

International Max Planck Research School for Maritime Affairs
at the University of Hamburg

Solène Guggisberg

The Use of CITES for Commercially- exploited Fish Species

A Solution to Overexploitation and Illegal,
Unreported and Unregulated Fishing?



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The Use of CITES for Commercially-exploited Fish Species

A Solution to Overexploitation and Illegal,
Unreported and Unregulated Fishing?

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International Court of Justice
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The Hague
The Netherlands

The views and opinions expressed in this book are those of the author and do not necessarily reflect the views of any former or current employer.

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To get started with the serious part now, a Babylonian proverb has it that the gods do not deduct from a (wo)man’s allotted span the hours spent fishing; I do sincerely hope that they extend such generosity to the years spent writing a thesis about this activity!

Abbreviations

AB	Appellate Body (of the World Trade Organization)
CCAMLR	Commission on the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CCRF	Code of Conduct for Responsible Fisheries
CIL	Customary International Law
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CDS	Catch Documentation Scheme
CLCS	Commission on the Limits of the Continental Shelf
CMMs	Conservation and Management Measures
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COFI	Committee on Fisheries
CoP	Conference of the Parties
DSB	Dispute Settlement Body (of the World Trade Organization)
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organization
GATT	General Agreement on Tariffs and Trade
GFCM	General Fisheries Commission for the Mediterranean
IFS	Introduction from the Sea
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
ICRW	International Convention for the Regulation of Whaling
ILA	International Law Association
ILC	International Law Commission

ILC Draft articles of 2011	ILC draft articles on the responsibility of international organizations adopted in 2011
IMO	International Maritime Organization
IPOA-Sharks	International Plan of Action for the Conservation and Management of Sharks
IPOA-IUU	International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
IOTC	Indian Ocean Tuna Commission
ITLOS	International Tribunal for the Law of the Sea
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unreported and Unregulated
IWC	International Whaling Commission
MEA	Multilateral Environmental Agreement
MoC	Memorandum of Cooperation
MoU	Memorandum of Understanding
MSY	Maximum Sustainable Yield
NAFO	Northwest Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammal Commission
NASCO	North Atlantic Salmon Conservation Organization
NDF	Non-Detriment Finding
NEAFC	North East Atlantic Fisheries Commission
NGO	Non-Governmental Organization
Nm	Nautical miles
PCIJ	Permanent Court of International Justice
RFMO	Regional Fisheries Management Organization
SCRS	Standing Committee on Research and Statistics (of ICCAT)
SEAFO	South East Atlantic Fisheries Organisation
SIOFA	South Indian Ocean Fisheries Agreement
SOFIA	State of World Fisheries and Aquaculture
SRFC	Sub-Regional Fisheries Commission
TACs	Total Allowable Catches
TDS	Trade Documentation Scheme
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations 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
UNGA	United Nations General Assembly
UNODC	United Nations Office on Drugs and Crime
USA	United States of America

VCLT	Vienna Convention on the Law of Treaties
WCPFC	Western and Central Pacific Fisheries Commission
WTO	World Trade Organization
WWF	World Wild Fund for Nature

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Chapter 1

Introduction

“[T]he oceans of the world continue to suffer from the survival of the philosophy of the commons. Maritime nations still respond automatically to the shibboleth of the ‘freedom of the seas.’ Professing to believe in the ‘inexhaustible resources of the oceans,’ they bring species after species of fish and whales closer to extinction.”

(G. Hardin, ‘The Tragedy of the Commons’ (1968) 3859 Science 1243, 1245)

The current situation of many commercially-exploited fish species is worrying with nearly 30 % of all stocks around the globe qualifying as overfished.¹ In particular, the biomass of big predatory species, such as tunas, is severely reduced. As for collapsed stocks, for instance the cod in the Northwest Atlantic, they will need several decades to recover from overexploitation.² Overfishing, caused by excessive—and yet often disregarded—quotas, driven by fleet overcapacity and aggravated by illegal, unreported and unregulated (IUU) fishing, dangerously depletes stocks and threatens to drive some species to extinction. The resource management regimes in charge have consequently been widely criticized; the institutions involved, their interactions and balance sheets are questioned, but with no easy one-size-fits-all solution in sight.

