

Faculty of Law

The implementation of the ecosystem-based approach to fisheries management in the Common Fisheries Policy

A legal comparison with Norway's implementation of the Ecosystem Approach

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1	Introduction	1
1.1	Background.....	1
1.2	Purpose and Research Question.....	3
1.3	Methodology.....	5
1.4	Scope delimitation.....	7
1.5	Structure	8
2	Implementation of the EA in the EU	8
2.1	Background.....	8
2.1.1	1967-1983	9
2.1.2	Birth of the CFP (1983-1992).....	11
2.1.3	First Reform (1992-2002).....	13
2.1.4	Second Reform (2002-2013)	15
2.1.4.1	International Development	15
2.1.4.2	Effects on the 2002 CFP.....	19
2.2	Legal Analysis of the EAFM in the 2013 CFP.....	21
2.2.1	TAC-Setting.....	21
2.2.1.1	Conflict of interests in the purpose of TAC.....	22
2.2.1.2	Insufficient design of the Precautionary Approach.....	23
2.2.1.3	Decision-making in the TAC setting.....	26
2.2.2	Bycatch Management	31
2.2.2.1	Preventative Management through real-time closures	31
2.2.2.2	After Landing – The Landing obligation.....	36
	Background.....	36

	Choke species and Quota swapping	38
	Flexibility Mechanisms	41
3	Norway	44
3.1	Background	44
3.1.1	National circumstances for fisheries management	44
3.1.2	Design of the MRA	47
3.2	Quota system	48
3.2.1	Legal design	48
3.2.2	Decision-making	54
3.3	Bycatch management	56
3.3.1	Preventative Measures	56
3.3.2	Landing obligation	59
4	Discussion	60
5	Conclusion	65
	List of references	1

Abstract

Since the establishment of the European Economic Community, the Common Fisheries Policy (CFP) built the legal basis for economic exploitation of fish stocks under the guise of "conservation policy". Since the scientific certainty of an approaching collapse of fish stocks exists, the European Union has been trying to integrate more ecological needs with the help of an ecosystem-based approach to fisheries management (EAFM). However, the EAFM concept fails due to historical circumstances such as the principle of relative stability, outdated stakeholder involvement and weak legal frameworks that would allow an effective implementation. Ecosystem-based management is not doomed to fail in advance, as the implementation in Norway shows. Norway is a role model in the field of sustainable fisheries management and can look back on a comparatively long tradition of appropriate conservation measures. Pragmatic approaches, extensive stakeholder involvement and resilient environmental law principles enable such success and are therefore considered the "measure of all things". The aim of this thesis is to find out how a more adaptive legal implementation of EAFM in the CFP can be enabled through a legal comparison between the two legal regimes.

Abbreviations

AC	Advisory Council
CBD	Convention on Biological Diversity
CBD-COP	Convention on Biological Diversity – Conference of the Parties
CFP	Common Fisheries Policy
EA	Ecosystem Approach
EAFM	Ecosystem-based approach to fisheries management
EC	European Commission
EEC	European Economic Community
EU	European Union
FAO	Food and Agricultural Organization
ICES	International Council for the Exploration of the Sea
IMR	Institute of Marine Research
JRC	Joint Research Center
LO	Landing Obligation
MRA	Marine Resources Act
MS	Member State
MSY	Maximum Sustainable Yield
PA	Precautionary Approach
PP	Precautionary Principle
QS	Quota Swapping
RCT	Real-time closure
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total Allowable Catch
TFEU	Treaty on the Functioning of the European Union
UNFSA	United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks

1 Introduction

1.1 Background

Since the beginning of the Common Fisheries Policy (CFP) in the 1970s, fish stocks have been perceived as a generally inexhaustible "common pool resource".¹ Since then, most legislation has focused on satisfying economic rather than ecological interests², so that, quotas have been systematically set on unsustainable levels, subsidising overcapacity, and adopting inappropriate conservation measures (CM). All Measures under the CFP are considered as CM because the overarching goal of the CFP is to promote conservation policies.³ These misconceptions marked the beginning of a criticism of European fisheries policy that has been going on for years due to ever since declining catch numbers and simultaneously rising costs. The reason for the lack of catches and the main objects of criticism are the deteriorating maritime ecosystems and the declining fish stocks in European waters ("Union waters")⁴ due to various disturbance factors such as climate change, pollution, and unsustainable fishing practices such as overcapacity, overfishing and the absence or non-observance of scientific advice. However, the crisis of European fisheries are not exclusively due to a failure of the European Union (EU), but rather to the complexity of the underlying and competing interests, as economic, ecological and social conditions must be equally taken into account in the Common Fisheries Policy (CFP) while drafting CM.⁵ The year 2012 marked the lowest year in terms of catches and signalled that a serious shift towards more sustainable fishery practices and reduced pressure upon the marine ecosystems is needed if the sector wants to survive.⁶ In order to overcome these problems, the "Ecosystem-based approach to fisheries management" (EAFM) was introduced 2002 in the CFP, but only defined in the 2013 CFP as

¹ Jill Wakefield, *Reforming the Common Fisheries Policy* (Edward Elgar 2016) XX.

² Ibid.

³ Art. 3 (1) (d) The Treaty on the Functioning of the European Union OJ L C 115/47 (TFEU).

⁴ Art. 4 (1) 1 Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 OJ L 354/22 (CFP).

⁵ Art. 2 (1) CFP.

⁶ 'Fishery Statistics' (*eurostat statistics explained*, 10 October 2021) <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Fishery_statistics#Aquaculture_statistics> accessed 23 April 2022.

“an integrated approach to managing fisheries within ecologically meaningful boundaries which seeks to manage the use of natural resources, taking account of fishing and other human activities, while preserving both the biological wealth and the biological processes necessary to safeguard the composition, structure and functioning of the habitats of the ecosystem affected, by taking into account the knowledge and uncertainties regarding biotic, abiotic and human components of ecosystems”.⁷

Due to the EU Commission the concept of EAFM is based on the Ecosystem Approach (EA) and represents an integrated management approach that seeks to reconcile ecological (ecological pillar) and social-economic (social pillar) considerations by considering cumulative effects in decision-making.⁸ The purpose of EAFM is to manage the activity concerned "within ecologically meaningful boundaries" so that decisions are made on a case-by-case basis with the aim of sustainable resource use.⁹ EAFM is applied across sectors (horizontal dimension) and sector-specific (vertical dimension).¹⁰ The horizontal dimension aims to reconcile the objectives of different sectors and legislations through integrated management.¹¹ In the vertical dimension, the activity concerned must be managed within the legislation on the basis of the EAFM principles.¹² Accordingly, the purpose of the EA is to provide ecosystem services, such as food supply as a providing service or species habitat and genetic diversity as supporting services.¹³

The horizontal dimension of the EA in the EU is formed by various legislations such as inter alia Marine Strategy Framework Directive, the Water Framework Directive, and the Marine

⁷ See Art. 4 (9) CFP.

⁸ European Commission Communication, COM (2008) 187 final, ‘The role of the CFP in implementing an ecosystem approach to marine management’, p. 7.

⁹ Art. 4 (9) CFP.

¹⁰ G Bianchi and Hein Rune Skjoldal, ‘The Bergen Conference on Implementing the Ecosystem Approach to Fisheries (Bergen, Norway, 26–28 September 2006): Summary and Main Conclusions’, *The ecosystem approach to fisheries* (CABI 2009) 15.

¹¹ *ibid.*

¹² *ibid.*

¹³ ‘Supporting Services’ (*Food and Agriculture Organization of the United Nations*) <<http://www.fao.org/ecosystem-services-biodiversity/background/supporting-services/en/>> accessed 23 April 2022.

Spatial Planning Directive, which in relation to maritime management were reflected by the Integrated Marine Policy and nowadays by the Blue Growth Agenda.¹⁴

The vertical dimension within the CFP is reflected in the individual CMs in that the basis for decision-making is to consider knowledge and uncertainties and cumulative effects in decision-making to minimise ecosystem impacts. Key measures are the adoption of the Total Allowable Catch (TAC) based on concepts such as Maximum Sustainable Yield (MSY), and effective bycatch management.

In contrast to EA, which is defined by international law, the term “Ecosystem-based management” is not defined and used when there is management of human activities in the area of resource use, such as fisheries. EA(F)M fully incorporates the meaning of EA and, through the word "management", emphasises human components such as the acceptance of the use of natural resources by human activities, the involvement of stakeholders in public decision-making, the adaptive capacity of management approaches and the possibility of adaptive management.¹⁵ In essence, both concepts have the sustainable use of natural resources through the integration of ecosystem considerations and human activities as their core objective. Thus, in the following work, both concepts are considered equivalent in terms of substantive law, as their legal design determines the legally binding nature and inclusion of ecosystem interests in individual cases.¹⁶

1.2 Purpose and Research Question

Due the failed promotion of a conservation policy for 50 years ecosystems considerations are to be taken more into account through the implementation of the EAFM. The need of a suitable management design which is able to deal with "the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning" was

¹⁴ COM(2021) 240 final Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of Regions on a new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future.

¹⁵ Sara Söderström and others, “‘Environmental Governance’ and ‘Ecosystem Management’: Avenues for Synergies between Two Approaches’ (2016) 17 *Interdisciplinary Environmental Review* 1, 5.

¹⁶ *ibid.*

already acknowledged by the founder of the EA.¹⁷ Shortly after, the Food and Agricultural Organization (FAO) emphasised the need of an adaptive and precautionary law-making and implementation of the EAFM in order to achieve its objectives.¹⁸ In relation to EAFM, the Precautionary Principle or Precautionary Approach and resilient law-making are the cornerstones for adopting appropriate management measures for the constantly changing availability of marine living resources. The CFP builds the legal basis for CM for fishing activities, but these have failed in the past also due to missing adaptive management. Therefore, improved implementation of the EAFM in the CFP through legal elements of adaptive management is needed to prevent fisheries mismanagement and strengthen marine ecosystems to ensure the provision of ecosystem services in the future.

Since the EA is not used exclusively implemented in the EUs Fisheries management, but also in Norwegian fisheries policy. Norway implements the EA within their environmental policies and the its implementation becomes subject of a legal comparison, as Norway operates an independent fisheries and environmental policy due to exclusion of these points in the Agreement on the European Economic Area.¹⁹ Like the EU, Norway has enacted the Marine Resources Act (MRA), which regulates the management of wild living marine resources, and the Nature Diversity Act as the environmental pillar for the management of national territorial waters. In comparison to the EU Norway implements the EA as a principle within their fisheries management resulting in more stringent implementation of international commitments and incorporation in the decision-making.

Therefore, in the context of a legal comparison, it is the aim of this thesis to find out to what extent the previous implementation of the EAFM in the CFP has failed, and whether

¹⁷ Fifth Meeting of the Conference of the Parties to the Convention on Biological Diversity, Ecosystem Approach, (Nairobi, Kenya, 15 - 26 May 2000), 4. (CBD/COP 5/5/VI).

¹⁸ FAO, The ecosystem approach to fisheries Issues, terminology, principles, institutional foundations, implementation and outlook, FAO Fisheries Technical Paper 443 No 4, Suppl. 2, ISSN 0429-9345 (2002), p.5 (FAO 2002, p.)

¹⁹ 'Climate Change and the Environment' (*Norgesportalen*) <<https://www.norway.no/en/missions/eu/values-priorities/climate-env/>> accessed 5 May 2022.

there are parallels/suggestions for an improved implementation through the Norwegian implementation in terms of strengthening adaptivity of the law to be able to promote conservation and sustainable use of fish stocks in an equitable way.

In this context “adaptivity” will be understood as law, which seeks to establish a close linkage between scientific knowledge of social-ecological systems and policy responses to their management in a constantly changing system with uncertain factors as inter alia scientific data and understanding of biological systems, economic and social risks, and the dynamic and complex social ecological systems.²⁰ This includes the application of EAFM in particular by the Precautionary Approach (PA) or Precautionary Principle (PP) and best available science, and best available technique, as these form the basis for decision-making at CM.

In the following “resilience” is understood as “law as a system needs to have capacity to adapt to changing social ecological circumstances in the systems it seeks to steer without losing its own core characteristics, such as coherence and due process”.²¹ In relation to the EAFM, legal resilience is assessed on the basis of characteristics such as legal certainty, transparent decision-making, the acceptance and involvement of stakeholders, and the application of the Good Governance Principles.²²

1.3 Methodology

In this paper the implementation of the EA(FM) in the EU and NOR is going to be compared regarding its legal design by paying special attention to adaptive and resilient elements. The comparison is going to cover a legal analysis of the Quota-setting and the topic of bycatch management because these are the central CM of both legislative bodies to promote ecosystem-based governance and the international legal basis for those measures are signed by both legal bodies.

