

## The Precautionary Principle in Fisheries Management in CARICOM States

### El Principio Precautorio en el Manejo Pesquero de los Estados de la CARICOM

### Le Principe Precautorio dans la Gestion de Pêche des États de la CARICOM

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#### ABSTRACT

Although the precautionary principle is a widely accepted and applied principle in environmental law, its application to conservation and management of living marine resources is a more recent development. Its application to fisheries was first articulated in Principle 15 of the Rio Declaration and Agenda 21 in 1992. The precautionary approach has since been receiving considerable attention and has found currency in numerous binding and non-binding fisheries instruments at the international, regional and domestic levels. This paper briefly reviews the development of precaution in international fisheries law and argues that the precautionary approach provides a firm basis for improved fisheries management, particularly in data poor environments such as the Caribbean. The paper then explores the extent to which precaution has been incorporated at the regional and domestic levels in the fisheries policies and laws of CARICOM Member States. It concludes that although progress is being made, much more could be done to incorporate and apply the precautionary approach in CARICOM States.

KEY WORDS: Precautionary principle/approach, fisheries management, CARICOM

#### INTRODUCTION

Marine fish stocks, marine ecosystems, and the marine environment are very complex, dynamic interconnected systems. The basic objective of fisheries management is to achieve optimum long-term sustainable benefits from the fish stocks while reducing the risk of severe or irreversible decline in stocks or damage to the marine ecosystem. Effective management requires the development and implementation of management and conservation measures based on good scientific knowledge and understanding of the fish stock, marine ecosystems, and socio-economic factors. Considerable scientific data and information on the target species is usually required including, *inter alia*, accurate data on catch and fishing effort, stock abundance, distribution, migration, the proportion of mature individuals, the rate of mortality, and reproduction (FAO 1997). Knowledge of the impact of fishing on dependent and associated species and other species belonging to the same ecosystem is also required. So too is knowledge and understanding of the oceanographic and environmental factors, including the impact of climate change and climate variability on the fish stocks and marine ecosystem.

According to FAO (1996), scientific knowledge and understanding of the fisheries and marine ecosystems and capacity to predict their future status in accurate quantitative terms is limited by the properties of fishery resources, their dynamic nature, and interconnectedness; the limited knowledge on genetic stock structure and impacts of fishing on resources genetics; the complexity of the interactions between species and gears and fisheries; the poor quality of the available fishery data; the limitation of scientific models and research funds, and the fluctuations of economic parameters. This leads to a degree of uncertainty in the scientific, technical, economic, and political information upon which managers and industry leaders base decisions which may not always be wholly appropriate. In developing countries with tropical multispecies fisheries the problem of inadequate scientific data and information about the fish stocks and marine ecosystems can be particularly severe.

The knowledge required for good decision-making is both difficult and expensive to acquire and may still have high levels of uncertainty due to limitation in the scientific models used, even in developed States with significant financial resources and research capacity. This limited scientific knowledge and uncertainty about the marine resource systems suggest a need to be cautious in carrying out fishing activities and determining fisheries management and conservation measures such as setting catch quotas and permitted levels of fishing effort in order to avoid causing serious decline of the population of fish stocks or harm to the marine ecosystem. This cautious approach, in situations where there is limited scientific information on the impact of fishing on the target species, other species in the ecosystem, or the wider ecosystem processes, is the essence of the precautionary approach in fisheries. The core of the approach is that, in the face of serious risk to, or grounds for concern about the health of the fish stocks and marine ecosystems, scientific uncertainty or the absence of complete evidence of harm should not prevent the formulation and implementation of management and conservation measures to minimize risks and protect the fish stocks and ecosystem (FAO 1995, Churchill and Lowe 1999).