The current fishing crisis is a serious challenge on the social, economic and of course ecological levels, particularly since “nearly two-thirds of humanity inhabit coastal areas and depend on coastal and marine environments for their livelihoods.”³ The fisheries and aquaculture sector employed, in 2012, more than 58 million people directly and several hundred millions if ancillary (post-harvest) jobs and dependents are counted.⁴ A billion people’s protein intake mainly comes

¹ FAO, ‘The State of the World Fisheries and Aquaculture’ (Rome 2012) 11; FAO, ‘The State of the World Fisheries and Aquaculture’ (Rome 2014) 7.

² On the cod disaster, see C. Clover, *The end of the line* (Ebury Press 2005) chapter 8 ‘After the gold rush’.

³ B. K. Sovacool, ‘A Game of Cat and Fish: How to Restore the Balance in Sustainable Fisheries Management’ (2009) 40 *Ocean Development and International Law* 97, 98.

⁴ In 2008, 44.9 million people’s livelihood directly depended upon fishing and 180 million people did so if the secondary – post-harvest – jobs are counted (FAO, ‘The State of the World Fisheries

from fish⁵, which represents more than 15 % of the total animal protein consumed in the world.⁶ Also, “the estimated annual landed value of fish globally is around USD 90 billion”,⁷ that of fish and fishery products exports nearly reached USD 130 billion in 2011, making it “[f]or developing countries [...] by far the most valuable of agricultural commodities [traded internationally]”.⁸ As for the ecological impact of bad management leading to stocks’ depletion, the disappearance of one—or more—of an ecosystem’s constituent parts has obvious consequences on the whole trophic chain and even on the physical components’ equilibrium.⁹

The fast-growing industry of aquaculture might appear to be the solution to the current fishing crisis. Undeniably, aquaculture is promising, but it also creates problems in relation to the sustainable management of wild fish stocks. This is particularly true if it has a farm-ranching component based on the fattening, in a controlled environment, of wild-caught juveniles. Nearly half of the fish products consumed nowadays comes from aquaculture sources.¹⁰ It is hence impossible to discuss fisheries issues without looking at the effects of aquaculture on wild capture and at the implications of general conservation measures on such practices.

and Aquaculture’ (Rome 2010) 6, 26). In 2010, 54.8 million people were engaged directly in fish production while it was estimated that the livelihoods of 660 to 820 million people depended upon it indirectly (FAO, ‘The State of the World Fisheries and Aquaculture 2012’ (n 1) 10, 41). In 2012, 58.3 million people were engaged directly in capture fisheries and aquaculture and 10 to 12 percent of the world’s population depended on those sectors for their livelihood (FAO, ‘The State of the World Fisheries and Aquaculture 2014’ (n 1) 27, 31–32).

⁵T. Bostock and S. Walmsley, ‘Enough to Eat? Fisheries and Food Security’ in R. Bourne and M. Collins (eds), *From Hook to Plate: The State of Marine Fisheries: A Commonwealth Perspective* (2009) 105.

⁶FAO, ‘The State of the World Fisheries and Aquaculture 2012’ (n 1) 5; FAO, ‘The State of the World Fisheries and Aquaculture 2014’ (n 1) 66, 105.

⁷World Ocean Review, *Living with the oceans* (Maribus, Future Ocean 2010) 120.

⁸Bostock and Walmsley (n 5) 107; FAO, ‘The State of the World Fisheries and Aquaculture 2014’ (n 1) 7.