²⁰ David Langlet and Rosemary Gail Rayfuse, *The Ecosystem Approach in Ocean Planning and Governance: Perspectives from Europe and Beyond*, vol 87 (Brill Nijhoff 2019) 22.

²¹ Ibid 20.; Brita Bohman, *Legal Design for Social-Ecological Resilience* (University Press 2021) 115.; JB Ruhl, ‘General Design Principles for Resilience and Adaptive Capacity in Legal Systems - with Applications to Climate Change Adaptation’ (2011) 89 North Carolina law review 1373, 1373.

²² Art. 4 CFP; FAO 2002, p. 39-40.

In the following comparative legal research will be understood as the “systematic exposition of rules, institutions, and procedures prevalent in one or more legal systems with a comparative evaluation after objective estimation of their similarities and differences and their implications.”²³ Since the EAFM/EA itself is not to be concretised in a measure, but is implemented and applied as a concept/principle in all phases of law-making, consequently not only the legal norms will be the subject of the comparison, but also the institutions and stakeholders involved. In addition, “comparison” will be understood as “the construction of relations of similarity and dissimilarity between different matters of fact”.²⁴ The comparison attempts to relate the elements to be compared and to draw conclusions regarding the research question.

The analysis is conducted by means of a micro-comparison.²⁵ This requires that the CMs of both legal systems are analysed to discuss the different legal elements and interpretations on the EAFM later on. A social dimension is excluded in this analysis as far as possible, because it is not possible to describe the full social dimension of fisheries management and value of fisheries in the EU with its 27 MS due to different cultural and historic backgrounds. Obviously, the social dimension of Norway differs to the European, because private and commercial fishing is anchored an important pillar of the national economy and deeply cultural rooted. Social aspects play an important role for the effective implementation of the EA(FM), but the legal analysis will rather focus on historic reasons due to the above-mentioned reasons. The historical dimension of both legal acts will be of crucial importance for the analysis, because the European and Norwegian fisheries management faced the same ecological and economic crisis as stock-collapses, overcapacity, over-subsidizing, but the responses based on the same international legal agreements differ.

It is the purpose of this comparison to develop a more critical understanding of the EU CFP in terms of failures of the EAFM and its importance to avert the upcoming sectoral crisis. Therefore, it's the purpose to elaborate the elements of the Norwegian implementation which are of

²³ P Ishwara Bhat, ‘COMPARATIVE METHOD OF LEGAL RESEARCH: NATURE, PROCESS AND POTENTIALITY’ (2015) 57 *Journal of the Indian Law Institute* 147, 149.

²⁴ Nils Jansen, ‘Comparative Law and Comparative Knowledge’, *The Oxford Handbook of Comparative Law* (1st edn, Oxford University Press 2006) 310.

²⁵ P Ishwara Bhat (n 23) 164–165.

importance for an effective implementation of the EAFM and to discuss whether these are suitable with EU-law. Norway Fisheries management is comparable, because in both jurisdictions the wild living resources are a common pool resource and scientific knowledge about the interactions of stocks and the ecosystems, as well as cumulative impacts is very low, with the greatest knowledge about commercially important stocks. Additionally, the environmental law is fragmented in both legal systems and therefore causes the horizontal and vertical implementation of EA(FM) with anchoring the CMs in long-term objectives and multi-annual plans. Due to the administrative structures in the decision-making process within the sector of fisheries management both systems are comparable because it is characterized by its requirements of international law like the inclusion of scientific bodies, science, and regional bodies. Nevertheless, due to size of the EU as an institution the decision-making process is more complex regarding the involved bodies.

Difficulties in the comparison arise from the fact that socio-cultural factors are difficult to assess in terms of their significance and scope, since, as will be shown in the following analysis, both systems are essentially dependent on compliance and collaboration with stakeholders in their design, and in this context the cultural approach to law and compliance with the law are also of essential importance.²⁶ A second limitation of the comparison results from the fact that not all Norwegian laws are available in English, so that a literal translation could have diminished the meaning of the laws. Due to the language barrier, the research on scientific contributions in fisheries management was limited to the English-language contributions.

1.4 Scope delimitation

As the vertical dimension of the EAFM is subject to this thesis, the legal analysis is only going to refer to the regulations within the CFP and relating to wild catches within European waters and Norwegian waters, because from this point of view the requirements for the implementation of the EA regarding aquaculture and the external dimension of European fisheries differ compared to the catches within EU waters. To allow for a holistic analysis of the EA(FM), it cannot be avoided to refer to other legal acts of relevance. However, this will only be the case insofar as there is a linkage to the relevant regulations of the CFP. The substantive

²⁶ *ibid* 168–169.

scope is not going to cover aspects of Regional Fisheries Management Organisations because the conservation measures within these only refer to local circumstances and can therefore only be used as examples.

1.5 Structure

The first part of the thesis will contain the legal analysis of the EU CFP. (2.1) This is divided into a consideration of the historical developments of the CFP to be able to develop a point of departure and create an understanding of the historically grown legal framework. The subsequent part covers a legal analysis of the TAC-setting and Bycatch management in the CFP (2.2). Both parts are going to be introduced with a short relevant background information about the provision itself, and subsequently the relevant legal problems within the legal design are analysed. The legal analysis of the bycatch management is going to be divided in a preventative part to avoid bycatch and the landing obligation itself. The correspondent analysis of the Norwegian implementation is going to be conducted in an identical manner, but only some relevant information about NOR are added to develop a better understanding of Norway's legal system. (3.) The legal analysis is followed by a discussion about the most relevant differences between both forms of implementation regarding its interpretation, effects and implications. (4.)

2 Implementation of the EA in the EU

2.1 Background

This chapter is going to highlight the most important historical developments in the European Fisheries Policy to gain an understanding about the historical failures relating to adaptive and resilient legal shortcomings and to create a “point of departure”. In the historical considerations, it must be borne in mind that the CFP has been significantly influenced by developments in international law, the enlargement of the European Community and the state of global fish stocks.²⁷

²⁷ Robin Churchill, *EEC fisheries law* (Nijhoff 1987) 3.

2.1.1 1967-1983

When the European Economic Community (EEC) was founded by the Treaty of Rome (1957), European fisheries were not regarded as a single economic factor but as part of "agriculture", and ever since fisheries are found in Art. 38-44 TFEU under the chapter "Agriculture and Fisheries". The legal basis of the first fisheries policy was the "Market Regulation"²⁸ and the "Structural Regulation"²⁹ and it constituted the basis for the further development of the CFP. The Structural Regulation aimed at "harmonious and balanced development"³⁰ by "promoting the rational development of the fishing industry"³¹. The term "rational" was not defined, but it is clear from Article 10 Structural Regulation that the focus was on "economic growth and social progress". This also established the equal access principle, which states that all EEC vessels have "equal conditions of access and use of the fishing grounds"³² in EEC waters. This principle remains unchanged today and is at the core of the CFP.

Art. 6 of the Structural Regulation stated that in the case of a "risk of overfishing", which was an undefined legal term at the time and the only reference to conservation aspects, the Council was empowered to adopt the "necessary conservation measures". This wording laid the foundation for the disagreements about the competences of conservation measures in Union waters.³³ In the legal dispute *Commission v. United Kingdom*, the CJEU judged that the EC and not Member States (MS) has the competence and that MS only have the competence concerning their territorial waters.³⁴ Consequently, there was no clear division of substantive jurisdiction over CM, resulting in regulatory gaps and unsustainable fisheries management. This problem was finally solved in 1981 by the European Court of Justice when it ruled that the

²⁸ Regulation (EEC) No 2142/70 of the Council of 20 October 1979 on the establishment of a common structural policy for the fishing industry OJ No L 236/5.

²⁹ Regulation (EEC) No 2141/70 of the Council of 20 October 1970 laying down a common structural policy for the fishing industry OJ No L 236/ 1 (Structural Regulation)

³⁰ Art. 1 Structural Regulation.

³¹ Art. 10 (1) Structural Regulation.

³² Art. 2 Structural Regulation.

³³ Churchill (n 27) 8–9.

³⁴ C-804/79 *Commission of the European Communities, Supported by the French Republic and Ireland (Interveners), v. United Kingdom of Great Britain and Northern Ireland* (1981), 1045.

European Commission (EC), and not the MS, has exclusive competence to issue CMs, which was consequently also stated in the TFEU's competence regulation.³⁵

After the first enlargement of the EEC in 1973, with Norway withdrawing from the negotiations through a national referendum³⁶, the European fleet and the area of European territorial waters increased. At the same time, the United Nations Convention Law of the Sea³⁷ (UNCLOS) negotiations began, in which a central concern was the expansion of the Exclusive Economic (EEZ) Zone from 12nm to 200nm from the baseline due to sinking catch numbers in the so far existing EEZs.³⁸ Since nowadays 95% of the global catches are caught within EEZs³⁹, the fear of the EEC was to be excluded from the fish-rich grounds that had previously been in the high seas and now threatened to fall into other territories, and consequently to increase fishing pressure on the already depleted fish stocks of the EU's own maritime waters.⁴⁰ Consequently, a the "Hague Resolution" (1976)⁴¹ was adopted to react to the extension of other countries EEZ's. with three relevant pillars.⁴²

The first pillar of this decision was to extend the EEZ to 200nm as of 1.1.1977, which gave the growing fleet more fishing grounds without being dependent on treaties with third countries as a strategical political decision. A second pillar of the "Hague Resolution" was the claim that the conservation management of Union waters should be undertaken by the EC and not the MS with a central focus on the allocation of quotas and access rights in the light of the equal access principle. During this time, it was already clear from scientific data that the EU fleet suffered from overcapacity and it was urgent to reduced it in size to prevent further over-fishing.⁴³ Moreover, it was not possible for the fleet to operate sustainably and economically,

³⁵ Ibid.

³⁶ Daniel Owen and Robin Churchill, *The EC Common Fisheries Policy* (University Press 2010) 10.

³⁷ United Nations Convention on the Law of the Sea (10 December 1982, in force 16 November 1994) 1833 UNTS 396 (UNCLOS).

³⁸ Churchill (n 27) 6.

³⁹ Agenda 21, 17.69.

⁴⁰ Owen and Churchill (n 36) 7.

⁴¹ Official Journal of European Communities, Information and Notices, C 138, Volume 24, 09 June 1981.

⁴² E.g. Iceland extended its EEZ in 1975 from 12nm to 200nm.

⁴³ Owen and Churchill (n 36) 8.

as the capacity of the available fish stocks did not allow it.⁴⁴ In the Norwegian Sea, for example, fish catches peaked at that time with around 4 million tonnes of fish per year.⁴⁵ In the mistaken belief of increasing yields year on year to achieve "economic growth", annual catches declined by half by the 2020 to around 2 million tonnes.⁴⁶ To prevent declining catches and maintain the economic viability of the fishery, the EU fleet was supported by the third pillar of the Hague Resolution, namely the subsidisation of the fleet, and laid the foundation for the problem of chronic overcapacity. During that time no attention was paid on CM, so that the fish stocks and ecosystems never fully recovered due to these developments and the catch number of these days have never been reached again in Union waters.

2.1.2 Birth of the CFP (1983-1992)

One year after the ratification of 1982 UNCLOS, the 1983 CFP⁴⁷ was adopted. The 1983 CFP regulation was a novelty, as it was for the first time that CMs were adopted through TACs and technical measures. The CFP had "the conservation of the biological resources of the sea and their balanced exploitation on a lasting basis and in appropriate economic and social conditions" as an objective for their fishing grounds in order to contribute to a greater stability of fishing activities.⁴⁸ All CM shall be formulated "in the light of available scientific data"⁴⁹ and may include protection zones, gear restriction, minimum sizes, or restriction on fishing efforts.⁵⁰ The central element of the CMs was the setting of TACs but the term was not defined. Nevertheless it can be understood as "the amount of fish that may be taken from a particular stock for the year".⁵¹ The TACs were distributed based on the principle of relative stability

⁴⁴ Ibid.

