁵¹ States are to ensure inter alia the use of selective fishing gear and reduce waste, discards and catch of non-target species (fish and non-fish).⁵² Furthermore, States are encouraged to reduce the impacts of fisheries on species associated with or dependent upon target species.⁵³ The provisions have the scope to provide effective protection of marine ecosystems by protecting target and non-target species and the ecosystems associated with those species.

In addition, the Code requires States to implement appropriate measures (within the precautionary principle framework) so as to minimise waste, discards, ghost-fishing, by-catch and negative impacts of fishing on associated or dependent species.⁵⁴ The principles also require fisheries management authorities to promote the development and use of selective gear and efficient operational methods as part of their overall effort to conserve the marine environment.⁵⁵ States must ensure that regulations related to measures for the reduction of waste, discards and by-catch are not circumvented by technical devices.⁵⁶ The Code suggests that reduction of waste and by-catch may be achieved by technical measures, such as modifying gear to prevent smaller, unwanted species or individuals being trapped in the net.⁵⁷ States are also required to improve their understanding of the status of fisheries by collecting appropriate data and exchanging information with all relevant groups.⁵⁸ The Code is a part of the new generations of treaties, which provide a higher benchmark for fisheries management.

Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

The WCPT Convention was adopted on 4 September 2000 and is one of the first agreements to be developed following the conclusion of the UN Fish Stocks Agreement in 1995. The objective of the WCPT Convention is to ensure the long-term and effective conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean, in accordance with LOSC and the UN Fish Stocks Agreement.

Conservation of the marine environment

The WCPT Convention deals specifically with highly migratory fish stocks in the western and central Pacific Ocean. However, it outlines some broad provisions that can be applied for the protection of marine ecosystems. These include inter alia measures to ensure the long-term sustainability of highly migratory fish stocks;

⁴⁵ Ibid., Annex I, Art. 6

⁴⁶ Ibid., Annex II, Art. 4

⁴⁷ Ibid., Art. 18(e)

⁴⁸ Ibid., Art. 18(f)

⁴⁹ Ibid., Art. 18(I)

⁵⁰ FAO Code of Conduct for Responsible Fisheries, Art. 6.2

⁵¹ Ibid., Art. 6.5

⁵² Ibid., Art. 6.6

⁵³ Ibid.

⁵⁴ Ibid., Art. 7.22, 7.52 & 7.69

⁵⁵ Ibid., Art. 7.69

⁵⁶ Ibid., Art. 8.51

⁵⁷ Ibid., Art.

⁵⁸ Ibid., Art. 12(4)

minimisation of wastes, discards and other impacts associated with fishing; applying the precautionary principle in implementing the WCPT Convention; protecting marine biodiversity; preventing or eliminating overexploitation of fish stocks; and enforcing conservation measures through effective monitoring, control and surveillance.⁵⁹

The WCPT Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean to assist in the implementation of the Convention.⁶⁰ The functions of the Commission include inter alia promoting the sustainable utilisation of highly migratory fish stocks in the Pacific; adopting measures for the conservation and management of highly migratory fish stocks, other species and the marine environment in general; and adopting measures to promote responsible fishing in the western and central Pacific.⁶¹

Convention for the Conservation and Management of Fishery Resources in the South East Atlantic Ocean

The SEAFO Convention is a regional agreement covering the southeast Atlantic region. It was concluded on 21 April 2001, and like the WCPT Convention is one of the first post UN Fish Stocks Agreement treaties. The objective of the SEAFO Convention is to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area. The SEAFO Convention prescribes principles for conservation and management, which the Contracting Parties are obliged to apply either directly or through the Organisation to be established by the Parties.

The Parties have a duty to apply the precautionary approach to fisheries management, and adopt where necessary, conservation and management measures for species belonging to the same ecosystem.⁶² Further, Parties must ensure that fishing practices and management measures take due account of the need to minimise harmful impacts on living marine resources as a whole,⁶³ and protect biodiversity in the marine environment.⁶⁴ The SEAFO Convention imposes an obligation on the Commission to apply the precautionary approach widely to conservation and management and exploitation of fishery resources to protect the fishery resources and preserve the marine environment.⁶⁵

Convention on Conservation of Nature in the South Pacific

The Convention on Conservation of Nature in the South Pacific (Apia Convention) was developed in Apia, Western Samoa, in June 1976, with the fundamental objective of conserving, utilising and developing the natural resources of the South Pacific Region through careful planning and management for the benefit of present and future generations.