It is a conceptually simple and practical tool that can be used along with other measures to achieve sustainable use of fisheries and protection of the marine ecosystems in that it requires States and other stakeholders to avoid activities that may cause serious harm to the fish stocks or ecosystems. Even more important, it can provide a solid legal basis for taking action which could not otherwise be pursued due to inadequate data and scientific understanding of the state of the fish stocks and

consequences of fishing on stocks or biodiversity in the marine environment. It is thus a useful decision-making tool for a systematic response to the pervasive and intractable problem of lack of adequate data and scientific uncertainty in fisheries management, particularly in developing countries. For these reasons, the precautionary approach has received widespread support globally as a practical tool to reconcile and balance development and use of fisheries resources on the one hand, with long-term sustainability, conservation, and protection of biodiversity in the marine environment on the other hand (Segger and Khalfan 2005).

### PRECAUTION IN INTERNATIONAL FISHERIES INSTRUMENTS

#### UN Convention on the Law of the Sea, 1982 (UNCLOS)

UNCLOS has no specific provisions expressly dealing with the precautionary approach as the Convention predates the development of the concept in international fisheries law. However, the concept of precaution is implicit in several of its provisions. According to Judge Laing in a separate opinion delivered in the Southern Bluefin Case (ITLOS 2000), 'it cannot be denied that UNCLOS adopts a precautionary approach'. This he argued may be gleaned, *inter alia*, from the preamble and several other provisions of the Convention. These include:

- i) Articles 63-66, on conservation and utilization of a number of species in the exclusive economic zone, identify conservation as a crucial value. So do article 61, specifically dealing with conservation in general, and article 64, dealing with conservation and optimum utilization of highly migratory species.
- ii) Article 116, on the right to fish on the high seas, *inter alia* reiterates the conservation obligation on nationals of non-coastal/distant fishing States while fishing in the exclusive economic zone of other States.
- iii) Article 117 explicitly articulates the duty of all States "to take, or to cooperate with other States in taking, such measures for their respective nationals as may be necessary for" conservation of living resources in the high seas.
- iv) Article 118 requires inter-State cooperation in the conservation and management of high seas living resources. Such cooperation is to extend to negotiations leading to the establishment of subregional or regional fisheries organizations, and
- v) Article 119, entitled "conservation of the living resources of the high seas", deals with the allocation of allowable catches and "establishing other conservation measures". Although paragraph 1(a) refers to measures, based on the best scientific evidence, for production of the maxi-

imum sustainable yield, the conservatory thrust of this article is vigorously reaffirmed by the treatment, in paragraph (b), of the effects of management measures on associated or dependent species the populations of which should be maintained or restored "above levels at which their reproduction may become seriously threatened"

#### Rio Declaration and Agenda 21

The precautionary principle is expressly articulated in Principle 15 of the Rio Declaration on Environment and Development 1992 (UNGA 1992a) and Agenda 21 (UNGA 1992b). Principle 15 says, '[i]n order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.' Paragraph 17.1 of Agenda 21 provides that the protection and sustainable development of marine and coastal environment and its resources require new approaches that are 'integrated in content and are precautionary and anticipatory in ambit' (UNGA 1992b).

The precautionary approach has since been incorporated in several binding and non-binding fisheries instruments including the 1995 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 (hereinafter the UNFSA) (UNFSA 1995) and the FAO Code of Conduct for Responsible Fisheries (hereinafter the Code) (FAO 1995).

#### United Nations Fish Stocks Agreement

The UNFSA (1995) develops the precautionary approach as one of the general principles for the conservation and management of straddling and highly migratory fish stocks (Arts. 5(c)). Section 6 and Annex II of the UNFSA provide detail rules for application of the precautionary principle to fishing for straddling and migratory fish stocks. States Parties are required to apply the precautionary approach widely to conservation, management and exploitation of all aquatic resources in order to protect them and preserve the aquatic environment (Art 6 (1)). States are obliged to be 'more cautious when information is uncertain, unreliable or inadequate' and must not postpone the adoption of conservation and management measures because of an 'absence of adequate scientific information' (Art. 6(2)). States are also obliged to apply the guidelines set out in Annex II and determine, on the basis of the best scientific available, reference points for each stock that they manage. They must further ensure that when such reference points are approached, they are not exceeded. For new or exploratory fisheries, States are required to adopt cautious measures until there are

sufficient data to allow the identification of measures for the long-term sustainability and gradual development of fisheries (Art. 6(6)). If a natural event adversely affects the status of stocks, states are required under Article 6 (7), to implement temporary emergency measures to avoid worsening the situation through fishing activity.