⁴⁵ ICES, 'ICES 2021 Greater North Sea Ecoregion Fisheries Overview - Data Output File' 2 <[https://www.ices.dk/sites/pub/Publication Reports/Forms/DispForm.aspx?ID=38406](https://www.ices.dk/sites/pub/Publication%20Reports/Forms/DispForm.aspx?ID=38406)> accessed 28 February 2022.

⁴⁶ Ibid.

⁴⁷ Regulation (EEC) No 170/83 of 25 January 1983 establishing a Community system for the conservation and management of fishery resources OJ No L 24/1 (1983 CFP).

⁴⁸ See Art. 1 1983 CFP; Recital (5) 1983 CFP.

⁴⁹ Art. 2 (1) 1983 CFP.

⁵⁰ Art. 2 (2) 1983 CFP.

⁵¹ Churchill (n 27) 112.

which allowed the MS exercise their sovereignty over its natural resources and its purpose was to protect vulnerable fishing communities.⁵² Ever since it is used as an argument to override scientific advice to enable higher individual quota.⁵³ Due to *Lado* the relative stability “is the system of allocation of fishing rights among Member States, through fixed percentages per Member State (so called “quota”) of the catch limitations established in the CFP.”⁵⁴ Subsequently the TAC are “automatically divided among Member States according to fixed percentages, corresponding to the relative stability keys.”⁵⁵ The TACs were based upon economic considerations, historical catches, loss of catches through the expansion of the 200nm EEZ and special considerations of coastal communities dependent on fishing.⁵⁶

TAC exists since then and its purpose is to “ensure that no more fish are taken from a stock than biologically justifiable”.⁵⁷ Although it was already considered among legal scholars to determine the TAC based on MSY or other reference points, it was not included in the 1983 CFP, so that it was easier to deviate from the TAC proposals for socio-economic reasons.⁵⁸ The TACs were adopted for over-exploited stocks in order to prevent short-term economic losses, as long-term benefits would only occur in an indefinite period of time.⁵⁹ TACs were only issued for the most economically important species and based on a single-species assessment and not necessarily for the species requiring conservation measures.⁶⁰ Additionally no considerations of cumulative effects or ecosystem effects were considered.⁶¹

⁵² See Art. 56 1 (a) UNCLOS.; Jill Wakefield, ‘The Common Fisheries Policy: An Exercise in Marine Exploitation’ (2017) 36 Yearbook of European law 496, 503.

⁵³ *ibid.*

⁵⁴ Ernesto Peñas Lado, *The Common Fisheries Policy: The Quest for Sustainability* (Wiley Blackwell 2016) 26.

⁵⁵ *Ibid.*

⁵⁶ Churchill (n 27) 115–116.

⁵⁷ *Ibid.*, p.112.

⁵⁸ *Ibid.*, p.112.

⁵⁹ Churchill (n 27) 114–115.

⁶⁰ Langlet and Rayfuse (n 20) 2.

⁶¹ Peñas Lado (n 54) 51.

Consequently, it would have been possible to make fisheries management adaptive already at that time through the application of the best scientific advice or precautionary measures if the economic recommendations had been taken first and the quotas had actually been adjusted to ecological capacities. However, as these were only non-binding recommendations, they were disregarded by discretionary decision and the strong competition between various scientist, politics and the competition within the fishing industry itself made it impossible to find sustainable compromises.⁶² These opposing interest laid the foundation for a since then existing hostile opposition between scientist and the industry in which the scientific advice were consequently disregarded.⁶³ In the CFP, the focus was on fishing entitlements and not on CM, so that, according to one study, TACs were set too high by an average of 33% for 68% of the fish stocks studied between 1987-2011.⁶⁴

In a review of the first decade of the TAC the International Council for the Exploration of the Sea (ICES) stated that the problem of low accuracy of catch forecast and the absence of scientific knowledge of cumulative effects of uncertain factors were not heard in the decision-making process and therefore stocks kept on deteriorating even though TACs were set. Furthermore, it stated that discards, misreporting, and under-reporting are the main reason for fish mortality and the failure of the TAC management.⁶⁵

2.1.3 First Reform (1992-2002)

The first reform of the CFP (1992 CFP⁶⁶) which repealed the 1983 CFP was influenced by the latest developments in international law. In 1987 the Brundtland Report⁶⁷ was issued defining

⁶² Niamh Nic Shuibhne and Laurence W Gormley, *From Single Market to Economic Union: Essays in Memory of John A. Usher* (1st ed., University Press 2012) 299–300.

⁶³ Ibid.

⁶⁴ Bethan C O’Leary and others, ‘Fisheries Mismanagement’ (2011) 62 *Marine pollution bulletin* 2642, 1042–1046.

⁶⁵ G Blais, ‘A DECADE OF FISHERIES RESOURCES MANAGEMENT BY TACS IN EUROPEAN COMMUNITI WATERS FROM 1983 TO 1992’ (ICES 1994) C.M. 1994/T:2 6.

⁶⁶ Council Regulation (EEC) No 3760/92 of 20 December 1992 establishing a Community system for fisheries and aquaculture OJ No L 389/ 1 (1992 CFP).

⁶⁷ United Nations Report of the World Commission on Environment and Development: Our Common Future (1987) (Brundlandt Report).

the concept of "sustainable development" and this marked the beginning of a regime shift from the maximum exploitation of marine resources towards the effective and sustainable exploitation in international environmental law. Due to the Maastricht Treaty the concept of sustainable development was determined as an objective of EU policy.⁶⁸ A few months before the 1992 CFP came into force, the CBD-Convention, and the Agenda 21 action plan on the 1992 Rio Earth Summit were signed, but barely reflected in the reform. Also, the UNCLOS was not into force yet, so that it was not properly implemented, besides being reflected in the Recital 4 that the "optimum utilization of biological potential" should be improved, but⁶⁹ in the absence of a definition it remained unclear what it meant. From an economic perspective it was no obstacle to promote further unsustainable fishing activities, even though the problems of overcapacity and overfishing could not be denied anymore.

The Commission issued a report in 1991 on the state of the European fisheries and the design of the CFP and it aimed towards setting "new rules of the game" for the time between 1992-2002.⁷⁰ The Commission stated that the resources were overfished, and the fishing sector was about to face an economic and ecological crisis.⁷¹ The reasons for that were the absence of any form of control over the fishing capacity, the lack of coercive measures at European and MS level which was intensified by the failure of appropriate sanctions against illegal fishing practices and lack of political will.⁷² Around one year later the Commission issued the 1992 Control Report stating that the CFP failed due to inherent weaknesses within the legal framework and lack of political commitment, and common understanding among stakeholders.

In order to counteract these problems, the 1992 CFP aimed to restructure the fishing sector to bring it into line with the available and accessible resources⁷³, but also to reduce the above-mentioned fishing mortality. Therefore, new technical CM were released like a new fishing

⁶⁸ Now: Art. 3 (3) Treaty of the European Union

⁶⁹ Recital (4) 1992 CFP.

⁷⁰ SEC (91) 2288 final, Report 1991 from the Commission to the Council and the European Parliament on the common fisheries policy.

⁷¹ Ibid, p- 57-59.

⁷² Ibid.; Ronán J Long, *Enforcing the Common Fisheries Policy* (Fishing News Books 2000) 20–21.

⁷³ Recital (15) 1992 CFP.

licence system to reduce overcapacity and improve knowledge about the fishermen. Furthermore, restrictions regarding the exploitation rate as well as a Management and Monitoring system on Multiannual basis were released. The success of these measures was only of limited nature, because neither the PP was integrated into the decision-making as a limitation of discretion⁷⁴, nor were the CM adopted appropriately due to "reluctance by governments commit themselves politically to the industry restrictions necessary to achieve rationalisation".⁷⁵ In combination with the significant negligence of scientific advice, the fish stocks and marine ecosystems declined further.

2.1.4 Second Reform (2002-2013)

The second reform of the CFP in 2002 (2002 CFP)⁷⁶ were significantly influenced by developments in international environmental law and, unlike during the 1992 CFP, these had already entered into force in 2002. Furthermore, the progressive implementation of the EAFM was included in the objectives.⁷⁷

2.1.4.1 International Development

Of central importance in the development of international environmental law was the adoption of the non-binding action plan "Agenda 21" at the UN Rio Earth Summit (1992), in which states committed to a new era of marine ecosystem protection acknowledging the cumulative impacts of fisheries on fish stocks and ecosystems.⁷⁸ Therefore, it needed new precautionary, anticipatory, and integrated approaches like the EA at national, subregional, and regional levels to pursue the protection and sustainable development of the marine and coastal environment and its resources.⁷⁹ The aim of sustainable fisheries is to achieve "greater efficiency in exploitation" instead of finding the limits of exploitation within the framework set

⁷⁴ Wakefield, *Reforming the Common Fisheries Policy* (n 1) 56.

⁷⁵ FAO, *The state of worlds fisheries and aquaculture 2008*, ISSN 1020-5489 (2008), p. 13.

⁷⁶ Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy OJ L 358/59 (2002 CFP).

⁷⁷ Art. 2 1 2002 CFP.

⁷⁸ United Nations Conference on Environment & Development Rio de Janeiro, Brazil, 3 to 14 June 1992 Agenda 21, 17.72 (Agenda 21).

⁷⁹ *Ibid.* 17.1.

by CM. In the long term, this is supposed to reduce the pressure on the marine ecosystem to be able to supply more people with fish as a source of food through increasing catches.

The central legal basis for the achievement of Objective 17 is the UNCLOS Convention as the framework convention for the Law of the Sea with the articles relevant to fisheries.⁸⁰ Regarding the utilization of living resources such as fish stocks within the EEZs "the coastal States shall determine the total allowable catch".⁸¹ Hereby, the Coastal State shall adapt "proper conservation and management measures that maintenance of living resources is not endangered by over-exploitation".⁸² Such measures shall aim to maintain or restore harvested species at levels which can produce MSY while taking *inter alia* the interdependence of stocks, ecological and economic factors into consideration.⁸³

This wording indicates for the first-time substantive requirements for the determination of the TAC with a holistic view of the ecosystem. MSY became of central relevance for the determination of exploitation rates. It has been criticised that in the MSY-determination, economic factors in a purely scientific discussion run counter to the purpose of MSY, which is to determine what stock of fish is required for the ecosystem to sustain the species.⁸⁴ In addition, there were no further reference points on how the TACs are to be determined other than the "best scientific evidence". Based on this wording, the TAC must be decided only based on the data available and present at the time of decision and the absence of data or scientific certainty does not have to be considered with precautionary elements. UNCLOS did not manage to solve environmental problems alone, so that in the light of Agenda 21, the adoption of United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks⁸⁵ (UNFSA) was also called for.

⁸⁰ Art. 61-67; 116-120; Part X UNCLOS.

⁸¹ Art. 61 (1) UNCLOS.

⁸² Art. 61 (2) UNCLOS.

⁸³ Art. 61 (3) UNCLOS.

⁸⁴ Wakefield, *Reforming the Common Fisheries Policy* (n 1) 31–32.

⁸⁵ United Nations conference on straddling fish stocks and highly migratory fish stock (8 September 1995, in force 21 December 2001) A/CONF.164/37 (UNFSA).

As required by Agenda 21 and based on the UNCLOS Convention, UNFSA was enacted in 1995 and aims to "ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks".⁸⁶ The legally-binding UNFSA, which came into force in 2001 aimed to prevent damage to (non-)exploited species through an anticipatory approach.⁸⁷ Furthermore, it is of central importance for the further development of international fisheries law, because for the first time the PA was included in a fisheries agreement in a legally binding way and the definition has since become the standard. According to the PA "States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures".⁸⁸

Due to the rising awareness in the international community that Sustainable Development and Biodiversity are intrinsically interlinked, the ratification of the 1992 CBD-Convention which translated the parts of the Agenda 21 into firm commitments was an important step for the protection of the marine ecosystems.⁸⁹ While the main objective is the conservation of "biological diversity", the topic "biodiversity protection" aimed to address the issues of incompatible sectoral regulation and failures to protect whole ecosystems by ensuring.⁹⁰ Consequently, in terms of fisheries management ecosystem consideration are to be incorporated in conservation measures and exploitation management. The decisions of the Conference of the Parties (CBD-COP) played an important role in the development of the EA. In the so-called "Jakarta Mandate", the CBD-COP expressed that they were "deeply concerned" about the "overexploitation of living marine and coastal resources".⁹¹ States reaffirmed support for an integrated

⁸⁶ Agenda 21 17.49; Art. 1 UNFSA.