⁹N. Matz, *Wege zur Koordinierung völkerrechtlicher Verträge: Völkervertragsrechtliche und institutionelle Ansätze* (Springer 2005) 136. A well-known example is that of sea otters (see infra Chapter 4 A. II. 2.). Depletion can also lead to changes in the ecosystem balance (C. Mullon, P. Fréon and P. Curry ‘The dynamics of collapse in world fisheries’ (2006) 6 *Fish and Fisheries* 111, 112; J. B. C. Jackson and others, ‘Historical overfishing and the recent collapse of coastal ecosystems’ (2001) 293 *Science* 629; WWF, ‘On the Brink – Mediterranean Bluefin Tuna – The Consequences of Collapse’ <http://assets.panda.org/downloads/onthebrinktunacollapse.pdf> accessed 4 July 2015, 3–4). The heavily fished seas also become mostly populated by smaller fishes, jellyfish and microbes (K. M. Gjerde, ‘High Seas Fisheries Governance: Prospects and Challenges in the 21st Century’ in D. Vidas and P. J. Schei (eds), *The World Ocean in Globalisation: Climate Change, Sustainable Fisheries, Biodiversity, Shipping, Regional Issues* (Martinus Nijhoff Publishers 2011) 224; P. A. Larkin, ‘Concepts and issues in marine ecosystem management’ (1996) 6 *Reviews of Fish Biology and Fisheries* 139, 152).

¹⁰Nearly 46 % in 2008 as reported in FAO, ‘The State of the World Fisheries and Aquaculture 2010’ (n 4) 3, 18; 47 % in 2010 as reported in FAO, ‘The State of the World Fisheries and Aquaculture 2012’ (n 1) 26. Percentage reviewed down to 42.2 % for 2012 (FAO, ‘The State of the World Fisheries and Aquaculture 2014’ (n 1) 19).

The purpose of the present study is to consider possible ways to attain sustainable and legal fishing, thus avoiding further depletion of stocks or even extinction of species. The adequacy of using the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for commercially-exploited fish species will be assessed and the cooperation between relevant institutions examined. In particular, the recent partnership between the Food and Agriculture Organization (FAO) and CITES will be analyzed, as will be the role of regional fisheries management organizations (RFMOs) in relation to a listing of fish species under CITES.

The organizations studied here, the FAO, RFMOs and CITES, adopt different approaches to the protection of marine species. A regime focusing on conservation is indeed proposed by CITES while rather exploitation-oriented regimes are based on the FAO for global principles and on RFMOs for the practical management of resources. RFMOs are usually the entities with primary responsibility for the management of stocks and they attempt—with variable results—to implement, at the regional level, the goals of optimum but sustainable utilization of fisheries promoted by the FAO.

In the current context where some fish species are depleted and international trade is a major factor in the market for fish products,¹¹ CITES, as a treaty regime regulating trade in endangered species, can be expected to play a beneficial role. Indeed, using the CITES structure to implement the FAO's main goal of sustainable fisheries as well as to provide an alternative or additional tool for fisheries matters when regional management proves inadequate is an attractive option. The same can be said of taking advantage of the RFMOs' and FAO's expertise to provide CITES with the best available scientific data and necessary technical information.

While a partnership between CITES and the FAO was undertaken already at the end of the 1990s, although informally at first, some concerns have been expressed about CITES' suitability regarding fisheries management. Highlighted as problematic were its lack of expertise in the marine field, its allegedly preservationist tendencies and the perceived threat it poses to RFMOs' mandates. The existence of a substantive overlap regarding the sustainable management of commercially-exploited and endangered fish species also appeared to be a major issue in the decision not to afford protection to certain fish species under CITES. However, such overlap does not necessarily mean that the institutions are or should be in confrontation. Cooperation has indeed the potential, under certain circumstances, to improve the situation and, more generally, is a practical way to face fragmentation of international law.

Two main concrete questions underlie this research: the first refers to whether CITES can and should be used for commercially-exploited fish species and the other examines whether the existing institutional cooperation is efficient. In addition to the practical contribution made by clarifying the value of using CITES and recommending ways to improve the system, this particular case-study provides an

¹¹ Sovacool (n 3) 98.

interesting lens to approach wider international law issues. Indeed, finding ways to achieve effective governance of transboundary or global natural resources is central for the peaceful use of oceans and land. Furthermore, the role of science in advising decision-makers is a sensitive issue which deserves scrutiny and is similar in many regimes. Finally, the complex problem of fragmentation of international law is acute in various fields of environmental law, as in all rapidly developing areas of international regulations. This has been recognized in 2012 in *The Future We Want*, when the heads of states and other representatives declared: “[w]e encourage parties to MEAs [i.e. multilateral environmental agreements] to consider further measures, in these and other clusters, as appropriate, to promote policy coherence at all relevant levels, improve efficiency, reduce unnecessary overlap and duplication, and enhance coordination and cooperation among MEAs”.¹² Hence, looking at successes—and failures—in regimes’ cooperation and analyzing the causes and risks that fragmentation gives rise to are aspects of the present research that are transferrable to most legal regimes in need of increased coordination and coherency.