Annex II contains Guidelines for Application of Precautionary Reference Points, which are based on sound science. Target or non-target fish stocks which become the subject of concerns must be more carefully monitored (UNFSA 1995).

#### **FAO Code of Conduct for Responsible Fisheries**

The FAO Code of Conduct for Responsible Fisheries (FAO, 1995) provides a comprehensive set of principles and standards for fisheries conservation and management, including application of a precautionary approach and the closely linked ecosystem approach. The Code calls upon States and organizations to apply the precautionary approach using nearly identical language as the UNFSA (see for example Arts.6.5 and 7.5 of the Code and 6(1) of UNFSA).

In implementing the precautionary approach, the Code calls upon States to take into account 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, including discards, on non-target and associated or dependent species, as well as environmental and socio-economic conditions (Art. 7.5.2).

States are exhorted to use the best scientific evidence available to determine: stock specific target reference points and stock-specific limit reference points, and the actions to be taken if they are exceeded; when a limit reference point is approached, measures should be taken to ensure that it will not be exceeded (Art. 7.5.3). For new fisheries, States should adopt cautious conservation and management measures, including, *inter alia*, catch limits and effort limits (Art. 7.5.4). If a natural phenomenon has a significant adverse impact on the status of living aquatic resources, States should adopt conservation and management measures on an emergency basis to ensure that fishing activity does not exacerbate such adverse impact. States should also adopt such measures on an emergency basis where fishing activity presents a serious threat to the sustainability of such resource (Art 7.5.5).

#### **United Nations General Assembly**

On 22 December 1989, the UN General adopted Resolution 44/225 recommending a ban on all large-scale pelagic driftnet fishing on the high seas by 30 June 1992. This is an example of the precautionary approach in action as the ban was recommended and implemented by States and regional organizations in the absence of scientific consensus on the likely long-term impact of this particular fishing technique, but recognizing that there was a real

possibility of serious harm, not only to the targeted fish stocks, but also marine biodiversity (UNGA 1989).

The UN General Assembly has adopted several resolutions concerning sustainable fisheries, which although not legally binding, are nevertheless significant instruments for fisheries the conservation and management. These resolutions, which are adopted annually, have addressed a wide range of fisheries issues including, *inter alia*, application of the precautionary approach and ecosystem approaches. For example, the 9<sup>th</sup> pre-ambular paragraph of General Assembly Resolution 65/38 of 7 December 2010 (UNGA 2011) recognized 'the urgent need for action at all levels to ensure the long-term sustainable use and management of fisheries resources through the wide application of the precautionary approach...' It goes on to call upon States to apply widely, in accordance with international law and the Code, the precautionary approach to the conservation, management and exploitation of fish stocks (see paragraphs 6 - 9,15, 73, 99, 105, 117).

#### **Regional Fisheries Management Organizations**

Several Regional Fisheries Management Organizations (RFMO) including NAFO, NEAFC, SEAFO, ICCAT, CCAMLR, WCPFC, IATTC have adopted or are in the process of adopting the precautionary approach. The constituent treaties of GFCM (Art III (2)), WCPFC (Art 5 (c) and 6), SEAFO (Article 7), require these organizations to adopt a precautionary approach (Mooney-Seus and Rosenberg, 2007). The NAFO amended treaty (2007) which is yet to enter in force also requires the adoption of a precautionary approach (NAFO, 2007).

