Frozen fish block: how committed are North Atlantic States to accountability, conservation and management of fisheries?

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Abstract

The North Atlantic Ocean has numerous global, regional, and sub-regional instruments for fisheries management. Research for this paper has examined North Atlantic State levels of compliance with these instruments. The study reveals there to be moderate levels of overall compliance, and a latitudinal gradient of compliance with Northern States scoring higher than those in the south. Of particular significance for other global regions, and the future development of international fisheries law, are the findings that: few regional fishery bodies have a systematic program in place to monitor and assess compliance; and despite overall moderate levels of compliance with the conservation and management regimes, most fishery stocks are either overexploited or at risk or collapse.

Keywords: International fisheries instruments; Compliance; Agreements; Legal regimes; North Atlantic

1. Introduction

On 11 November 2001, the Minister for Foreign Affairs of Malta deposited an instrument of accession to the Agreement for the Implementation of the Provision 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 referred to as the UN Fish Stocks Agreement). The UN Fish Stocks Agreement was opened for signature in New York on 4 December 1995. Article 40(1) provides that the Agreement will enter into force 30 days after the date of deposit of the thirtieth instrument of ratification or accession. The Maltese instrument became the thirtieth State instrument to be deposited with the UN Secretary General and accordingly the Fish Stocks Agreement entered into force on 11 December 2001.\textsuperscript{1}

The great strength of the Fish Stocks Agreement is that it gives increased enforcement power to the instrument that is the founding basis of modern international marine capture fisheries law—the 1982 United Nations Convention on the Law of the Sea. Such international instruments are an integral part of the global fisheries conservation and management process as many commercial stocks traverse international boundaries during their life cycle and are accordingly exploited by more than one nation. The impact of the UN Fish Stocks Agreement on regulating conservation and management of marine capture fisheries is promising, but its effectiveness remains to be seen. This paper does not deal with the potential of international instruments, but with the factor that brings such instruments into force—State compliance with international, regional and sub-regional instruments of fishery governance.

The research for this project was conducted throughout 2001 as executed by the Fisheries Centre, University of British Columbia. The study is part of a larger Sea Around Us Project (SAUP), which aims to quantify in...
multidisciplinary terms, the impact of marine resource extractions and to evaluate the benefits and costs of various scenarios such as the status quo and rebuilding of depleted stocks [1]. Within this project, the North Atlantic Ocean was selected as the first large marine system to be assessed. That region provides a wealth of past and present information on fisheries and marine ecosystems. It is also a geographic region where several commercial fish stocks have either collapsed, or are nearing collapse.

The paper is presented in three parts. Part I examines the relevant international fishery instruments and regional fishery body conventions which impact upon the North Atlantic region. Part II describes the application of these fishery instruments to the multidisciplinary Sea Around Us Project. Finally, Part III presents the findings of the research. Of particular relevance to the North Atlantic region is a conclusion that must impact upon later regional investigations. This is, that high State compliance with international fishery instruments does not necessarily equate with sustainable fisheries management.

2. International, regional and sub-regional instruments pertaining to North Atlantic marine capture fisheries

Any analysis of compliance by North Atlantic states with the multitude of regional and international instruments for good governance, conservation and management of fisheries should not lose sight of the fact that two of these instruments represent the most significant achievements in the whole legal regime for fisheries management. These are the 1982 United Nations Convention on the Law of the Sea (1982 Convention) and the 1995 UN Fish Stocks Agreement. A brief description may be provided of these instruments to demonstrate their unique role in fisheries management.

First, with regard to the 1982 Convention, it must be understood that for more than 2000 years, the international community lived by a customary law of sea fisheries. Some customs favoured freedom of fishing, while other customs attempted a theoretical or practical regulation/control of the industry. Only in the twentieth and twenty-first centuries have people attempted to reach a universally accepted code of regulation for marine capture fisheries. Those provisions within the 1982 Convention which establish an international legal regime for fisheries have achieved this. The Convention came into effect on the 16 November 1994.

2.1. The United Nations Convention on the law of the sea

The 1982 Convention deals with a comprehensive range of subjects contained in 320 articles and nine annexes. With regard to marine capture fisheries, the Convention deals with subjects that had not been comprehensively raised before in international law. Such subjects pertaining to fisheries include, inter alia, the exclusive economic zone (EEZ), the rights and jurisdiction of coastal States, conservation and management of the living resources of the high seas, maximum sustainable yield and optimum utilisation, and the establishment of regional fishery bodies for the conservation and management of transboundary and highly migratory stocks.