In order to determine ways to improve the conservation and management of fish stocks, it is important to start by identifying the problems which stocks of commercially-exploited fish species are facing. The overview chapter introduces the issue of stock depletion through the most recent statistics available, before briefly describing the causes of such problem and the impact of aquaculture on the general picture (Chapter 2: Fishing Crisis and Aquaculture). In the following section, the treaties and institutions dealing with these issues are presented (Chapter 3: Global and Regional Legal Regimes Dealing with Commercially-exploited Marine Species). Fragmentation, lack of political will, inadequate measures, poor implementation and enforcement are a few of the numerous institutional and structural challenges which permit and/or cause overfishing as well as IUU fishing; these issues ought to be examined in parallel with the characteristics of what would represent or could facilitate appropriate governance of fisheries (Chapter 4: Structural and Governance Issues).

In the fifth section of this research, the legality, adequacy and expected efficacy of the protection of commercially-exploited fish species under CITES are discussed (Chapter 5: Protection of Commercially-exploited Fish Species Under CITES). The cooperation of CITES with other institutions in the listing of commercially-exploited fish species is the topic of the following chapter: the several situations in which partnerships exist and/or are needed are presented, their frameworks, strengths and weaknesses analyzed and compared with some of CITES’ other partnerships (Chapter 6: CITES Cooperation with Other Institutions in Relation to Commercially-exploited Fish Species).

Finally, a concluding part addresses the desirability of using CITES for commercially-exploited fish species under the current partnerships. It also provides

¹² *The Future We Want* – endorsed in UNGA Resolution A/RES/66/288 27 July 2012 (Document adopted at Rio + 20) §89.

some recommendations as to the conditions under which CITES should be used for such species as well as to desirable changes both in the regime and in the collaborations (Chapters 7 and 8: Desirability of Using CITES and Recommendations).

The terminology ‘commercially-exploited aquatic species’ stems from the CITES-related activities of the FAO, but has not been formally defined. The gentlemen and ladies’ agreement within CITES is to use the FAO understanding of the words, namely as a reference to all marine and freshwater fish and invertebrate species—mammals, birds, reptiles and plants are consequently excluded. This is wider than the ambit of the present research, which concentrates on marine species and tends to focus on fish (sharks included), with invertebrate used only as illustration of implementation aspects. The protection of marine mammals serves for comparison purposes. Hence the preferred wording will be ‘commercially-exploited fish species’ when referring to fish species only and ‘commercially-exploited marine species’ when referring to both marine fishes and mammals.

Part I
Fishing Crisis, Regulations and
Structural Issues

Chapter 2

Fishing Crisis and Aquaculture

Many stocks of commercially-exploited fishes are overexploited with collapse as a possible consequence, especially in the case of particularly vulnerable species.¹ This is the overarching problem of today's fisheries. While the validity of the most alarming reports is questioned by some, the large majority of scientists agree that the current level of exploitation of many fisheries is not sustainable in the long-term² (A).

The problem of fish species' depletion is mostly caused by overfishing, IUU fishing and incidental by-catch.³ However, other factors such as habitat alteration⁴ or climatic variations have an important effect on the ability of stocks to replenish and thus on the level at which sustainable fishing can be set (B).

¹On more vulnerable species, see W. W. L. Cheung and others, 'Intrinsic vulnerability in the global fish catch' (2007) 333 *Marine Ecology Progress Series* 1; J. A. Hutchings and J. D. Reynolds, 'Marine fish population collapses: consequences for recovery and extinction risk' (2004) 54 *BioScience* 297. Multiple examples of species extinction in marine species are provided in N. K. Dulvy, Y. Sadovy and J. D. Reynolds, 'Extinction vulnerability in marine populations' (2003) 4 *Fish and Fisheries* 25, 28–35.