### **PRECAUTION IN REGIONAL INSTRUMENTS**

#### **CARICOM Revised Treaty**

The 2001 Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy (CSME), has as its objective, the promotion of economic and social development through regional cooperation and integration of the economies of States Parties (CARICOM 2001). The Treaty provisions address, *inter alia*, natural resource management, fisheries, and environmental protection. CARICOM has an obligation to adopt effective measures to assist member states in the management of their natural resources (Article 58(1)). More specifically, CARICOM must adopt measures for the effective management of the soil, air, and all water resources, the EEZ, and all other maritime areas under the national jurisdiction of the member States; and for the conservation of biological diversity and the sustainable use of biological resources of the member states (Article 58(2)). With respect to fisheries, the Treaty requires the Community, in collaboration with national, regional, and international organizations, to promote the development, management, and conservation of the fisheries resources in and among the member states on a

sustainable basis (Article 60(1)). The Community is obliged to promote the establishment of a regime for the effective management, conservation and utilization of the living resources of the EEZs of Member States (Article 60 (4)).

Article 65 of the Revised Treaty addresses environmental protection. In formulating measures in relation to the environment, the Community is required to, *inter alia*, take account of: available and accessible scientific and technical data; the potential costs and benefits of action or inaction; and the precautionary principle and those principles relating to preventive action, rectification of environmental damage at source and the principle that the polluter pays.

### CRFM Agreement

The Agreement establishing the Caribbean Regional Fisheries Mechanism (CRFM) was signed and entered into force on the 4 February 2002 (CRFM 2002). The parties to the CRFM Agreement are the 15 CARICOM Member States, plus Anguilla and the Turks and Caicos Islands. Article 4 sets out the objectives of the CRFM as follows:

*“the efficient management and sustainable development of marine and other aquatic resources within the jurisdictions of Member States; the promotion and establishment of co-operative arrangements among interested States for the efficient management of shared, straddling or highly migratory marine and other aquatic resources; and the provision of technical advisory and consultative services to fisheries divisions of Member States in the development, management and conservation of their marine and other aquatic resources.”*

Article 5 of the CRFM Agreement provides that in pursuance of its objectives the organization shall be guided by a number of general principles including, *inter alia*, maintaining marine biodiversity in the marine environment using the best available scientific approaches to management; and encouraging the use of the precautionary approach to sustainable use and management of fisheries resources. Thus, the CRFM Agreement provides explicitly for the application of the precautionary approach to fisheries management, and can thus be relied on to support its application in the fisheries of Member States.

### CARICOM Common Fisheries Policy

The CARICOM countries are in the process of preparing a Common Fisheries Policy as an instrument to achieve their common fisheries development objectives. The draft treaty establishing the Common Fisheries Policy which was endorsed by the 4<sup>th</sup> Meeting of the Ministerial Council of the CRFM in May 2011 and the 38<sup>th</sup> Special Meeting of CARICOM Council for Trade and Economic Development, 14 October 2011, sets out the goals to be achieved in respect of sustainable fisheries development,

conservation and protection of marine ecosystems (CRFM 2011). It sets out, in a comprehensive framework, the basic principles, and objectives to ensure good governance, fairness, and equity in utilization, conservation and management of the fisheries resources. Article 5 of the Draft Agreement establishing the Policy enshrines a number of fundamental principles which must guide the elaboration and implementation of Policy and implementing regime. These include:

- i) Use of the best available scientific information in fisheries management decision-making, taking into consideration traditional knowledge concerning the resources and their habitats as well as environmental, economic and social factors;
- ii) Application of internationally recognized standards and approaches, in particular the precautionary approach and the ecosystem approach to fisheries management, and
- iii) The principle that the level of fishing effort should not exceed that commensurate with the sustainable use of fisheries resources (CRFM, 2011).

### OSPESCA

The Fisheries and Aquaculture Integration Policy adopted by the Organization for the Fishing and Aquaculture Sector of the Central American Isthmus (OSPESCA) in 2005 enshrines the commitment of the Central American States Parties to applying the principles of sustainability and the precaution approach in the sustainable use and management of fisheries resources and ecosystems (OSPESCA 2005). Section 3.2 which sets out guiding principles, provides that,

*‘[t]he marine and inland waters ecosystems should be used with responsible practices in order to take advantage of the fisheries and aquaculture resources, ensuring that they are not degraded and the fish species keep their natural capacity of reproduction, ensuring the benefits for current and future generations’; and in respect of the precautionary approach it says, ‘[i]t is the option of taking temporary joined decisions of fisheries and aquaculture management, in view of signs that demonstrate their convenience, although there were no scientific or technical evidence, making the effort to obtain this evidence as soon as possible.’*