Despite the total significant achievement of the 1982 Convention, it is widely agreed that by the time it came into force in 1994, the 1982 Convention was already outdated in many of its subject area [3]. This is evidenced by the fact that in 1994, an FAO Report on the state of the world’s fisheries, noted that some 70% of the world marine capture fisheries (particularly those of the North Atlantic) were fully exploited, over-exploited or in a state of recovery [4]. Clearly, the 1982 Convention provided an inadequate regime for fisheries governance. Some specific criticisms of its marine capture fishery provisions may be noted.

Article 61: This article’s five sub-paragraphs give responsibility to the coastal State for determining “the allowable catch of the living resources in its exclusive economic zone”. This is to be done by “proper conservation and management measures” determined by cooperating with competent sub-regional or global international organizations. The difficulty of this provision is that despite the clear importance of “conservation and management” in the new legal regime for fisheries, the 1982 Convention makes no attempt to define what the term means. The lack of definition given to both “conservation” and “management” is a significant omission when it is remembered that some developed states initially opposed the concept of a 200 mile exclusive economic zone. Opposing States were eventually persuaded to support the concept if, inter alia, the conservation and management of fishery resources were made an essential ingredient of the 1982 Convention [5].

Article 62: This article deals with the utilization of living resources based on capacity to exploit and the allocation of the surplus allowable catch. The term “optimum utilization” was adopted despite opposition from environmentalists who preferred “sustainable
development”. The latter term was later defined in the Brundtland Report [6].

**Article 63**: This article deals with stocks or stocks of associated species which occur both within the EEZs of coastal states and in areas beyond and adjacent to the zone. In respect of such stocks, the coastal State and States fishing for such stocks in the adjacent area are required to seek, either directly or through appropriate sub-regional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area. The article has two objectives:

- To cooperate in the “conservation” of stocks.
- In the case of stocks that occur within the EEZs of two or more coastal States, the obligation under Article 63(1) is to agree on measures necessary for the “conservation and development” of these stocks.

**Article 64**: The issue of the extent to which coastal states had sovereign rights to highly migratory species (listed in Annex 1 of the Convention) within their EEZs, and their obligation to cooperate, to ensure conservation and promotion of optimal utilization within and beyond the EEZ, is not resolved in this article. Only the cooperation of States in the conservation and optimal utilization of the species is sought. There is no obligation for States to reach an agreement on the management of the stocks.

**Articles 116–120**: Section 2 of the 1982 Convention, provides in articles 116–120 a dual duty on States engaged in distant water fishing to conserve stocks and cooperate with adjacent coastal States in the exploitation of such stocks. The methods to allocate the living resources among the potential and competing users as well as monitoring and surveillance of the catches of distant water fishing nations were not addressed.

In summary, the above provisions of the 1982 Convention dealt with subjects that had not been comprehensively raised before in international law. The ambiguities, uncertainties and lack of definitions had become critical issues in the 12 years between the 1982 opening for signature and the coming into effect of the 1982 Convention in 1994. Accordingly, in the interests of food security, and the contribution that commercial fishing makes towards feeding an increasing global population, it was necessary for the international community of States to strengthen fisheries conservation and management laws, and address the above omissions of the 1982 Convention. Throughout the 1990s, several international and regional instruments attempted to do this. For the purposes of this paper, the UN Fish Stocks Agreement is the most significant of such instruments.

### 2.1.1. UN Fish Stocks Agreement

This agreement guides the implementation of the 1982 Convention provisions for straddling stocks and highly migratory stocks by addressing with varying degrees of effectiveness, the ambiguities and omissions of the 1982 Convention. The agreement, however, still does not comprehensively define “conservation and management”. The definition provided in Article 1(b) is vague at best, and at worst, it can be said to place conservation and management in conflict.