There are certain core provisions in the Apia Convention that address matters such as protected areas, conservation of indigenous species under threat of extinction, customary use of species and areas, and research.

Protected areas

The Apia Convention requires Parties to establish protected areas to safeguard inter alia representative samples of natural ecosystems and endangered species.⁶⁶ Parties are required not to alter the boundaries of national parks within their jurisdiction to either decrease the size of such areas, or to allow the commercial exploitation, collection or hunting of resources contained therein, without first conducting a full investigation.⁶⁷ Additionally, national reserves must be maintained inviolate to the greatest extent possible, although permission for scientific research in reserves may be granted if the purposes of such research is consistent with the purposes for which the reserves were established.⁶⁸

Conservation of indigenous species

Parties must not only protect indigenous species in general, but also give particular attention to indigenous and migratory species being exploited in an unsustainable manner or under threat of extinction.⁶⁹ In order to achieve the latter, each Party must develop and maintain a list of indigenous species that are threatened with

⁵⁹ WCPT Convention, Art. 5

⁶⁰ Ibid., Art. 9

⁶¹ Ibid., Art. 10

⁶² SEAFO Convention, Art. 3(d)

⁶³ Ibid., Art. 3(e)

⁶⁴ Ibid., Art. 3(f)

⁶⁵ Ibid., Art. 7(1)

⁶⁶ Apia Convention, Art. 2(1)

⁶⁷ Ibid., Art. 3(1)-(3)

⁶⁸ Ibid., Art. 4

⁶⁹ Ibid., Art. 5(1)

extinction.⁷⁰ Species listed accordingly must be protected to the greatest extent possible, and permission to collect, capture or hunt such species may be granted only under circumstances that will improve the conservation status of the listed species and their ecosystems.⁷¹ Parties must bear in mind the traditions of indigenous communities and make special provisions to enable such communities to use species and areas in accordance with their customs.⁷²

Research

The Apia Convention requires all Parties to initiate research relating to nature conservation and the management of protected areas and species.⁷³ Furthermore, Parties are obliged to cooperate in exchanging information and results relating to such research and in interchanging and training personnel for nature conservation objectives.⁷⁴

Agreement for the Establishment of the Regional Commission for Fisheries (RECOFI)

The Agreement is a subregional fisheries agreement amongst a number of Arab Gulf States, which establishes the Regional Commission for Fisheries (RECOFI). In the Preamble to the Agreement, the Parties note the objectives and purposes stated in Chapter 17 of Agenda 21 and the FAO Code of Conduct for Responsible Fisheries. The Parties also note other international instruments that have been negotiated concerning conservation and management of certain fish stocks.

The functions of the Commission is to promote the development, conservation, rational management and best utilisation of living resources.⁷⁵ This is to be achieved by keeping under review the state of the resources, including their abundance and the level of their exploitation. The Commission is required to recommend appropriate measures for the conservation and rational management of living marine resources, including regulating fishing methods and fishing gear, prescribing the minimum size for individuals of specified species, and establish open and closed fishing seasons and areas.⁷⁶

The Commission is required to apply the precautionary approach to conservation and management decisions, and take into account the best scientific evidence available and the need to promote the development and proper utilisation of the living marine resources.⁷⁷

Convention on the Conservation of Antarctic Marine Living Resources

The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) recognises the importance of the ecosystems approach to fisheries management. In the Preamble, the Parties recognise the importance of safeguarding the environment and protecting the integrity of the ecosystems of the seas surrounding the Antarctic. The CCAMLR provides a management system that protects both the ecosystem and allow fishing activities in the Southern Oceans. It is the first international convention to address ecosystem management goals.

The objective of CCAMLR is the conservation of Antarctic marine living resources.⁷⁸ Three principles of conservation underpin the objective of CCAMLR. These are to prevent the decrease in the size of harvested populations below unsustainable levels, maintain the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources, and prevent changes in the marine ecosystem which are not potentially reversible over two or three decades.⁷⁹ The functions of the Commission which is established under the CCAMLR, is to give effect to the objective and principles of the Convention. Conservation and management measures the Commission may adopt include the designation of quantity of species which may be harvested, designation of protected species, the determination of the size, age and sex of species which may be harvested.⁸⁰ The Commission may also take measures on regulate the effects of harvesting and associated activities on components of the marine ecosystem other than the harvested populations.⁸¹

⁷⁰ Ibid., Art. 5(2)

⁷¹ Ibid., Art. 5(3)

⁷² Ibid., Art. 6

⁷³ Ibid., Art. 7(2)

⁷⁴ Ibid.