⁸⁷ Recital (7) UNFSA.

⁸⁸ Art. 6 (2) UNFSA.

⁸⁹ See Art 22 (1) CBD this creates a linkage to UNCLOS.

⁹⁰ Wakefield, *Reforming the Common Fisheries Policy* (n 1) 37.

⁹¹ Second Meeting of the Conference of the Parties to the Convention on Biological Diversity, Conservation and sustainable use of marine and coastal biological diversity, (Jakarta, Indonesia, 6 - 17 November 1995), Recital (2).

approach to marine and coastal management and in reaction to the need of a new approach the EA was first mentioned on the CBD-COP V in 2000 and it was defined as

“a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable manner. Thus, the application of the ecosystem approach will help to achieve a balance between the three objectives of the Convention: 'conservation, sustainable use and equitable sharing of the benefits arising out of the utilisation of genetic resources’”.⁹²

Ever since this definition formed the international basis for further understandings and development of the EA. On the basis of the this definition the FAO as a globally recognised body the need for a more holistic ecosystem protection and released since then important papers which aim to facilitate the implementation of the EA(FM) like the Technical Paper on the EA and it is linked to the FAO Code of Conduct for responsible Fisheries (COCRF) and the International Guidelines on Bycatch Management and Reduction of Discards.⁹³ These Non-binding guidelines and documents build the substantive basis for a globally recognised ecosystem-based fisheries management.

In 2002 even before the adoption of the 2002 CFP, the 2002 UN World Summit (Johannesburg Declaration) encouraged the application of the EA until 2010 for reasons of "global food security and for sustaining economic prosperity and the well-being of many national economies", whereby the CBD-COP V/6 was explicitly mentioned and must therefore be understood as the basis for the interpretation of the term.⁹⁴ In addition, the implementation and application of all international agreements listed so far was encouraged, and Objective 17 of Agenda 21 continued to be upheld.⁹⁵ The development of the EA and PA as legal instruments for the protection of ecological interests are of paramount importance and together form the

⁹² CBD/COP 5/5/VI A, 4.

⁹³ FAO, Code of Conduct for Responsible Fisheries, ISBN 92-5-103834-1, (2009) (COCRF); FAO, International Guidelines for Bycatch management and discard reduction, ISBN 978-92-5-006952-4, (2011) (FAO 2011)

⁹⁴ United Nations, Report of the World Summit on Sustainable Development Johannesburg, South Africa, 26 August to 4 September 2002 (A/CONF.199/20), 30, 30(d).

⁹⁵ Ibid 30 (b).

framework for ecologically sustainable fisheries management, as they complement each other.⁹⁶

2.1.4.2 Effects on the 2002 CFP

In the light of the 2002 CFP, it was obvious that the CFP has not been successful in ecosystem protection and sustainable fisheries due to the above-mentioned problems. Already in Recital 3, the EC recognises that "many fish stocks continue to decline", in comparison, the 1992 reform spoke of "a number of fish stocks"⁹⁷ which can be interpreted as an indicator about acknowledgement about the state of fisheries. Conscious about the state of fisheries and willing to solve this with the suitable legal tools in hand, the 2002 CFP aimed to reconcile "the exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions."⁹⁸

The overarching approaches within the CFP to achieve the objectives were the "Precautionary Approach" and the "Ecosystem-based approach to fisheries management".⁹⁹ While the PA was not explicitly based on the UNFSA definition but on Art. 191 (2) TFEU, the Ecosystem Approach was not defined in the CFP and therefore it did not have any objective, did not take explicitly cumulative effects into consideration and had no reference points.¹⁰⁰ Much more it relied on an implementation and interpretation coherent with the international commitments conducted by the responsible decision-making authorities. Regarding the scope and implementation of the EA in the CFP the Commission stated in a Communication to the Council that the scope of the EA includes elements of the definition of the CBD and the notions of the FAO Fisheries Technical Paper 2003 and is supposed to be understood as "about ensuring goods and services from living aquatic resources for present and future generations within meaningful ecological boundaries".¹⁰¹ In this paper the EA was understood as an integrated,

⁹⁶ FAO 2002, p.7.

⁹⁷ See Recital (3) 2002 CFP; Recital (1) 1992 CFP.

⁹⁸ Art. 2 (1) 2002 CFP.

⁹⁹ Art. 2 (2) 2002 CFP.

¹⁰⁰ Recital (10) CFP.

¹⁰¹ COM (2008) 187 final. European Commission Communication, 'The role of the CFP in implementing an ecosystem approach to marine management' 3.

cross-sectoral approach to protect the marine ecosystems holistically and not only depended on the policies of the CFP alone.¹⁰² Subsequently, the Integrated Maritime Policy as the horizontal dimension of the EA was issued with the objective to create more coherence between the various sectoral policies in terms of inter alia environmental protection. Herby, the Marine Strategy Framework Directive plays a substantial role also in the vertical dimension of the EAFM because it defines the legal basis for marine ecosystem protection and its objectives must be considered while developing CM based on the CFP.¹⁰³

To implement inter alia the vertical dimension of the EAFM the 2002CFP established new institutions. First, Advisory Councils (AC) were established to include all affected stakeholder to allow a more comprehensive assessment on a sub-regional level of the needed management actions as well as Recovery and Management plans to shift towards long-term objectives.¹⁰⁴ Second, the Scientific, Technical and Economic Committee for Fisheries (STECF) was established as a competent authority on matter pertaining CM due to the failure to enforce regulations.¹⁰⁵

Despite initial hopes of bringing about a sustainable turnaround in the CFP, this reform also failed for several reasons. First, all objectives were given the same meaning with a central focus on guaranteeing stable incomes and jobs for the fishers, so that "sustainable environmental conditions" were never in the foreground, leaving legislators with a wide margin of discretion.¹⁰⁶ Second, the measures against overcapacity and overfishing failed because the TACs continued to exceed scientific recommendations, so that catches also fell in the long term.¹⁰⁷ This was mainly due to the fact that scientific recommendations on TACs continued to be systematically disregarded or were not adopted in the reform as a legally binding basis for TACs.

¹⁰² Ibid, 2-4.

¹⁰³ DIRECTIVE 2008/56/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) OJ L 164/19.

¹⁰⁴ Art. 31, (5), 2002 CFP.

¹⁰⁵ Art. 33 2002 CFP.

¹⁰⁶ Wakefield, *Reforming the Common Fisheries Policy* (n 1) 58–59.

¹⁰⁷ See Footnote 50.

Finally, these unsustainable developments and the insufficient inclusion of the EA and PA are illustrated by the worst fishing year since the EEC was established in 2012.¹⁰⁸ This is also illustrated by the fact that, despite the reform measures, catch numbers fell in absolute terms throughout the 2002 reform period.¹⁰⁹

2.2 Legal Analysis of the EAFM in the 2013 CFP

The following section is going to conduct a legal analysis concerning the failed implementation of the EAFM about the TAC and bycatch management.

2.2.1 TAC-Setting

The TAC is the keystone conservation measure in the CFP and since its emergence it has evolved from a measure focused, in the absence of a “strategic objective”, on individual species management without consideration of ecosystem aspects to a measure embedded in a long-term approach based on multi-annual plans and enhanced ecosystem protection.¹¹⁰

As already mentioned above, the TAC is divided into different MS quotas on the basis of the principle of relative stability and then distributed to the fishermen. The TAC is not explicitly defined in the CFP, but rather subsumed under the term “catch limit” which is defined “as appropriate, either a quantitative limit on catches of a fish stock or group of fish stocks over a given period where such fish stocks or group of fish stocks are subject to an obligation to land, or a quantitative limit on landings of a fish stock or group of fish stocks over a given period for which the obligation to land does not apply”.¹¹¹

Compared to the term TAC, this represents a more general term, as “catch limits”, but does not specify a specific time period for catch determination. A concrete definition is rather found in the 2020 Fishing Opportunity Regulation¹¹² and consequently can be adopted either

¹⁰⁸ See Footnote 4.

¹⁰⁹ Ibid.

¹¹⁰ Owen and Churchill (n 36) 132–133.

¹¹¹ Art. 4 (15) CFP.

¹¹² Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters OJ L 25/2.

for single fish stocks or multiple fish stocks. Here TAC is understood as "the quantity of fish that may be landed" in the case of an exemption from the landing obligation according to Art. 15 (4) to (7) CFP or as "quantity of fish that may be caught" in the case that the landing obligation applies.¹¹³

In addition to species-specific TACs, either analytical or precautionary TACs may be adopted. While the first is defined as a "quantitative evaluation of trends in a given stock, based on data about the stock's biology and exploitation, which scientific review has indicated to be of sufficient quality to provide scientific advice on options for future catches".¹¹⁴ It requires the availability of "sufficient" scientific data without further requirements. A "precautionary TAC" is to be issued in accordance with the PA according to Art. 3 (8) CFP, Art. 6 UNFSA if only insufficient scientific data are available.

2.2.1.1 Conflict of interests in the purpose of TAC

The purpose of TAC is the "conservation and sustainable exploitation" of marine biological resources, and it is the responsibility of the Council to adopt measures to this end. To ensure sustainable exploitation, it is also the competence of the Council to adopt measures on the fixing and allocation of fishing opportunities in accordance with Article 2(2) of the CFP. The term "fishing opportunities" is not defined in the current version of the CFP but can be understood as "a quantified legal entitlement to fish, expressed in terms of catches and/or fishing effort" as defined in the 2002 CFP.¹¹⁵ Since quotas are legal entitlements for a MS and quotas are based on the TAC for the respective stock, it can therefore be concluded that TACs must also be issued in accordance with Art. 2 (2) CFP, even though it is not legally certain stated.

However, it is problematic that "fishing opportunities" must also be enacted in accordance with the principle of relative stability in particular with regard to the coastal communities which are starkly depended on fishing.¹¹⁶ The purpose of relative stability is to safeguard and

¹¹³ Art. 3 (d) 123/20/EC.

¹¹⁴ Art. 3 (f) 123/20/EC.

¹¹⁵ Art. 3 (q) 2002 CFP.

¹¹⁶ Recital (5) 123/20/EC; Wakefield, 'The Common Fisheries Policy' (n 52) 502.

take full account of the “particular needs” of a region, which is dependent on fishing.¹¹⁷ However, these "particular needs" can be contrast to the objectives of Art. 2 (2) CFP as part of the "conservation policy" might be misused in the favour of national interests. The opposing positions among socio-economic and ecological stakeholders can shift towards socio-economic needs reasoning it with communal need.¹¹⁸ Additionally, the absence of a common vision how to conserve fish stock resulted in further disregards of scientific advice since 2013.

According to Art. 2 (2) CFP, there is to be a progressive restoration and maintenance of harvested species above levels which can produce the MSY, to protect ecosystems in the long term. However, to enable at least a maintenance of a stock, TACs are supposed to be set as high as the MSY, i.e., only what can reproduce per year may be taken. Since from 2020 onwards the TAC "under all circumstances" may only be as high as the proposed MSY. Given the current legal fragmentation of the definition of TAC, the opposing interest among stakeholders and the need for urgent action, it is highly unlikely that the interests can be reconciled without setting a legally binding frame which ensures a proper ecosystem protection.

Consequently, the purposes of the TAC seem legitimate from an ecological point of view, but they regularly conflict with the economic interests and demands of the addressees while providing no legal resilience for ecosystem protection. These weaknesses are intensified by the inadvertent design of the PA and the failure to take BAT/BAS into account in decision-making.

2.2.1.2 Insufficient design of the Precautionary Approach

As this problem of counteracting interest was already known through the last 40 years of fisheries management legally binding rules and concepts were established in the 2013 CFP like the EAFM and the PA.¹¹⁹

While determining the TAC, the availability of marine living resources and the cumulative impacts of human activities including fishing must be weighed against each other due to the

¹¹⁷ Recital (36) CFP.

¹¹⁸ Wakefield, ‘The Common Fisheries Policy’ (n 52) 502–503.

¹¹⁹ See Art. 2 CFP.

EAFM. In the case of "uncertainties" in any of the potential impacts or doubts about the availability of natural resources, the PA must be applied so that in any case the "biological wealth and biological processes" of the affected ecosystem can be maintained.¹²⁰ Consequently, it should generally not be possible to justify contrary measures which purposes are not compliant with the EAFM, for example. In order to have a strong implementation of the EAFM the interconnected PA must also be designed resistant against contrary interests, but so far the PA suffers on an inadequately design.