The Agreement nevertheless advanced the 1982 Convention. Some important developments within the Fish Stocks Agreement are that it:

- adopts the precautionary approach and requires States to apply it within areas of national jurisdiction and on the high seas;
- increases the role of regional fishery bodies to establish conservation and management measures for straddling and highly migratory fish stocks;
- ensures that States do not authorize the use of their flag to vessels on the high seas unless the State is able to effectively exercise responsibility over such vessels and compliance with regional conservation and management measures;
- grants to States which are a party to the Agreement and members of a relevant fishery body, the power to board and inspect fishing vessels of another State party, in order to ensure compliance with conservation and management measures, even where the flag State is not a member of the regional fishery body. The right to board a fishing vessel also extends to fishing vessels voluntarily in port for inspections of documents, fishing gear and catches in order to ensure compliance with sub-regional, regional and global conservation and management measures.\(^9\)

### 2.1.2. Agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas (Compliance Agreement)

The Compliance Agreement deals with the problem of refloaged fishing vessels on the high seas. The Agreement requires that each State shall take measures to ensure that fishing vessels flying its flag do not engage in any activity that undermines the effectiveness of international conservation and management measures.\(^11\) The State will also not allow vessels to fish the high seas unless the vessel is authorized to do so by the appropriate authority.\(^12\)

### 2.2. North Atlantic regional fishery arrangements

In addition to these three global instruments other agreements specific to the North Atlantic, as well as other parts of the world exist. FAO has compiled a

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9 Articles 5, 6, 8, 18(2) and 19(1).
10 Article 23.
11 Article III (1) (a).
12 Article III (2).
database of international fisheries instruments and as of 2001 there were more than 2000 global instruments in force [7,8]. The majority of these being bilateral agreements between States. Further, there are specific North Atlantic regional fishery Conventions/Arrangements including:

- International Convention for the Conservation of Atlantic Tunas (ICCAT);
- Convention on Future Multilateral Cooperation in Northwest Atlantic Fisheries (NAFO);
- Convention on Future Multilateral Cooperation in Northeast Atlantic Fisheries (NEAFC);
- European Union Common Fisheries Policy (CFP);
- Convention for the International Council for the Exploration of the Sea (ICES);
- Convention for the Conservation of Salmon in the North Atlantic Ocean (NASCO);
- Agreement Concerning Certain Aspects of Cooperation in the Area of Fisheries which also includes the following three agreements:
  1. Agreement Concerning Cooperation in the Field of Fisheries Between Norway and the USSR (1975);
  2. Agreement Concerning Mutual Fisheries Relations Between Norway and the USSR (1976);
  3. The Grey Zone Agreement Between Norway and the USSR (1978);
- Negotiations on Allocating the Capelin Stock Between Norway, Iceland and Greenland;
- Agreed Record of Conclusions of Fisheries Consultations on the Management of the Norwegian Spring Spawning Herring (Atlanto-Scandian Herring) Stock in the Northeast Atlantic for 1997 (including Supplementary Agreements).

A central theme of all these global and regional fishery instruments is the need for all States to cooperate at the global, regional and sub-regional levels for better fisheries management. Thus, in the UN Fish Stocks Agreement, Articles 5, 8 and 14 describe a number of ways that a “duty to cooperate” can be effectuated. Central to these provisions is the need to establish and participate in regional fishery bodies, which share information and cooperate in scientific research. Similarly, the Preamble to the Compliance Agreement calls upon States which do not participate in global, regional or sub-regional fishery organisations or arrangements to do so, with a view to achieving compliance with international conservation and management measures. This theme is further reiterated and supported by other articles within the Agreement.

13 Subsequent to the creation of many of these international fishery instruments, an attempt has been made to define the term “Regional Fishery Body”. According to the 1998 FAO Text of Documents placed before the High Level Panel of External Experts in Fisheries, RFBs are defined as “a mechanism through which three or more States or international organisations that are parties to any international fishery agreement or arrangement collaboratively engage each other in multilateral management of fisheries affairs related to trans-boundary, straddling and highly migratory fish stocks, through the collection and provision of scientific information and data, serving as a technical and policy forum, or taking decisions pertaining to the development and conservation, management and responsible utilisation of the resources….A RFB in other words is the instrument for fishery governance at the regional level.” [9]

The subject of State compliance with these international, regional and sub-regional instruments of fishery governance is discussed in Part II of this paper.

3. The Sea Around Us Project

The research project undertaken in this paper began with a basic question

With more than 2,000 global instruments for fisheries conservation and management, plus a global network of regional fishery bodies that exercise governance over fish stocks, why are world marine capture fisheries in a state of crisis [10,4,11]?