⁷⁵ Agreement for the Establishment of the Regional Commission for Fisheries (RECOFI), Art. III(1)

⁷⁶ Ibid., Art. III(1)(a) & (b)

⁷⁷ Ibid., Art. III(2)

⁷⁸ CCAMLR, Art. II

⁷⁹ Ibid., Art. II (a), (b) & (c)

⁸⁰ Ibid., Art. IX

⁸¹ Ibid.

Convention for the Establishment of the Lake Victoria Fisheries Organisation

The Parties to the Convention for the Establishment of the Lake Victoria Fisheries Organisation recognise the continuing need to increase scientific understanding of Lake Victoria, its living resources, its ecosystem, and the impact on those resources of climate, human populations and settlement, non-indigenous wildlife and industrialisation. The Convention establishes the Lake Victoria Fisheries Organisation.⁸² The objective of the Organisation is harmonise national measures for the sustainable utilisation of the living resources of the Lake, and to develop and adopt conservation and management measures.

To achieve these objectives, the Organisation is required to promote the proper management and optimum utilisation of the fisheries and other resources of the Lake, and advise on the effects of the introduction of non-indigenous aquatic animals or plants into the waters of the Lake, and to adopt measures regarding the introduction, monitoring, control and elimination of such animals or plants.⁸³

Agreement for the Establishment of the General Fisheries Commission for the Mediterranean

The Parties to the Agreement for the Establishment of the General Fisheries Commission for the Mediterranean have a mutual interest in the development and proper utilisation of the living marine resources in the Mediterranean and the Black Sea. While the Agreement does not specifically provide for the ecosystems approach to fisheries management, the Commission has an indirect responsibility, which may entail the application of such an approach.

The Commission is required to keep under review the state of the resources, including their abundance and the level of their exploitation.⁸⁴ Measures which the Commission may recommend for conservation and management include, regulating fishing methods and fishing gear, prescribing the minimum size for individuals of specified species, establishing closed and open seasons, and regulating the amount of total catch and fishing effort and their allocation among members.⁸⁵

Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, “Galapagos Agreement”

The objective of the Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific “Galapagos Agreement” is the conservation of living marine resources in the high seas zones of the Southeast Pacific, with special reference to straddling and highly migratory fish populations.⁸⁶ The Galapagos Agreement specifies a number of conservation principles, which have an impact on ecosystems approach to fisheries management.⁸⁷

Article 5(1)(c) of the Galapagos Agreement provides that in the establishment of conservation measures for regulated species, the effects of fishing for specific fish stocks on the populations of associated or dependent species, as well as on the marine ecosystem as a whole, shall be taken into account. Further, the effects of environmental changes and other phenomena which might affect the marine ecosystem, along with the direct or indirect effects of capture, shall be taken into account, in order to reduce or prevent the risk of potentially irreversible alterations.

The Washington Declaration on Protection of the Marine Environment from Land-Based Activities

The Washington Declaration on Protection of the Marine Environment from Land-based Activities (the Washington Declaration) was developed in Washington in November 1995 as part of the UN Global Programme of Action for the Protection of the Environment. The primary objective of the Washington Program is to protect the marine environment from the impacts of land-based activities, and in particular from:

- sewage;
- persistent organic pollutants;
- radioactive substances;
- heavy metals;
- oils (hydrocarbons);

⁸² Convention for the Establishment of the Lake Victoria Fisheries Organisation, Art. II

⁸³ Ibid.