The PA is insufficiently designed for a successful implementation of the EA for two main reasons. Firstly, because the PA allows more discretion than the PP in decision-making¹²¹ and secondly, because compliance with MSY as part of the PA is insufficiently enshrined in law. The CFP states that the PA derives from the PP in Art. 191 (2) TFEU¹²² but the ECJ has weakened its meaning in relation to fishing activities.¹²³ According to Art. 191 (2) TFEU, "environmental policy shall aim at a high level of protection based on the precautionary principle", but the CJEU ruled that the PP only applies in cases where it has an impact on human health and excluded it concerning fishing when it had the chance to.¹²⁴ Thus, there is a difference between the PP and the PA, because while the PP requires that decisions are taken prudently in case of uncertainty, the PA requires certainty that harm will be caused before a (fishing) activity is restricted.¹²⁵ In the area of fisheries where neither the whole ecosystem interactions nor all status of stocks can fully be assessed the required certainty is hard to reach and without additional parameters to define the precautionary approach it can always be justified to refrain from restrictive actions.¹²⁶

¹²⁰ Art. 2 (2) CFP.

¹²¹ Jill Wakefield, 'The Problem of Regulation in EU Fisheries' (2013) 15 *Environmental law review* 191, 193–194.

¹²² Recital (10) CFP.

¹²³ Wakefield, 'The Common Fisheries Policy' (n 52) 504–505.

¹²⁴ Case C-343/09 *Afton Chemical Limited v Secretary of State for Transport* (2010), 93.

¹²⁵ Wakefield, 'The Common Fisheries Policy' (n 52) 504–505.

¹²⁶ *Ibid.*

With regard to the application of the PA in the TAC setting, no precautionary measures need to be taken as long as there is no scientific data that a stock is overfished. The PA and the MSY are structurally linked in the CFP, as both are found in Art. 2 (2) CFP, so that the MSY can be understood as the minimum standard to be respected in the TAC setting. Consequently, if a TAC above the MSY is proposed in theory, the stock will deteriorate, and risk being overfished in the long term. However, to conduct adaptive EAFM with sufficient attention to natural capacities, a resilient design of the MSY is required, but this is not the case in the CFP due to the legal wording and the consideration of economic aspects. The purpose of the PA is to restore and maintain living marine resources progressively above biomass levels capable of producing MSY. Thus, if the TAC is set at a level at least equal to or lower than the MSY, the stock of the living marine resources concerned will increase so that, in the long term, they will at best be within a "safe biological limit".¹²⁷ This is reached when there is a high probability that the estimated spawning biomass at the end of the year is higher than the limit biomass reference point and estimated fishing mortality reference point.¹²⁸

The problem, however, lies in the definition of MSY, as it refers to "without significantly affecting the reproduction process". "Significantly" is an undefined legal term and therefore subject to wide discretion and leaves room for non-EA-based interpretations. Within the framework of a teleological interpretation, it is to be assumed that "significantly" means at the highest a "yield" that does not restrict the reproduction process, since from 2020 onwards MSY is to be achieved in all circumstances by 2020. Nevertheless, there is a possibility for a contrary interpretation especially because economic considerations are also considered while determining the TAC. Thus, this weakens the MSY as an important parameter of the PA to stop overfishing and might hinder the possibility to achieve sustainable fisheries.

Overall, it weakens the implementation of the EAFM, because it cannot be effectively guaranteed that ecosystem impacts are minimised, if appropriate precautionary measures cannot be taken. Additionally, the missing resilience of the legal construction of the MSY intensifies the

¹²⁷ Art. 4 (18) CFP.

¹²⁸ Here is a horizontal link to the MSD with the terms "safe biological limits" of commercially exploited fish and shellfish to achieve the Good Environmental Status, Annex I (3), 2008/56/EU.

concerns because the outcome leaves a discretion for economic interests even though it is supposed to be solely science-based. Overall neither adaptive management in favour of fish resource availability nor legal resilience in this highly contested sector effects a progressive implementation of the EAFM.

2.2.1.3 Decision-making in the TAC setting

Another crucial step is the application of resilient and adaptive institutional decision-making framework which ensures the appropriate implementation of the EAFM.¹²⁹ As already mentioned, the outcome of the TAC setting process must aim towards "sustainable exploitation" of marine biological resources. Due to the highly complicated and fragmented decision-making process of the TAC and the insufficient design of resilient and adaptive EAFM-elements its successful implementation is hindered. In order to show the decision-making process in its entire fragmentation all relevant legal bodies will be addressed, an analysis of the application of the EA will only be given for the role of the AC, as it is otherwise beyond the scope of this paper.

The TACs are determined by the MS on a single-stock basis, and must be consistent with the principles and rules of the CFP.¹³⁰ However, the proposed TACs are not simply accepted without further ado, but are rather only a starting point for the further decision-making process, at the end of which "the Union"¹³¹ adopts the TACs within the framework of the CM.¹³² While it is the Union adopts the TAC, the Commission is responsible for collecting the relevant data from the MS and to carry out consultations with the AC and relevant scientific bodies.¹³³ In this process, different legal bodies participate in the decision-making and all partici-

¹²⁹ FAO 2002, p. 4.

¹³⁰ Art. 7 123/20 EC.

¹³¹ UNION = The European Commission, European Parliament, and the Council of the European Union.

¹³² Art. 6 (1) CFP.

¹³³ Art. 7 (2) CFP.

pants are obliged to integrate EA considerations and to apply the Good Governance Principles.¹³⁴ The principle of "best available scientific advice" is of central importance, as it is supposed to be the foundation for determining sustainable TACs, but it can be easily disregarded due to the decision-making process.

In a first step, the MS provide their TAC-relevant data both to the Commission¹³⁵ and to ICES and Joint Research Centre (JRC). ICES collects the data and evaluates them with the aim of providing guidance on sustainable fisheries in relation to sustainable interactions of humans and the marine environment.¹³⁶ It is not referred in the CFP but can be considered as a "relevant scientific body" due to a legally-binding Memorandum of Understanding with the Directorate-General Maritime Affairs and Fisheries about provisions of services and scientific deliverables.¹³⁷ As a scientific body, ICES provides scientific data resulting from the MS data for the application of the EA. In this case, the results are directly forwarded to the Commission.¹³⁸

The JRC which is also not mentioned in the CFP, has the task of promoting coordination between inter alia European Environmental Agency, ICES, and others. The JRC does not provide advice with new substantive content, but coordinates, collects, maintains, and disseminates the scientific fisheries data from EU and MS. The results are passed on to the STECF.

The STECF, which is a "scientific body"¹³⁹, receives its data from the JRC and the Regional Stock Assessment Groups (e.g. ICES, etc.) and uses them in relation to the advisory opinions of the Commission. The central task of the STECF is to consult the Commission on CM,

¹³⁴ Art. 4 CFP.

¹³⁵ If necessary, through "Joint recommendations" Art. 17 CFP.

¹³⁶ P Ramírez-Monsalve and others, 'Pulling Mechanisms and Pushing Strategies: How to Improve Ecosystem Approach Fisheries Management Advice within the European Union's Common Fisheries Policy' (2021) 233 Fisheries research 4–5.

¹³⁷ Agreement in the form of a Memorandum of Understanding between the European Community and the International Council for the Exploration of the Sea signed in Brussels on 16 May 2007

¹³⁸ Ramírez-Monsalve and others (n 136) 4.

¹³⁹ Art. 7 (2), Art. 26 CFP.

whereby the scope is limited by the respective questions.¹⁴⁰ Whether EA advice is possible depends on the scope of the respective consultation power but is possible in principle. The content and scope would also depend on the EA-relevant data of the JRC and the Regional Stock Assessment Groups.

The ACs play a central role in the Commission's consultation. Their competence covers either a geographical area or a field of action.¹⁴¹ The aim of the ACs is to promote a balanced representation of all stakeholders, regionalization, and to contribute to the achievement of the objectives of Art. 2 CFP.¹⁴² It shall be made possible for stakeholders to be more involved in decision-making in order to bring in regional interests, to find locally appropriate solutions and, because stakeholder acceptance and liability is of crucial importance due to the low level of monitoring and enforcement on sea.¹⁴³ The inclusion of all relevant stakeholder is also one pillar of the Agenda 21 to strengthen the coordination and cooperation among all relevant stakeholders on a regional basis.¹⁴⁴ The ACs have the task to submit recommendations and suggestions on inter alia conservation aspects, inform on conservation aspects, and to contribute, in close cooperation with scientists, to collect and supply data necessary.¹⁴⁵ It is to be used as a forum where knowledge can be combined and social, economic and ecologic outcomes can be discussed.¹⁴⁶ The interests cover ecological, economic and social factors which are in opposite to the objectives of the CFP not equally represented in the ACs, because the distribution of the seats is with 60 % in favor of "organisations representing the fisheries" and 40% "other interest groups" (consumers, non-governmental organisations, etc.).¹⁴⁷ Since it has already been shown in the past that the representation of the interests of the fisheries sector

¹⁴⁰ Ramírez-Monsalve and others (n 136) 6.

¹⁴¹ Annex III CFP.

¹⁴² Art. 43 (1) CFP.

¹⁴³ Sebastian Linke and Svein Jentoft, 'A Communicative Turnaround: Shifting the Burden of Proof in European Fisheries Governance' (2013) 38 *Marine policy* 337, 340.

¹⁴⁴ Agenda 21, 17.1.

¹⁴⁵ See Part XI CFP.

¹⁴⁶ Ramírez-Monsalve and others (n 136) 6.

¹⁴⁷ Regulation Commission delegated Regulation (EU) 2015/242 of 9 October 2014 laying down detailed rules on the functioning of the Advisory Councils under the Common Fisheries Policy OJL 41/1 (Establishment of AC) (60% based on Annex III 2. (a) CFP).

was largely responsible for deviating from scientific data in the design of CM and TAC, the question arises as to whether this will change with the current design of the AC.¹⁴⁸

First, no benchmarks and standards exist to guarantee a verification whether the AC uses appropriate data with regard to the suitability to achieve the objectives of Art. 2 CFP or to try to obtain the "best available data".¹⁴⁹ Additionally, there is no way of verifying which data was used in the decision-making process and this cannot be easily assured by the "good governance principles". Even though, the Good Governance Principles apply in theory, this is neither in Part XI CFP nor in the succeeding Regulations concretized. It is also incomprehensible where the data of ACs originates from, because the composition of the ACs does not demand scientific bodies and the diversity of the participants have the chance to attend the meetings without any requirement of verification where their data come from. The standing is further weakened due to the fact, that scientist may only act as observers and do not have any chance to influence decisions decisively.¹⁵⁰

Second, there is no justification for the fisheries organizations to occupy 60% of the seats.¹⁵¹ If a discourse between the various stakeholders should take place at eye level and in an equal manner, this cannot be justified either. Considering that public interests can only be represented by the "other interest groups" underrepresented, a common good, however inaccessible, is consequently managed by a private sector (under the AC) in terms of extraction and conservation.¹⁵² Even if "the penny has dropped"¹⁵³ regarding the application of the EA, this is by no means guaranteed by the legal construct of the ACs but depends only on the decision-makers themselves. Even if MSY compliance has been widely followed since 2020, decisions can still be taken within the ACs to the disadvantage of the EAFM and without being based

¹⁴⁸ Jill Wakefield, 'The Ecosystem Approach and the Common Fisheries Policy', *The Ecosystem Approach in Ocean Planning and Governance* (Brill) 300–302.

¹⁴⁹ *ibid* 301–302.

¹⁵⁰ 'NSAC-Rules-of-Procedure-2020.Pdf' 6 <<https://www.nsrac.org/wp-content/uploads/2020/11/NSAC-Rules-of-Procedure-2020.pdf>> accessed 20 April 2022.

¹⁵¹ Wakefield, 'The Ecosystem Approach and the Common Fisheries Policy' (n 148) 302.

¹⁵² *Ibid*.

¹⁵³ Ramírez-Monsalve and others (n 136) 6.

on the TAC, without anything being able to be done about it. The underrepresentation of the “Public”¹⁵⁴ results in a lack of transparency and combined with the obscure decision-making within the ACs the implementation of the EAFM fails.

After the Commission has obtained the necessary advice and data from the legal bodies, the proposal still needs to be signed by the European Parliament and the Council of the European Union before the TACs become legally enforceable.