Despite a number of studies that have highlighted the global decline in fish stocks, there have been few studies that have investigated levels of State compliance with the fishery instruments designed to manage fish stocks [12–14]. FAO itself has recently recognized the need for monitoring and evaluating State compliance with these fishery instruments. Accordingly, the Second Meeting of FAO and Non-FAO Regional Fishery Bodies or Arrangements14 drafted performance indicators for measuring the objectives (such as management, governance and benefit distribution) and functions (such as capacity development, training and information management) of RFBs and their member States. The Report suggests that State compliance is best measured using a range of variables such as:

- State participation (e.g. meeting attendance, training),
- State contributions (e.g. in-kind, and financial support),

13 Note in particular Article V (3), Article VI (4), (10), and (11), and Article VII.

• State information delivery and implementation (e.g. decision compliance, acceptance of dispute settlement).

To date, none of these recommendations have been implemented [7].

The Sea Around Us Project (SAUP) has researched the question of State compliance with international fishery agreements, and the impact that these compliance levels have on relevant fish stocks.

In SAUP Stage One—the North Atlantic Ocean, the relevant marine waters encompass waters north of Miami, Florida, in the west, and waters north of Cape Bojador, Morocco, in the east. This geographic region excludes the semi-enclosed Mediterranean and Baltic Seas. The study area includes FAO areas 21 and 27, and small segments of FAO areas 31 and 34 (Fig. 1). This resulted in 17 countries, and one voting block—the European Union, bordering the study area.\textsuperscript{15}

The SAUP project is multidisciplinary and has assimilated ecological, legal, economic, social, political and institutional data. Assessment criteria for each fishery instrument examined in the study (Table 1) are focused on measuring either qualitatively or quantitatively the level of compliance with the various fisheries management provisions contained within an instrument. Where an instrument contains few provisions for management,\textsuperscript{16} the current management or work programs were used to develop the assessment criteria. Additional data came from RFB published secretariat reports, agreements and treaties, as well as stock assessments from ICES. In some cases, academic and professional journals were also used to gather the necessary information. If information was not published, then secretariats for the instrument were contacted for the appropriate information. In addition, RFB terms of reference and/or annual programs were also used to determine assessment criteria. Only those States where an instrument applied were assessed with regard to compliance with the instrument. This was irrespective of whether they were a party to the instrument or not.

As each instrument has unique and specific provisions (See Table 2 for an example) a specific set of criteria was formulated for each instrument. Where possible, criteria were limited to approximately 6 factors per instrument, but some instruments, such as the Fish Stocks Agreement had less than 6 factors due to the broad nature of the Agreement [15]. The criteria were specified to ensure maximum differentiation between the levels within a criterion. Generally a range of scores between 0 and 3 was used for a criterion.

\textsuperscript{15}These are: Belgium, Canada, Denmark, Faroe Islands, Germany, France, Iceland, Greenland, Ireland, Morocco, Netherlands, Norway, Portugal, Russia, Spain, United Kingdom, USA.

\textsuperscript{16}Such as the establishment of a RFB, working parties and arrangements for meetings.

The Convention for the Conservation of Salmon in the North Atlantic (NASCO) (although important for the management of salmon stocks throughout the North Atlantic) was not assessed. The available reports did not provide the information necessary to complete this research, and the secretariat advised that such information was not available.

The International Council for the Exploration of the Sea (ICES), which is the oldest recorded regional fishery body dating back to 1902, was also not assessed. ICES is an intergovernmental marine organization that undertakes scientific study of the sea and its resources. It then provides management advice, as requested, by various international commissions, the European Union, and State member governments. Thus, the Council is primarily an advisory body and does not implement any management recommendations.

4. The findings

In the North Atlantic, compliance varies considerably between countries and treaties (Table 3). Overall the Convention for Multilateral Cooperation in the North East Atlantic had the highest level of compliance, with an average score of 81% based on five countries (information on individual EU countries was not available from the NEAFC and therefore the EU score was used to represent each country’s score). The Fisheries Compliance Agreement had the lowest level of compliance with an average score of 33% based on the 15 countries where it applies. There was a distinct difference in State attitudes towards adherence with the Compliance Agreement. Either country has ratified the agreement and are actively implementing it, or they have signed it, but not ratified it. Morocco had the lowest level of compliance with a score of 24% based on the 4 instruments that apply, while Norway had the highest average score (69%) over 9 instruments.