⁸⁴ Agreement for the Establishment of the General Fisheries Commission for the Mediterranean, Art. III(1)(a)

⁸⁵ Ibid., Art. III(1)(b)

⁸⁶ Galapagos Agreement, Art. 2

⁸⁷ Ibid., Art. 5

- nutrients;
- sediment mobilisation;
- litter; and
- physical alteration and destruction of habitats.⁸⁸
- The Programme recommends inter alia the following measures for protecting the marine environment from the impacts of land-based sources:
- reviewing national action programs within a few years and implementing these programs in accordance with national capacities and priorities;
- cooperating to undertake capacity building activities and mobilising resources for developing and implementing the programme, in particular, for countries in need of assistance;
- undertaking measures to prevent and/or mitigate impacts on the marine environment resulting from land-based activities;
- promoting access to knowledge, expertise and cleaner technologies to address land-based activities that impact upon the marine environment; and
- promoting measures to address the consequences of sea-based activities that require national and/or regional land-based actions, such as recycling facilities.⁸⁹
- undertaking strategic environmental impact assessments of all new management plans for Commonwealth fisheries with and without management plans;
- continuing to address the issue of by-catch in fisheries;
- continuing to develop and implement policies for ecologically sustainable fisheries through, for example, pre-commercial assessments and experimental fisheries;
- encouraging the adoption and use of codes of responsible fishing practices;
- undertaking research and development measures to develop management initiatives to ensure ecologically sustainable fisheries; and

CONCLUSION

In analysing the strengths and weaknesses of international efforts to incorporate ecosystem management principles into international instruments, the most notable strengths of the international instruments studied for this paper are the instruments themselves, as they attempt to establish a global framework for the conservation and management of marine environments and resources. Moreover, the inclusion of ecosystem conservation is also a positive element, as it is a step away from the traditional species and stock focuses. This ecosystem-based focus also provides scope for an increased involvement of regional bodies in establishing integrated marine and coastal management measures.

The past two decades has been one characterised by the realisation that only a holistic approach towards fisheries management can ensure the proper governance of the oceans. The implementation of the new international instruments will strengthen fisheries management and ocean governance. As one international expert said: -

“These instruments—and particularly the Code of Conduct for Responsible Fisheries—contain a number of provisions referencing broader environmental goals—for example, the need for consideration of aquatic ecosystems, the need for an ecosystem approach to management, and the need to minimise bycatch, pollution, waste and discards. As such, they illustrate what we believe is essentially a “paradigm shift” in international fisheries, which flows from the increasing recognition of the nexus between international fisheries law and international environmental law. This paradigm shift involves growing recognition of two requirements for the sustainable conservation and management of capture fisheries. The first reflects ecosystem concerns. There must be effective steps to provide for the health, not only of populations of target species, but also of non-target species, and we must take steps to maintain relationships among species. Second, there must be effective steps to protect fisheries habitat. In particular, we must protect fisheries habitat threatened by adverse impacts stemming from human activities, including harmful fishing

⁸⁸ Washington Declaration, Art. 1

⁸⁹ Ibid, Art. 2-6 & 14

practices, and other activities, which are increasingly concentrated in coastal areas. In effect, fisheries managers must concern themselves with the entire marine ecosystem”.⁹⁰

There are, however, several weaknesses that need to be considered. One of the major drawbacks of international instruments is that many States are not party to them, thereby limiting the extent to which these instruments are being applied. The provisions outlined in instruments are often vague and ambiguous with respect to the protection of the marine environment, and these need to be addressed to more clearly assert environmental protection obligations to States. Even though many of the instruments include illegal, unregulated and unreported (IUU) fishing, surveillance and enforcement as key issues to be addressed, it will be difficult, or even impossible, to control these problems through comprehensive and effective monitoring of an area so vast. Moreover, developing nations, in particular, will be hard pressed to find sufficient resources to implement many of the measures outlined in the international instruments.

The international instruments studied for this paper clearly include ecosystem management as a key element in protecting the marine environment and its resources. The effectiveness of those instruments, however, remains to be seen. It is clear that a lot of work still needs to be done. At a recent meeting of Environment Ministers from Asia and the Pacific, the Ministers issued the following Statement:

“We express our concern that the integrity of the coasts and oceans is under threat from unsustainable development and overexploitation. The discharge of hazardous and toxic wastes, land-based sources of pollution, the destruction of corals and mangroves, offshore oil drilling and mineral exploration and exploitation, oil spills, marine accidents, excessive coastal tourism and overfishing have been identified as some of the main causes of marine environmental degradation. We call for a renewed commitment to sustainable development of oceans and coastal resources through effective cooperation among national, subregional, regional and international institutions responsible for marine and ocean protection and management; the implementation of national, subregional and regional policies for enhancing sustainable management and uses of oceans and their resources; and⁹¹ the promotion of total ecosystem marine resources management through capacity building....”

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