²V. Christensen and others, 'Hundred-year decline of North Atlantic predatory fishes' (2003) 4 *Fish and Fisheries* 1; S. M. Garcia and C. Newton, 'Current situation, trends, and prospects in world capture fisheries' in E. K. Pikitch, D. D. Huppert and M. P. Sissenwine (eds), *Global Trends: Fisheries Management: Proceedings from the symposium held in Seattle, Washington, USA, June 14–16, 1994* (American Fisheries Society 1997); R. Hilborn and others, 'State of World Fisheries' (2003) 28 *Annual Review of Environment and Resources* 359; D. Pauly and others, 'Towards sustainability in world fisheries' (2002) 418 *Nature* 689; FAO, 'The State of the World Fisheries and Aquaculture' (Rome 2010) 8.

³These are also the main factors contributing to collapse of stocks (D. Freestone, 'Problems of High Seas Governance' in D. Vidas and P. J. Schei (eds), *The World Ocean in Globalisation: Climate Change, Sustainable Fisheries, Biodiversity, Shipping, Regional Issues* (Martinus Nijhoff Publishers 2011) 110; C. Mullon, P. Fréon and P. Curry 'The dynamics of collapse in world fisheries' (2006) 6 *Fish and Fisheries* 111, 119; Pauly and others (n 2)).

⁴N. K. Dulvy and others, 'Methods of assessing extinction risk in marine fishes' (2004) 4 *Fish and Fisheries* 255, 256.

Aquaculture and farm-ranching are presented by some of their supporters as the solutions to the fishing crisis. These practices have clearly some potential as ersatz to wild-capture, but they also bring problems of their own, particularly with regard to catching juveniles as spawning stock and to the use of wild-caught fish as food for predatory aquaculture stocks (C).

A. State of Wild Stocks

I. Decreasing Stocks

1. Fishes: Statistics

Without fishing pressure, stocks benefit from a biological equilibrium level, as the number of juveniles of one generation recruited in the mature stock and the biomass growth balance the losses both in number and biomass caused by natural mortality.

Fishing represents an additional withdrawal factor, but it is still possible to keep stable stocks in the long term if the levels harvested are below or at the maximum sustainable yield (MSY).⁵ Indeed, after a sharp initial decrease, a stock that is exploited for the first time re-equilibrates at a new level, with fewer old individuals and more young ones which, all things being equal, have a faster growth rate.⁶ A cycle of faster growth of stocks is hence put in place by removing the older fish which grow only marginally. In some general models, it seems accepted that a decline of 50 % of the pre-exploited stock quantities represents a sustainable utilization level, therefore a desirable target.⁷

Nowadays, the amount of fish caught is in many cases over that equilibrium point “where withdrawals through catch are exactly replaced by natural additions”.⁸ Statistical data such as the FAO State of World Fisheries and Aquaculture (SOFIA) reports non-sustainable fishing practices. According to the most recent edition, nearly 30 % of fish stocks are overexploited. Furthermore, 57 % of stocks are fully exploited and should consequently not be envisioned for expansion. This leaves only about 13 % of worldwide stocks which could produce more than their current level of exploitation, against 40 % in the mid-1970s.⁹ In contrast, the values

⁵ International Encyclopedia of the Social Sciences, ‘Overfishing’ (2008) <http://www.encyclopedia.com/doc/1G2-3045301846.html> accessed 4 July 2015.

⁶ D. R. Rothwell and T. Stephens, *The International Law of the Sea* (Hart Publishing 2010) 295.

⁷ K. L. Cochrane, ‘A fishery manager’s guidebook. Management measures and their application’ FAO Fisheries Technical Paper 424 (Rome 2002) 9.

⁸ B. K. Sovacool, ‘A Game of Cat and Fish: How to Restore the Balance in Sustainable Fisheries Management’ (2009) 40 *Ocean Development and International Law* 97, 106.

⁹ FAO, ‘The State of the World Fisheries and Aquaculture’ (Rome 2012) 11–12; FAO, ‘The State of the World Fisheries and Aquaculture’ (Rome 2014) 7.