4.1. UNCLOS, the Compliance Agreement and the UN Fish Stocks Agreement

The level of compliance for these instruments ranged between 100% for the Fish Stocks Agreement and 0% for the Compliance Agreement (Table 3). Canada, Morocco and the United States have yet to fully ratify UNCLOS. The status of the Faeroe Islands and Greenland with respect to these instruments is unclear; therefore they were not included in this part of the analysis. The overall level of compliance with the Fish Stocks and Compliance Agreements is much less than for UNCLOS (Table 3). The European Union as an entity representing the countries in the Union has not ratified the Fish Stocks Agreement and, therefore, represents a major proportion of the countries in this
Fig. 1. FAO areas in the North Atlantic.
study which exhibit a poor (11/15) level of compliance. Other countries such as Canada, Iceland, Norway and the United States have ratified the agreement and have been implementing it, even though it is just now coming into force.

The Compliance Agreement has been accepted by many of the countries in the study with the exception of Morocco, Russia and Iceland. However, fishing companies based in countries in this study including Spain are noted for reflagging their fishing vessels to avoid compliance with various agreements [16,17].

These instruments were difficult to assess because there is no single agency responsible for the implementation of any of the UNCLOS instruments. UNCLOS is a highly complex instrument and is administered by the Division for Ocean Affairs and Law of the Sea within the United Nations Office of Legal Affairs. Although the United Nations is the depository and administrator for these instruments, other conventions such as the North Atlantic Fisheries Organization (NAFO) have a secretariat that deals with the Convention on Future Multilateral Co-operation in Northwest Atlantic Fisheries on a day-to-day basis. There is no equivalent agency within the UN. Consequently the External or Foreign Affairs Department within each country was contacted for the appropriate information. Few countries responded to our request for specific information and therefore the assessable criteria were reduced to just a few that could be assessed using existing information.

A search of the literature also revealed little information on country-specific activities to implement these instruments. There was considerable literature, however, on the arguments used to debate whether the United States should sign UNCLOS and the Compliance Agreement.

4.2. International Convention on the Conservation of Atlantic Tuna

Only 8 of the 17 countries in the study have ratified ICCAT. However, some countries in the study such as Denmark, Faeroe Islands and Iceland who are not signatories have begun to target bluefin tuna in the Atlantic and there is increasing concern amongst member countries on the level of their catches (NOAA 2001). The United States (91%) and Canada (83%) have a high level of compliance, while countries such as Morocco (25%), Spain (37.5%) and France (37.5%) have a low level of compliance (Table 3). Despite a reasonable level of compliance by many member countries.

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<tr>
<th>Table 1</th>
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<tr>
<td>Summary of the fisheries instruments reviewed for the North Atlantic (acronyms are indicated in the brackets at the end of the title)</td>
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<tr>
<th>Assessed instruments</th>
<th>Notes</th>
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<tr>
<td><strong>UN Convention on Law of the Sea (UNCLOS)</strong></td>
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<tr>
<td>Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNCLOS Fish Stocks)</td>
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<td>Convention for the Conservation of Salmon in the North Atlantic Ocean (NASCO)</td>
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Came into force 11 November 2001
Not in force, there are only 12 signatures out of the required 25
Manages tuna and billfish in the entire Atlantic area
Management of mostly groundfish in the NW Atlantic area
Management of mostly pelagic fish in the NE Atlantic
Management of more than 100 species of fish within the EEZs or Fishing Grounds of EU countries
This group of agreements address management of the major fisheries in the Barents Sea that are not encompassed in NEAFC or CFP
Management of Herring stock that is fished primarily in the Norwegian Sea
Management of capelin stock that is fished primarily in the Jan Mayan area
Provides scientific advice to regional fisheries bodies in the NE Atlantic
Management of salmonid fisheries throughout the North Atlantic
Table 2