This obviously complex decision-making process results in a compromise between a multitude of actors with different social, economic, and environmental motivations and a low level of acceptance. It is welcomed that the now improved involvement of local and regional stakeholders allows in theory for locally appropriate solutions to be found through decentralized management, but this complexity, fragmentation, incoherence also creates problems. It is in the nature of a compromise that the various starting positions are softened during negotiations, but this has happened in the past to the benefit of the fishing industry and socio-economic development and to the detriment of scientific data and the ecosystem. The actual legal design, especially of the highly influential ACs does not guarantee an improved outcome. Within the ACs the cumulative effects missing verification if data are appropriate, the weak link to the Good Governance Principles and the Underrepresentation of the public allow counteracting outcomes in a decision-making system where liability and discretion is a decisive factor. Also, the general mistrust and conflict potential between the economy and scientist is not tried to be solved by the design of the CFP.

The application of the "best available scientific data" fails not because of the availability and aggregation of the data, but rather because it is not considered in the decision-making process due to redundant mandates and objectives.¹⁵⁵ The deviation from TAC based on the MSY recommendations and the MSY's binding nature is supposed to be followed from 2020 on. But without the sufficient decision-making framework in place, it cannot be guaranteed that this will be conducted due to above mentioned reasons. So far, EAFM-based decisions have not depended on the existing regulatory framework, but rather on "the good faith of the decision-

¹⁵⁴ In the sense of the Aarhus Convention.

¹⁵⁵ ‘CREAM Project’ <http://www.cream-fp7.eu/other_html/main_results_5.html> accessed 25 April 2022.

makers. Also, if one considers that the ministers responsible for enacting the TACs are also responsible for implementing them in the respective MS, there is a risk that decisions will be made in favor of national interests despite data to the contrary.¹⁵⁶

Ultimately, a number of factors in the TAC-setting hinder the implementation of adaptive EAFM, as both the weak legal design of the TAC through vague legal terms and fragmentation of applicable regulations and in decision-making cannot ensure that stakeholders are guided by EAFM principles.

2.2.2 Bycatch Management

2.2.2.1 Preventative Management through real-time closures

Bycatch management starts with the preventative adoption of „technical measures“ which aim towards the avoidance of unwanted catches like juveniles, protected species, non-targeted species and other organisms. It covers inter alia the possibilities of real-time closures and the legal design of technical measures regarding the design of gear and devices. Due to the CFP “technical measures”¹⁵⁷ may include inter alia characteristics and specifications of fishing gear and rules like the limitations and prohibitions fishing activities in certain areas or periods to minimise the negative impacts of fishing activities on marine biodiversity and marine ecosystems.¹⁵⁸ The technical measures have also a cross-sectoral purpose, because they aim not only towards the protection of economic relevant species but also their habitat, associated species in the food web, and the integrity of ecosystems by acknowledging the impacts of various fishing techniques.¹⁵⁹ Technical measures in the EU are set to achieve the MSY-objectives

¹⁵⁶ Setareh Khalilian and others, ‘Designed for Failure: A Critique of the Common Fisheries Policy of the European Union’ (2010) 34 *Marine policy* 1178, 1182.

¹⁵⁷ Defined in Art. 4 (20) CFP.

¹⁵⁸ Art. 7 (2) CFP.

¹⁵⁹ Karen Scott, ‘Bycatch Mitigation and the Protection of Associated Species’, *Strengthening International Fisheries Law in an Era of Changing Oceans* (Hart Publishing 2019) 168.

and are adopted fishery-specific and not stock-specific.¹⁶⁰ Technical Measures regarding bycatch management are embedded in multiannual plans¹⁶¹ based on regional long-term objectives and they are adopted on the initiative of the affected MS or through regional cooperation.¹⁶² Due to the need of immediate actions against the unsustainable fishing practices the Commissions exercises the competence to adopt CM also regarding the bycatch management.¹⁶³

The legal basis for technical measures are not solely found within the CFP, but also in the “Technical Regulation”.¹⁶⁴ The measures support the implementation of the CFP and they aim to achieve the objectives of the CFP with a new approach to increase the effectiveness of technical measures because so far it was unlikely to achieve the objectives of the CFP with the technical measures in place.¹⁶⁵ The Technical Regulation consists of general rules which apply to all Union waters but also take regional specificities into consideration.¹⁶⁶ It reflects the desire to reduce unwanted bycatch and contribute to the achievement of a “Good Environmental Status”¹⁶⁷ and other cross-sectoral legislation by avoiding bycatch of inter alia Marine Mammals and Seabirds.¹⁶⁸ Thus, technical measures are the practical tool to implement the EAFM by taking into account the cumulative impacts of fishery by acknowledging the urgent need to take action due to the destructive effects. These general objectives are to be achieved by the optimization of exploitation patterns, considering cumulative impacts and the minimization of negative environmental impacts.¹⁶⁹

¹⁶⁰ Ernesto Penas Lado, *Quo Vadis Common Fisheries Policy?* (John Wiley & Sons, Incorporated 2019) 150.

¹⁶¹ Art. 10 (1) (f), (2) (a) CFP.

¹⁶² Art. 18 (1) CFP.

¹⁶³ Art. 46 (2) CFP.

¹⁶⁴ Regulation of the European Parliament and of the Council (EU) 2019/1241 of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures OJ L 198/105 (2019/1241).

¹⁶⁵ Recital (2) Regulation 2019/1241.

¹⁶⁶ Recital (3) Regulation 2019/1241.

¹⁶⁷ Recital (7) 2019/1241.

¹⁶⁸ Recital (17) 2019/1241.

¹⁶⁹ Art. 3 2019/1241.

The technical measures regarding the specification of gear, monitoring devices etc. are either regulated within the common technical measures or the regional technical measures and both Chapters are guided by Art. 3 CFP. The technical measures can either be specific for certain fisheries or gear. Since the Commission has the jurisdiction about technical measures for the Union waters, these are specified within the Annexes of the Technical Regulation.¹⁷⁰ The affected MS are allowed to submit joint recommendations regarding those technical measures.

Real-time closure (RCT) can be understood as temporary closures triggered by a certain state of fish abundance, bycatch level, or similar events.¹⁷¹ RCTs are part of the regionalised technical measures and can be adopted by MS with a management interest proposed in accordance with international obligations.¹⁷² Art. 19 (1) 2019/1241 is the legal basis and the measure aims to ensure the protection of sensitive species or of aggregations of juveniles, spawning fish or shellfish species. The RCT is supported by the move-on obligation, which is triggered by a certain species threshold, and for the affected stakeholders triggers the obligation to stop fishing and leave the position.¹⁷³ The combination of measures has the purpose to achieve a preventive protective effect through a closure and to create the legal obligation to leave the fishing ground so that it can be the basis for a penalty. These measures are supposed to lay the legal basis for the responsible authorities to address rapidly changing conditions in line especially with the PA and EAFM.¹⁷⁴

However, the current design of the RCT within the Technical Regulation is inadequate, as it does not provide for precautionary measures for unexpected events such as changes in migration routes or other emergencies, so that there is no element of "real-time" in the regulation. Rather, RCTs can only be issued on a static basis in terms of location and time, since a joint recommendation must always be issued by all MS as a basis for decision-making and there

¹⁷⁰ Art. 15 2019/1241.

¹⁷¹ Coby L Needle and Rui Catarino, 'Evaluating the Effect of Real-Time Closures on Cod Targeting' (2011) 68 ICES journal of marine science 1647, 1647.

¹⁷² See p.15, 7.6 FAO 2011.

¹⁷³ Art. 19 (2) 2019/1241.

¹⁷⁴ Richard Caddell and Erik J Molenaar, *Strengthening International Fisheries Law in an Era of Changing Oceans* (1st edn, Hart Publishing 2019) 213.

are no rules of jurisdiction for emergencies. This poses particular problems for the protection of pelagic fish species, as they move in open water and adapt their location to the food supply instead of staying in one place.¹⁷⁵ The regionalisation aspect of this regulation has also only taken place in the case of the North Sea and Skagerrak, although it should be noted that these waters are jointly managed with Norway as a pioneer of RCT measures.¹⁷⁶ There are no precautionary measures in this regional regulation either, so that real-time closures for certain fish species are only triggered due to trigger levels of bycatch.¹⁷⁷

A second type of RCT, which is not named as such but corresponds to its nature, is based on Art. 108 1224/2009, which implements and specifies Art. 15 CFP.¹⁷⁸ In this case, the measure may even be adopted with "immediate effect" if there is evidence "that fishing activities and/or measures adopted by a Member State or Member States undermine the conservation and management measures adopted in the framework of multi-annual plans or threaten the marine eco-system".¹⁷⁹ In case a violation is detected shall be proportionate to the threat and may include the closure of fisheries.¹⁸⁰ It is problematic, however, that neither "evidence" nor "undermine" and "threaten" are defined in the requirements for the offence. "Evidence" basically presupposes the existence of facts that lead to the conclusion that CM are undermined or that the ecosystem is endangered. In the absence of a definition or references of this term, however, practitioners have a certain degree of discretion as to what is or is not evidence.

The terms "undermine" and "threaten" are also vague and require further specification in individual cases. In case of doubt, the precautionary approach would have to be applied, since the absence of data does not justify the non-application of a CM and precautionary action must be taken to protect the ecosystem in the case of uncertain impacts of human activities.¹⁸¹ A broad

¹⁷⁵ Penas Lado (n 160) 153.

¹⁷⁶ COMMISSION REGULATION (EU) No 724/2010 of 12 August 2010 laying down detailed rules for the implementation of real-time closures of certain fisheries in the North Sea and Skagerrak OJ L 213/1.

¹⁷⁷ Art. 7 (1) 724/2010.

¹⁷⁸ COUNCIL REGULATION (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy OJ L 343 (1224/2009).

¹⁷⁹ Art. 108 (1) 1224/2009.

¹⁸⁰ Art. 108 (2) (b) 1224/2009.

¹⁸¹ See Art. 6 (2) UNFSA.

interpretation of the concept of enhanced environmental protection would be appropriate, given the state of European wild living resources and ecosystems and the precautionary approach.

However, neither Regulation 1224/2009 nor the Technical Regulation refer to the precautionary approach and the EAFM in the legislation, which makes it easier for those concerned not to apply the concepts due to the questioning of the regulations, as legal laypersons in doubt do not understand the coherent application of the law. In addition, the terms contain a considerable margin of discretion as to what is to be understood by "undermine" and "threaten". However, if the legal consequence, i.e., the closure of fisheries, is triggered, the legal consequence must be "appropriate". This legal concept also leaves the competent authority a wide margin of discretion, which in case of doubt does not necessarily have to be in favour of ecosystem protection, as scientific data regarding spatial, temporal, or technical closures can be deviated from, as has already been shown in the past.

A third type of RCT is the "emergency measures" adopted by either the Commission or the MS.¹⁸² These measures are triggered by a "serious threat to the conservation of marine biological resources or to the marine ecosystem based on evidence". Here, too, the term "serious threat" gives a wide margin of discretion as to what is allowed and what is not, as there is no definition of the term. According to *Wakefield* it means that the serious threat must be "on duly justified imperative grounds of urgency."¹⁸³ In addition, cases of scientific uncertainty do not constitute a serious threat due to the design and meaning of PA so that sufficient real-time action cannot be taken.¹⁸⁴

The problem with the RCT provisions is the discretion of the multilevel authorities that must assess a violation, since on the one hand the authorities at sea have to determine the violation and on the other hand the authority that decides on the legal consequences. The cumulative effects of personal differences, undefined legal terms, and the weak design of the PA (see

¹⁸² Art. 12, 13 CFP.

¹⁸³ *Wakefield*, 'The Common Fisheries Policy' (n 52) 509–510.

¹⁸⁴ *ibid* 510.

above) are another reason for insufficient implementation of the EAFM. Moreover, no measure contains a real-time element that allows the requirements of legal certainty and clear wording to be met.

2.2.2.2 After Landing – The Landing obligation

In the following chapters, the legal analysis does not focus on the LO, but rather on its flexibility regulations.

Background

The tools with which these objectives are about to be achieved are to retain and count all catches of species, which are subjects to catch limits and caught during fishing activities, against the quotas.¹⁸⁵ Even though the word bycatch is not used in the latter measure, it can be concluded from a teleological interpretation that "bycatch" is also included, as it is listed in the chapter "Reducing bycatch and discard".