### PRECAUTION IN NATIONAL FISHERIES LEGISLATION

Domestic fisheries laws in most CARICOM States do not expressly provide for the application of the precautionary approach in fisheries management, with only a few exceptions. This is because the fisheries laws, in most cases, predate the emergence and adoption of the precaution approach in international fisheries law, which as noted

earlier, occurred in the mid 1990s with the adoption of the Fish Stocks Agreement and the FAO Code of Conduct. The process of reforming fisheries laws in the CARICOM States is normally very slow, often requiring more than 10 years for completion.

Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Lucia, Saint Kitts and Nevis, and Saint Vincent and the Grenadines have harmonized their fisheries laws. Barbados and Guyana have followed the general scheme of the harmonized fisheries laws of the eastern Caribbean States.

The principal fisheries acts and regulations lay down the legal rules for development, management and conservation of the fisheries resources including, *inter alia*, the rules governing conservation and management of marine living resources which are based largely of the rights and duties provided for by UNCLOS. The ministers responsible for fisheries are generally given broad powers to *'take such measures as he thinks fit... to promote the management and development of fisheries to ensure optimum utilization of the resources'* (s.3 Fisheries Act Grenada, 1986; s.3 Fisheries Act St. Vincent and the Grenadines, 1986).

A common feature of most of these fisheries statutes is that they focus on securing the rights of States over the living marine resources within their sovereignty and jurisdiction in accordance with the provisions of UNCLOS. That is, their primary object is promoting optimum utilization and exploitation of the fish stocks to provide social and economic benefits to society. They are less concerned with promoting responsible fisheries or conservation and management of the fish stocks and ecosystems, or protecting biodiversity in the marine environment. In general, these older fisheries acts do not include more recent fisheries conservation and management principles as articulated in the Code and related documents, and called for by the UN Resolutions on Sustainable Fisheries, including, *inter alia*, the objective of long term sustainable use, the need for precautionary and ecosystem approaches to fisheries management, and the need to protect biodiversity in the marine environment.

However, over the past decade, several CARICOM States, inspired by the call of the FAO Code and other international instruments, have embarked on a gradual process of reforming their fisheries laws and regulations to clarify and strengthen commitment to long-term conservation and sustainable fisheries by incorporating relevant principles such as the precautionary and ecosystem approaches to fisheries management. Greater priority is now being given to the principle that the *'right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living aquatic resources'* as provided for in Principle 6.1 of the FAO Code of Conduct (FAO 1995). Examples of this recent trend will be illustrated by reference to the reformed fisheries laws of Antigua and

Barbuda, Guyana, and Belize. Other CARICOM States, for example, Jamaica, Trinidad and Tobago, and Bahamas are in the process of reviewing and upgrading their fisheries laws.

### **Antigua and Barbuda**

The 2006 Fisheries Act of Antigua and Barbuda is the most recently enacted principal fisheries law in a CARICOM State. It is typical of the new generation fisheries acts being prepared by several CARICOM States in that it incorporates relevant modern principles of responsible fisheries enunciated by the FAO Code of Conduct and other recent international instruments, including, *inter alia*, the precautionary approach.

The concept of responsible fisheries is dealt with in Part II of the 2006 Fisheries Act which addresses fisheries management and development. Minister responsible for fisheries may take such measures as he thinks fit to promote the sustainable development and responsible management of fisheries and aquaculture activities so as to ensure the optimum utilization and conservation of the fish resources and the ecosystems to which they belong (S.4). Section 5 mandates the Chief Fisheries Officer to prepare and keep under review a plan for the responsible management and sustainable development of fisheries. It imposes an obligation for the Fisheries Plan to adopt a precautionary approach to fisheries management. The Act imposes similar obligations concerning responsible aquaculture development including the preparation of an aquaculture plan based on the precautionary approach (Section 6).