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Provision/decision/program</th>
<th>Criteria</th>
<th>Assessment criteria for the Common Fisheries Policy</th>
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<tbody>
<tr>
<td>1</td>
<td>Contribution of activity reduction to the overall targets of the MAGP4, average of capacity and activity (CEC, 2000)</td>
<td>1: 0; 2: 5–10%; 3: &gt; 10%</td>
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<td>2a</td>
<td>Level of adjusted catches in North Sea, Skagerrak and Kattegat (based on Watson and Pauly, 2001)</td>
<td>0: &gt; 1 million (metric ton); 1: 100,000–1 million; 2: 10,000–100,000; 3: &lt; 10,000</td>
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<td>2b</td>
<td>Level of adjusted catches in Norwegian Sea (based on Watson and Pauly, 2001)</td>
<td>0: &gt; 1 million (metric ton); 1: 100,000–1 million; 2: 10,000–100,000; 3: &lt; 10,000</td>
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<tr>
<td>2c</td>
<td>Level of adjusted catches in Community western waters (based on Watson and Pauly, 2001)</td>
<td>0: &gt; 100,000 (metric ton); 1: 10,000–100,000; 2: &lt; 10,000</td>
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<td>3</td>
<td>Problematic in over-quoting (based on pers comm. EC officer)</td>
<td>0: problematic; 1: no problems</td>
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<td>4</td>
<td>Subsidies to the fishing sector as a % of the total landed value (Sumaila and Monroe, 2001)</td>
<td>0: &gt; 25%; 1: 11–25%; 2: 1–10%; 3: 0%</td>
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<td>5</td>
<td>Level of violations 1990–1996 (based on Long and Curran, 2000)</td>
<td>0: more than 10; 1: &lt; 10; 2: &lt; 5; 3: no violations</td>
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<td>6</td>
<td>Quota Hopping (based on Long and Curran, 2000)</td>
<td>0: more than 100 vessels; 1: &lt; 100 vessels; 2: no vessels</td>
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(b) National scores for the Common Fisheries Policy

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<th>Criteria</th>
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Possible score 17 20 20 20 20 17 17 20 Total 8 8 12 9 11 11 10 10 6 9 % score 47 40 60 45 55 55 59 35 45
countries that have ratified the convention, many tuna stocks in the North Atlantic are still considered to be fully exploited or over exploited [18].

4.3. Convention on Future Multilateral Co-operation in Northeast Atlantic Fisheries

This instrument (NEAFC) applies to those countries bordering the east Atlantic and is focused on demersal fisheries such as blue whiting, oceanic redfish, herring, mackerel and capelin and is administered by the North-East Atlantic Fisheries Commission. Highly migratory species such as tunas and anadromous stocks such as salmon are dealt with in other instruments in this study. Though the commission has the power to recommend a wide variety of conservation and management measures, it, generally, only uses a few measures (such as setting TACs) for the various stocks it manages.

The Commission would only provide compliance information at the EU level and not on a State-by-State basis. Overall compliance is high for all States that have signed the convention (Table 3). However, management provisions (such as the use of logbooks and vessel monitoring systems) are easy to comply with for these economically prosperous countries, while TACs are generally set by consensus among member countries and do not necessarily reflect the catch levels needed to maintain the stocks, nor a precautionary approach to setting the TAC.

4.4. Convention on Future Multilateral Co-operation in Northwest Atlantic Fisheries

This instrument applies to those countries bordering the West Atlantic, primarily Canada, USA, Faeroe Islands, Greenland and Iceland as well as Germany, Norway, Portugal, Russia, Spain and the United Kingdom due to their long history of fishing in the area. The convention applies to all fish stocks except anadromous fish (such as salmon) or highly migratory stocks (such as tuna) and cetacean stocks (managed by the International Whaling Commission). Much of the focus is on groundfish stocks such as cod, redfish, flounder, capelin, shrimp and Greenland halibut.

The commission sets quotas as well as time and spatial restrictions for the catch of a range of species, and compliance is low to moderate among the North Atlantic countries that have ratified the agreement (Table 3). Canada has a high level of compliance (80%) while the compliance levels of the UK and Germany are low (44% and 46% respectively). Despite these levels of compliance, several stocks, especially cod, are still at critically low levels. The 2000 Annual Report [19] noted that the Scientific Council had reviewed and assessed 19 fish stocks and concluded that groundfish abundances are still low and that “there should not be a
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Agreement allows Iceland to access these stocks in the Barents Sea. The agreement facilitates the use of a TAC to manage cod, capelin, haddock, tusk, ling and blue ling cod, redfish, American plaice, Witch flounder and capelin were closed for 2001.

4.5. Commons Fisheries Policy (CFP)

The CFP is the main instrument for managing fish stocks in European Union waters and has 4 main objectives that include maintaining sustainable fisheries. This objective is primarily accomplished through the cooperation of member states. However, it appears that this policy is of limited effectiveness with 67% of stocks within EU waters overfished, 50% depleted and 37% overfished and depleted [20].