The idea of minimizing bycatch and reducing discards through a Landing obligation (LO) did not originate within EU itself but is a measure which results of various international developments and various interest stakeholders. According to the 2002 FAO report, the legal basis in international law is found in Art. 62 (3) UNCLOS which states "restore populations of harvested species at levels which can produce the maximum sustainable yield" and Art. 5 (b) UNFSA " or those stocks that are accidentally overfished, the fishery must be conducted such that there is a high degree of probability that the stock(s) will recover".¹⁸⁶ The FAO itself proposes a number of measures to achieve the goal, such as improving the selectivity of gear, seasonal or real-time closure, improving use of by-catch and mandatory landings of discards.¹⁸⁷ In the CFP the EU introduced for the first time a LO¹⁸⁸ to gradually eliminate unwanted bycatch and discards by ensuring that these are landed, because bycatch and discards

¹⁸⁵ Art. 15 (1) CFP.

¹⁸⁶ 'Biodiversity and the Ecosystem Approach in Agriculture, Forestry and Fisheries' 24 <<https://www.fao.org/3/y4586e/y4586e01.htm>> accessed 19 March 2022.

¹⁸⁷ FAO 2011, p.14-15.

¹⁸⁸ Art. 15 CFP.

produced up to 25% of the total catches and were for a long time considered as waste.¹⁸⁹ This reflects the EAFM in so far that negative impacts on ecosystems like the capture of non-target, protected, threatened or endangered species (seabirds, marine mammals, fish etc.), local anoxia of sea habitats and the disruption of food webs¹⁹⁰ and the financial viability of fisheries¹⁹¹ are minimised and aim towards more profitable fisheries in the future.¹⁹² Indirect it aims to incentivise more selective fishing methods through the use of more suitable fishing techniques to reduce preventatively.

As already mentioned, the problem had been known since 1992 and was nevertheless not mentioned and addressed in the 2002 CFP. Rather, in 2007, the Commission was in favour of consultation with stakeholders and the fisheries sector to jointly find solutions for bycatch reduction through a "bottom up" approach.¹⁹³ The fisheries sector was not particularly interested in finding constructive solutions, as this could have meant further economic losses in a deteriorating fishery and would have meant additional effort through mitigation measures.¹⁹⁴ Consequently, the Commission opted for a top-down approach as it felt compelled to set policy objectives to address the problem and mobilise the authorities and stakeholders.¹⁹⁵ It was obvious that the LO needed a certain degree of flexibility, because while some Member States feared negative consequences for their TACs due to the principle of relative stability (resulting in a zero TAC¹⁹⁶ in the first case), others were concerned about the implementation of the ban on the sale of undersized fish.¹⁹⁷ Therefore, negotiations on the LO focused on the flexibility mechanisms that resulted in the LO not being applied to species with a high survival

¹⁸⁹ Wakefield, 'The Problem of Regulation in EU Fisheries' (n 121) 196.; Art. 2 (5) (a) CFP.

¹⁹⁰ FAO 2002, p. 12.; FAO 2011, p. 5.

¹⁹¹ Recital (26) CFP.

¹⁹² See anoxia footnotes.

¹⁹³ Peñas Lado (n 54) 306–308.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

¹⁹⁶ Zero TAC means a quota which does not allow any bycatch (e.g. "choke species") of a certain species (subject to the LO) and which is impossible to avoid due to the fishing technique.

¹⁹⁷ Penas Lado (n 160) 114.

rate, as well as the de minimis exception and the cross-reporting of retained fish to another TAC. The outcomes are standardised flexibility mechanism which apply to all Union waters.

Choke species and Quota swapping

One way to achieve a reduction in discards and to incentivize more selective fishing techniques are the "Choke species" which is especially relevant to fisheries with a diversity of caught species (like mixed-fisheries). In the absence of a clear definition choke species can be understood as species for which the available quota is exhausted before the quotas are exhausted of the other species that are caught together in a fishery.¹⁹⁸ The choke species trigger a closure of fisheries when a quota of one target or by-catch species is exhausted before the other quotas are.¹⁹⁹ The "exhausted species" can therefore limit fisheries activities because of "low productivity of the stock and reduced fishing opportunities or discrepancy between historical right allocation compared to current abundance."²⁰⁰

The fishing industry was economically concerned about this regulation, as the choke species may result in zero TACs for some choke species due to the relative stability principle of the quota allocation. This is because during quota allocation, TACs are allocated only on the basis of the relative stability keys and not by taking into account economic considerations such as the confounding of fishing opportunity/ineffective fishery. Consequently, the fishery was in danger of becoming economically unviable as there was a mismatch between catching capacity and landing obligation.²⁰¹ From an economic point of view, a "sustainable explosion" could take place (at least in theory), but this is prevented by the "choke species" and is therefore also contrary to the social pillar of the EAFM and not in line with the objectives of the CFP.

¹⁹⁸ Directorate-General for Internal Policies of the Union (European Parliament) and others, *Options of Handling Choke Species in the View of the EU Landing Obligation: The Baltic Plaice Example* (Publications Office of the European Union 2015) 10 <<https://data.europa.eu/doi/10.2861/808965>> accessed 6 May 2022.

¹⁹⁹ Lars O Mortensen and others, 'Identifying Choke Species Challenges for an Individual Demersal Trawler in the North Sea, Lessons from Conversations and Data Analysis' (2018) 87 *Marine policy* 1, 1.

²⁰⁰ *Ibid.*

²⁰¹ Penas Lado (n 160) 115.

The fact that the relative stability key is no longer reflecting the fishing opportunities of the MS, a mechanism that creates flexibility in quota exchange and adaption so called “Quota swapping” (QS) became an important tool for fisheries right allocation.²⁰² The QS is a voluntary mechanism without legal basis, and it exists since the invention of TAC in 1983. Currently, approximately 17% of the existing quotas are swapped among stakeholders.²⁰³ Quotas are public legal rights, any share of which can be exchanged between Member States, individual fishermen, between companies or within companies.²⁰⁴

However, the practice of QS suffers from a massive lack of transparency. From a legal point of view, the quotas are "public legal entitlements" which, according to the Aarhus Convention, are supposed to be accessible to the public as information.²⁰⁵ Accordingly, "access to information" includes all "environmental information" of a "public authority".

The quotas include information on the permitted amount of a fish species that may be exploited from the marine ecosystem and thus directly concerns an "element of the environment" and it indirectly concerns the interactions between the different elements due to various ecosystem interruptions through fishing activities.²⁰⁶ The quotas are the result of European legislation that directly affects the environment and are therefore issued by a “public authority”.²⁰⁷ In the sense of a broad interpretation, the "conditions of human life" are affected by European legislation, as the CFP should not only contribute to the conservation of marine ecosystems but also to food security.²⁰⁸ Thus, access to information must be granted.

²⁰² Ellen Hoefnagel, Birgit de Vos and Erik Buisman, ‘Quota Swapping, Relative Stability, and Transparency’ (2015) 57 *Marine policy* 111, 112–113.

²⁰³ *Ibid* 113.

²⁰⁴ Penas Lado (n 160) 122.

²⁰⁵ Art. 1 Aarhus Convention.

²⁰⁶ Art. 3 (a) Aarhus Convention.

²⁰⁷ Art. 3 (b) Aarhus Convention.

²⁰⁸ Art. 3 (c) Aarhus.

Consequently, there is to be public transparency regarding the quota distribution and the QS based on it in the sense of a holistic transparency if no derogation rule is applicable.²⁰⁹ According to this provision a request for environmental information may be refused, if the disclosure would adversely affect confidentiality of commercial and industrial information in order to protect a legitimate economic interest.²¹⁰ The EU has made use of this exception in this respect through the provision of Art. 113 (1) Regulation 1224/2009. This states that

"Member States and the Commission shall take all necessary measures to ensure that data collected and received under this Regulation are treated in accordance with the applicable rules on professional and business secrecy".

The term "data" refers to all data that are reliable for the CFP, i.e., also the quota distribution and QS. The terms "professional and business secret" are not defined in Regulation 1224/2009, but for the sake of a coherent understanding of the European term, Directive 2016/943, which subsumes it as "business secret", is used to clarify the meaning. Based on Art. 2(1) of Directive 2016/943²¹¹, it must be a secret in the sense that "is not generally known or readily accessible within the circles which normally handle that type of information".²¹² This does not fulfil the requirements to be defined as a "secret" and therefore not a "trade secret". As already mentioned, the quotas are public legal entities, since they concern the exploitation of a public good ("marine biological resources"). This entity will always remain of a "public legal" nature until it expires, i.e., as soon as the quota in question is exhausted or expired. regardless of whether it is traded between member states, natural persons or legal entities. If the entitlement (quote) is sold, the contract of sale is of a private law nature, but this does not affect the nature of the quota. Consequently, a possible sales contract may contain secrets that fall under the "trade secret", but not the properties of the entitlement. This is because both the TAC and the distribution of quotas take place through a public act

²⁰⁹ Art. 4 (4) Aarhus.

²¹⁰ Ibid.

²¹¹ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure OJ L 157/1 (953/2016).

²¹² Art. 2 (1) 943/2016.

(Annual TAC Regulation), and the distribution of MS quotas to the fishing industry takes place through public tenders. The result of a public tender is also published for reasons of transparency, so that theoretically there is no point in the entire award procedure at which the current status and holder of the "public legal entitlement" is not known. Consequently, at no point in time can it be a "secret" and ultimately also not a "trade secret", so that Art. 113 (1) 1224/2009 does not constitute an exception to Art. 4 (4) Aarhus with regard to QS.

The more precise assessment of the protection of " professional and commercial secrecy" data is certainly beyond the scope of this paper, but it cannot be denied that the basic disclosure of QS is in the spirit of the "good governance principles"²¹³ and a successful implementation of the EAFM, as it is so far impossible to survey the dimension of QS practices in their entirety. A holistic overview would provide the opportunity to make the QA system more efficient and to ensure a more efficient and sustainable exploration of living marine resources with the help of best available science. According to *Lado* this solution would be appropriate to better deal with the problem of choke species, as it would be foreseeable which MS would (or would not) use their choke species quota and thus QS could better meet the needs of the fishing industry.²¹⁴

Ultimately, the LO is based on a standardised system that tries to compensate for negative effects through mechanisms based on fragmented legal bases and a complex and intransparent QA system. The result is that stakeholders trade off a common pool resource that is inaccessible to the public, when in fact the fishery could be managed more effectively, ultimately avoiding more bycatch.

Flexibility Mechanisms

A second major critic is the design and cumulative effects of the flexibility mechanisms. The purpose of these is to reduce the residual level of inevitable discards.²¹⁵

²¹³ Hoefnagel, de Vos and Buisman (n 202) 118.

²¹⁴ Penas Lado (n 160) 123.

²¹⁵ Ibid 124.

The first exception to the LO is the “de minimis rule” according to Art. 15 (4) (c), (5) CFP. Accordingly, up to 5% of the by-catches of all species subject to the LO do not have to be counted towards the remaining quotas if either an increase of selectivity is very difficult to achieve, or the handling of unwanted by-catches causes disproportionate costs.²¹⁶

The STECF mentioned in its 2019 LO-report that the number of applications for the derogation of disproportionate costs is increasing and that it does not have the capacities to assess all factors and requirements for an economic analysis of “disproportionate costs”.²¹⁷ So far it is an indefinite legal term which leaves a wide space for discretion, and it does not differentiate which costs can be subsumed under this term. Hereby, costs can occur in terms of inter alia discards of non-commercial species, costs for measuring/estimating the levels of discard, forgone income of juvenile and adult target species etc.²¹⁸ Therefore, the STECF must analyse the application of the rule based on “generic information” and a call to establish an analytical framework was unheard so far.²¹⁹

In application of the derogation rule the problem of “combined de-minimis” originates. Accordingly, the purpose of the exception is undermined in that the total of all de minimis surpluses (max. 5%) for the corresponding number of quotas averages 5% per quota, but more than 5% discard can arise per individual quota.²²⁰ This problem has not yet been the subject of legal proceedings, but this regulatory gap still exists. Overall, there are legal loopholes and uncertainties to exceed the amount of discard which ultimately results in a higher impact on the marine ecosystem.

²¹⁶ Art. 15 (5) (c) CFP.