### **Guyana**

Guyana enacted a new principal fisheries statute in 2002. This new legislation, the Fisheries Act 2002 (Ministry of Legal Affairs, 2003), goes further than most other CARICOM States in expressly providing for use of the precautionary approaches to fisheries management, albeit in very general terms. The Minister is empowered to *'take such measures as he thinks fit to promote the sustainable development and responsible management of fisheries so as to ensure the optimum utilization of fisheries resources in the waters for the benefit of Guyana, and in so doing shall promote precautionary approaches to fisheries management, as well as the need to conserve fisheries resources for future generations.'* So the commitment is to promote precautionary approaches to achieve the objective of optimum utilization.

### **Belize**

The principal fisheries legislation in Belize is the Fisheries Act (1948) (CAP 210). Montalvo and Edeson (2010) reviewed this Act in 2010 and concluded that it is *'old, outdated, and needs to be revised in a major way to bring it in line with the modern international law.'*

A new principal fisheries act is being prepared to replace the 1948 Act. The latest draft, entitled, Aquatic

Living Resources Bill, 2011 (Fisheries Department 2011), has been prepared through an extensive consultative process among stakeholders in the fisheries sector and is now making its way through the formal legislative process where it will be further debated and modified.

The Bill seeks to ensure that the living aquatic resources are governed by modern principles and objectives. Section 3 provides for the fundamental objective of long term conservation, management and sustainable use of the living aquatic resources. Section 4 incorporates certain fundamental principles and measures that the Minister or Fisheries Administrator is required to apply when making decisions under the Act, including the precautionary approach, the ecosystem approach, and the protection of biodiversity in the marine environment. The section goes on to say that the precautionary approach as described in the Fish Stocks Agreement shall be applied widely to the conservation and management of fishery resources in order to protect those resources and to preserve the aquatic ecosystems in which they occur. Section 4 further imposes an obligation on the decision-maker to ensure that fishing is commensurate with the sustainable use of fishery resources taking into account the impacts on non-targeted and associated or dependent species and the general obligation to protect and preserve the marine environment.

The Fisheries Administrator is required to prepare detailed fisheries management plans (Section 9). The Bill identifies minimum content of such plans, including how the fishery is to be managed using precautionary and ecosystem approaches to fisheries. In addition provisions have been made in Section 11 for species or fisheries for which special protection may be required. The Minister is given discretionary power to close a specific area, fishery, management unit, stock, or species of fish to fishing in order to prevent further depletion, promote recovery and ecosystem services, or protect critical habitats.

The Belize Aquatic Living Resources Bill, 2011, goes further than any other recent fisheries legislation in CARICOM States in incorporating and promoting application of the precautionary approach. The commitment to conservation and sustainable use is strong and clearly defined. And, so is the commitment to applying widely, the precautionary approach as defined in the UNFSA, which is by far the clearest articulation of the approach in any binding global instrument.

### CONCLUSION

The precautionary approach is a practical tool for improving conservation and management of fisheries resources and ecosystems. Its attractiveness is in its conceptual and operational simplicity in seeking to avoid the common malady of address problems in fisheries after they have caused undesirable harm and losses, and promoting a more equitable balance between short-term

benefits and longer-term sustainable use of the fish stocks and marine ecosystems. This approach is particularly relevant for developing fisheries and other for data poor cases where knowledge and understanding of the population dynamics and ecological relationships are limited.

The CARICOM states can rely on the precautionary approach in developing and implementing fisheries management and conservation measures based on an ecosystem approach. However, implementation remains a challenge as regional and national laws and policies have not kept pace with developments in international fisheries law.

Further work is therefore needed to incorporate and apply the precautionary approach in domestic policies and laws, and thus establish a firm foundation for precautionary action to strengthen the framework for long-term conservation and sustainable use of fisheries.

The precautionary approach remains an attractive and powerful, but underutilized tool for sustainable fisheries and safeguarding the marine ecosystems in the region. The recent trend among CARICOM States, evidenced by the actions of Guyana, Antigua and Barbuda, Belize, Jamaica, and Trinidad and Tobago in upgrading their fisheries legislation, is encouraging.

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