The CFP uses a range of measures to implement the sustainable fisheries objective: the Multi-Annual Gear Program (MAGP) aimed at reducing the fleet size in each member country, TACs and quotas, VMS and logbooks. Although the MAGP has reduced the fleet size, any advantages were counterbalanced by increased fishing effort, so that the net effect has been an increase in fishing efficiency and catches. The EU is trying to address this problem, but has had limited success [21]. There are 103 TACs and quotas set for fish stocks by the EU each year. Despite recommendations from ICES to further reduce quotas, member states are unwilling to reduce the quotas and continue to extract marine resources at unrealistic rates. In the area of enforcement and the use of logbooks, the effectiveness of these activities is highly questionable since the EU has only one vessel and few inspectors to oversee this component of the CFP [22].

Compliance with the CFP is low to moderate among member states (Table 3) due to the continued high levels of exploitation that some countries continue to practice. Countries such as Germany and the Netherlands scored higher than 50% because of their commitment to meet the MAGP targets, while Ireland and Portugal scored above 50% due to their limited fishing activities in the areas where stocks are under threat of overfishing. The remaining North Atlantic EU members scored below 50% the lowest score being recorded by Spain (35%) with one of the highest levels of violations recorded, as well as one of the highest levels of quota hopping by a member state [22].

4.6. Agreement Concerning Certain Aspects of Cooperation in the Area of Fisheries

This agreement is specific to managing fish stocks shared by Russia, Iceland and Norway in the Barents Sea. The agreement facilitates the use of a TAC to manage cod, capelin, haddock, tusk, ling and blue ling cod, redfish, American plaice, Witch flounder and capelin were closed for 2001.

4.7. Norwegian Spring Spawning Herring Stocks Agreement

Five countries (Table 3) are party to this agreement which manages the Norwegian spring spawning herring in the Norwegian Sea. The stock is managed using a TAC and quotas with protocols formulated in 1996 and 1997 used to implement the agreement. There is no organization that oversees this agreement. The TAC and quotas are based on advice from ICES and set at an annual meeting of all parties. There is a high level of compliance among the five contracting parties (Table 3). The EU scored the highest (100%) while Iceland and Russia scored the lowest (75%).

4.8. Agreement between Iceland, Denmark (with respect to Greenland) and Norway about Capelin in Jan Mayen EEZ

This instrument attempts to address the problem of overlapping EEZs between Norway and Iceland. The level of compliance for the three countries varied between 50% (Iceland) and 100% (Norway) with Greenland having a compliance level of 65% (Table 3).

5. Discussion

The most startling fact revealed by this study is that high compliance has little to do with sustainable fisheries management. Many of the stocks that are managed under the various instruments assessed are still over-exploited, considered under threat or collapsed [4], despite high compliance levels. The status of many of the tuna stocks in the North Atlantic along with cod stocks and herring stocks [2] are a clear contrast to the compliance levels that this study has revealed. There are a number of reasons for this contrast: countries are reluctant to reduce their share of the resource, lack of reliable information, considerable uncertainty associated with the information that is currently available,
and limitations in the methods used in stock assessments and catch allocations. Many conventions specific to the North Atlantic are now heeding the advice of fisheries researchers and conservation groups in taking a precautionary approach [23]. However, it appears that an even more precautionary approach is needed for most stocks in the North Atlantic.

The study also found that for some instruments such as ICCAT there was a high level of compliance for many of the signatories that border the North Atlantic yet many tuna stocks are depleted or at risk of collapsing. Further investigation found that a number of countries outside the North Atlantic fish in international waters without regard for the regional instrument and its provisions. These non-signing countries are no doubt contributing to the problem of declining stocks since often their catches exceed the quotas set for sustainable exploitation and often their catches go unreported. Japan has estimated that fish catches by non-members exceed by 80% the catches of ICCAT members [24].

The political will to agree to cut quotas so that fish stocks can either be sustained or rebuilt, is often lacking in some of the instruments. The politicians who make such decisions do so at the risk of alienating their constituency and shortening their political careers since these decisions often result in unemployment within the local fisheries sector. Yet, in some fishery sectors, the fishermen themselves are concerned and calling for measures to be introduced to rebuild fish stocks. The CFP is a clear example of where political will is lacking despite warnings from both researchers and local fishermen that many stocks are either depleted or overfished [20]. Other reports indicate that States are reluctant to reduce their quota and therefore their share of the resource, despite calls by ICES and conservation groups to do so [26,27]. Considerable research and debate amongst managers occurs before the final decision is made. The consistent disregard of conservation advice, combined with limited enforcement of the policy, makes the CFP largely useless [22]. The Common Fisheries Policy is scheduled for review in 2002 and this presents an opportune time for conservation groups to lobby politicians for more realistic quotas and, in some cases, moratoriums to be set for the survival of many fish stocks in the North Atlantic.

The European Union generally displays a disregard for the international instruments of fisheries conservation and management. The Maltese accession to the Fish Stocks Agreement will bring that Agreement into force on 11 December 2001 with the European Union as a glaring omission in the list of States to comply with that instrument. In fact, the Maltese accession to the Fish Stocks Agreement provides in Clause 13:

"Note is taken of the statement by the European Community made at the time of signature of the Agreement regarding the fact that its Member States have transferred competence to it with regard to certain aspects of the Agreement. In view of Malta’s application to join the European Community, it is understood that this will also become applicable to Malta on membership.

Furthermore, the Government of Malta would like to state that should Malta accede to the European Union, it reserves the right to submit a further Declaration in line with future declarations by the European Union."

Earlier ratifications of the Fish Stocks Agreement by Italy and Luxembourg were in fact later withdrawn in order for those States to comply with the complete EU block ratification as described in EU Resolution CE 414. The SAUP research has shown that individually, many European States have already internally satisfied the requirements of the Fish Stocks Agreement—particularly Italy, Luxembourg, Netherlands, Germany, Sweden, United Kingdom and Ireland. However, problems appear to still exist with Spain, France and Portugal. Often these countries scored low because they failed to provide the necessary information needed for management, rather than because they have exceeded the set quotas. This may be due to internal political and institutional structures.

Apart from a lack of compliance with instruments for fisheries governance, a lack of enforcement of the provisions of instruments is often cited as a factor for the decline of stock [28]. VMS combined with logbooks and observers can address this problem but the installation and operation of these systems requires substantial ongoing funding. Where they are in place, (such as the NEAFC) and State compliance is high, it is still the case that stocks are not necessarily healthy. This leads to the question of whether or not appropriate quotas have been set by decision-makers in the first place.

Some RFBs are well behind others in reporting and assessing levels of compliance. This is largely a result of several member States being problematic with the provision of timely and accurate reports. Here, NASCO represents an extreme case with poor public reporting on management activities and a secretariat reluctant to provide assessment information. The consensus among scientists indicates that salmon stocks throughout the North Atlantic are at critically low levels. However, it is impossible to assess if the management measures taken under this instrument, or the level of compliance with such measures, have contributed to these critically low stock levels.
6. Conclusion

The 17 States that surround the North Atlantic study region are developed States with significantly healthier economies than States in other global regions. As such, they could be expected to have high compliance levels with global, regional and sub-regional instruments for fisheries management and conservation. Apart from the poor example provided by the EU with the UN Fish Stocks Agreement and the Compliance Agreement, North Atlantic State compliance is generally good. However, good instrument compliance does not necessarily equate with effective fisheries management. This is evidenced by the fact of severe decline in North Atlantic fish stocks. A recent ICES Advisory Committee study indicated that 27 of 29 high trophic level fish stocks (cod, hake, saithe, Greenland halibut, haddock, anglerfish, whiting and redfish) were being fished outside of their safe biological limits [29]. ICCAT’s recent assessment of Western Atlantic bluefin tuna indicated that the stock is overfished, and their assessment of Eastern Atlantic bluefin tuna also indicated a strong decline in number and biomass of spawning stock [30].

A second conclusion of the study is that instrument compliance is often seen as satisfying the public face of international law, but once a State has publicly complied with the law, enforcement of the new fisheries management regime is given a low priority. To some extent this may be due to weak enforcement provisions in many fisheries instruments. The new UN Fish Stocks Agreement has stronger enforcement capabilities than previous international instruments, and it is to be hoped that this particular problem is commencing an era of redress.

The final conclusion of the paper is that State policy makers and enforcers must cease politicizing fisheries management, and begin to make the hard decisions with regard to the realistic and urgent reduction of fishery quotas, and by extension, fishing effort. The current trend of global and regional cooperation in the management of marine capture fisheries is wasted if State policy makers can only agree to cooperate with over exploiting quotas. With the recent revelation by Watson and Pauly [11] that marine capture fisheries globally are in fact declining and not stable as previously thought, politicians must act now to reverse this trend or soon there will be no marine resources left to negotiate.

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