²¹⁷ ‘STECF 19-08 - Evaluation LO JRs.Pdf - Landing Obligation - European Commission’ 10
<https://stecf.jrc.ec.europa.eu/reports/discards/-/asset_publisher/b1zP/document/id/2567734?inheritRedirect=false&redirect=https%3A%2F%2Fstecf.jrc.ec.europa.eu%2Freports%2Fdiscards%3Fp_p_id%3D101_INSTANCE_b1zP%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn2%26p_p_col_pos%3D1%26p_p_col_count%3D2> accessed 19 March 2022.

²¹⁸ Maria Amparo Perez Roda and others, ‘A Third Assessment of Global Marine Fisheries Discards’ (2019) 663 21.

²¹⁹ ‘STECF 19-08 - Evaluation LO JRs.Pdf - Landing Obligation - European Commission’ (n 217) 10.

²²⁰ Penas Lado (n 160) 124.

A second flexibility mechanism of the LO is the discard because of “high survival rates” (Art. 15 (4) (b) CFP. Again, this is an indeterminate legal term, whereby an assessment on a case-by-case basis is indispensable, especially in the case of life discards, since the “survival rate” depends on many factors that cannot be generalised (e.g. type of fish, fishing gear, air exposure, catch time, catch depth, etc.).²²¹ Therefore, the STECF demands that data is needed not only regarding the point of release, but also regarding post-release and so far this data is only insufficiently available. Thus, in these scenarios the PA is about to be applied, because the absence of relevant survival data must be reflected in precautionary decision-making with *inter alia* a “dead-discard reflection” in the relevant TAC.²²² Thus, the low scientific knowledge about the survival rates create an indefinite impact on the marine ecosystems. The problem with these two exemptions lies less in the individual legal formulation, but rather in the cumulative effects of potentially exceeding the 5% *de minimis* rule and the absence of scientific data. This results in more discards than foreseen in the LO and reflected in the TACs.

To strengthen the implementation of the EAFM it is necessary to clarify vague legal terms, minimum requirements for MS to be able to justify the existence of an exemption.

In order to further prevent the circumvention and misuse of the flexibility mechanism the data collection on vessels needs to be further improved. This includes both technical controls and the successful participation of the fisheries sector, which has so far not been interested in reducing bycatch due to the above-mentioned concerns.²²³ Furthermore, the discards must not be counted in the TACs to the extent that the TAC exceeds the proposed scientific MSY, as otherwise fishing would not be at a sustainable level.²²⁴ However, STECF also emphasises that it is much more important to prevent discards and bycatch through improved selective fishing methods than to repressively pursue compliance with exemptions.²²⁵

²²¹ Marie Morfin and others, ‘Narrowing down the Number of Species Requiring Detailed Study as Candidates for the EU Common Fisheries Policy Discard Ban’ (2017) 77 *Marine policy* 23, 26.

²²² ‘STECF 19-08 - Evaluation LO JRs.Pdf - Landing Obligation - European Commission’ (n 217) 11–12.

²²³ David Soto-Oñate and Ana C Lemos-Nobre, ‘The European Union Landing Obligation: The Compliance Problems Derived from Its Multilevel Approach’ (2021) 132 *Marine policy* 104666, 7–8.

²²⁴ ‘STECF 19-08 - Evaluation LO JRs.Pdf - Landing Obligation - European Commission’ (n 217) 41–42.

²²⁵ *Ibid.*

A second aspect for failure of the EAFM within the LO are the cumulative effects of the lack of support of the fishing industry, the centralised flexibility mechanism and a decentralised compliance and enforcement control.²²⁶

Ultimately, the LO is based on a standardised system that tries to compensate for negative effects through mechanisms based on fragmented legal bases and a complex and intransparent QA system. The result is that stakeholders trade off a common pool resource that is inaccessible to the public, when in fact the fishery could be managed more effectively, ultimately avoiding more bycatch.

3 Norway

3.1 Background

3.1.1 National circumstances for fisheries management

Since agriculture is of minor importance in NOR fishing has always been well anchored culturally and economically as a source of food and trade. Compared to Central and Southern Europe, Norway is much less densely populated with its 5.5 million inhabitants, most of whom live in smaller settlements except for a few large cities in the south.²²⁷ Norway is considered a role model in fisheries management, as it implemented many of the European CMs earlier and also came out on top in international comparisons of compliance rates with FAO COCRF.²²⁸

Fisheries management is part of public law and it is managed by the Ministry of Trade, Industry and Fisheries concerning the management of Sea Fisheries and the Ministry of Environment concerning the protection of biodiversity and water resources.²²⁹ Norway has a tradition

²²⁶ ‘Study EU Fisheries Policy_REV 2-Original.Pdf’ 109–111 <https://www.europarl.europa.eu/cms-data/187020/Study%20EU%20Fisheries%20policy_REV%202-original.pdf> accessed 19 March 2022.

²²⁷ ‘Environmental Law in Norway’ (2011) 26 Reference & Research Book News 16–17.

²²⁸ Peter Gullestad and others, ‘Changing Attitudes 1970–2012: Evolution of the Norwegian Management Framework to Prevent Overfishing and to Secure Long-Term Sustainability’ (2014) 71 ICES journal of marine science 173, 2.

²²⁹ ‘Environmental Law in Norway’ (n 227) 60.

of enacting framework legislation in the area of public law at the state level, which gives the implementing authorities a wide room of discretion in the implementation of policies and measures.²³⁰ This is intended to promote an active policy of regional development due to the great distance between the respective cities, in order to be able to take sufficient account of local needs in individual cases.²³¹ In terms of fisheries management the MRA and Nature Diversity Act build the legal basis and implement the EA horizontally. The EA is also implemented vertical in the MRA and is therefore equivalent to the EU implementation.

Concerning the problems of unsustainable fisheries NOR learned its first lessons during the late 1960s when the Spring Spawn herring stocks collapsed due to massive overfishing and overcapacity and second in the collapse of the North Sea cod and capelin in the 1970s.²³² The structural elements which supported the collapses were inter alia the open access to fisheries, large fishing gear, unsustainable subsidies, and the absence of international and national regulatory measures.²³³ In response to this the Norwegian Government (Regjeringen) changed its fisheries policy by closing all offshore fisheries for new entrants in 1973, aiming for the phase out of unsustainable subsidies during the 1980s, end overfishing and enhancing cooperation with Russia and the EEC on economically important shared stocks.²³⁴ Until then, Norwegian fisheries were characterised by small-scale vessels within the coastal areas and an industrialised fleet within the EEZs which was extended to 200 nm in 1976.²³⁵ Since the limitation of access, all existing quotas are only allocated to the quota holders entitled at the time of closure, so that, in contrast to the EEC, it was not possible to acquire quotas without acquiring them through the licence aggregation system. Nevertheless, the TACs were not set at sustainable levels, so the problem of overfishing could not be ended.

²³⁰ Ibid 21, 31.

²³¹ *ibid* 22.

²³² Gullestad and others, 'Changing Attitudes 1970–2012' (n 228) 3.

²³³ *ibid*.

²³⁴ *ibid* 4.

²³⁵ 'Environmental Law in Norway' (n 227) 228.

Subsidies peaked in the 1980s and supported the problem of overcapacity and were subsequently used to incentivise the scrapping of vessels.²³⁶ This way to reduce overcapacity was later replaced by the system of licence aggregation.²³⁷ This entails the possibility for especially small-scale fishermen to sell their fishing opportunities including their boat to a buyer. The buyer received the fishing opportunity and the (often less wanted) boat in return and thus fishing was supposed to become more effective with less fishermen fishing for the same capacity.²³⁸ Parallel attempts were made to improve the exploitation pattern, with real-time closures and discard bans for cod and pollock being applied as conservation measures since 1984 and 1987 respectively.²³⁹ The discard bans now cover almost all exploited species.²⁴⁰

The 1990s began with the collapse of the Northeast Arctic Cod stocks and most coastal areas were closed for fisheries due to overfishing.²⁴¹ This stood in harsh contrast to the open access to fish and was only slowly accepted among stakeholders that such emergency measures were necessary to stop overfishing.²⁴² The Coastal Fisheries became subject to access regulation since then.²⁴³

The decade from 1992-2002 marked for Norway also a big step forward in the development of environmental law. Norway ratified and implemented the 1992 Rio Conference, the CBD-Convention, UNFSA, the 1995 COCRF, the Aarhus-Convention.²⁴⁴ In 1994, the EEA Agreement was finally signed, explicitly excluding environmental concerns and fisheries management, and consequently, fisheries management remained an exclusively national matter.²⁴⁵

²³⁶ Gullestad and others, 'Changing Attitudes 1970–2012' (n 228) 4–6.

²³⁷ Ibid.

²³⁸ Ibid.

²³⁹ Gullestad and others, 'Changing Attitudes 1970–2012' (n 228) 4–6.

²⁴⁰ Ibid.

²⁴¹ Gullestad and others, 'Changing Attitudes 1970–2012' (n 228) 4.

²⁴² Ibid.

²⁴³ Ibid.

²⁴⁴ 'Environmental Law in Norway' (n 227) 55–56.

²⁴⁵ Ibid.

3.1.2 Design of the MRA

The Marine Resources Act was adopted in 2008 and builds the vertical pillar of the EAFM. Similar to the CFP, the MRA aims to "ensure sustainable and economically profitable management of wild living marine resources and genetic material derived from them, and to promote employment and settlement in coastal communities".²⁴⁶ Consequently, ecological, economic and social goals are to be reconciled as in the CFP. Like the CFP, the MRA covers all "wild living resources" and all activities "in connection with harvesting and other utilisation of catches" except anadromous species such as inter alia salmon and sea trout.²⁴⁷ In the application of this law, the relevant international agreements and international law must be applied.²⁴⁸ In contrast to the CFP, where such considerations are only found in the Recitals, the vertical dimension of the EA is enshrined in Art. 6 MRA.²⁴⁹ In addition to the precautionary approach, the EA is also understood as a principle of the MRA. This means, that in contrast to the CFP, the possible considerations must be taken into account in decision-making, because principles have a binding effect if they are based in legal acts like here.²⁵⁰ Although the EA is not explicitly defined in the MRA, it must be included in all policy sectors due to the integration principle, which states that environmental objectives and considerations of must be incorporated in all sectors.²⁵¹ It cannot be denied that the "consideration" of the EA is intended to allow environmental concerns to be better taken into account.

Consequently, the definition of the "ecosystem approach and cumulative environmental impact" which states that "any pressure on an ecosystem shall be assessed based on the cumulative environmental effects on the ecosystem now or in the future"²⁵² must be included in the meaning of the EA within the MRA.²⁵³ Consequently, the adoption of the CM based on the

²⁴⁶ Art. 1 MRA.

²⁴⁷ Art. 3 (1), (2) MRA.

²⁴⁸ Art. 6 MRA.

²⁴⁹ Recital (2), (5), (9) CFP.

²⁵⁰ Gerd Winter, 'International Principles of Marine Environmental Protection', *Handbook on Marine Environment Protection* (Springer International Publishing 2017) 586.

²⁵¹ 'Environmental Law in Norway' (n 227) 35.

²⁵² Art. 10 Nature Diversity Act.

²⁵³ Art. 7 (2) (b) MRA.

MRA must also consider cumulative environmental effects through this legally binding linkage.

3.2 Quota system

3.2.1 Legal design

The legal basis for the “National quotas” is in Chapter 3, Section 11-14 MRA and the objective is to promote precautionary management due to the fishery crisis in the past and gained scientific knowledge.²⁵⁴ The national quota promotes effective resource management and aim to out-phase the problems of overfishing, overcapacity and unsustainable resource exploitation. The national quotas are defined as “the maximum permitted quantities of wild living resources that may be harvested”²⁵⁵ and are shaped with the above-mentioned principles in the legal interpretation and implementation. The characteristics of the national quota are similar to the EU-TAC in that they allow a certain amount of wild living resources to be harvested over a certain period of time. The quota are stock-specific assessments, and they are interconnected with the objectives of increasing the economic output while improving exploitation patterns and discard management, optimising long-term economic yield, and incorporate new scientific knowledge.²⁵⁶

The national quota is divided into a "group quota" and a "district quota". The former is understood here as "maximum permitted harvest for each vessel group, gear group, or other defined group" and is directly addressed to the fishermen.²⁵⁷ In contrast to the CFP regulations, it is explicitly stipulated that the total of the group quotas may not exceed the national quotas,²⁵⁸ as otherwise there would be no compliance with the above-mentioned principles.

²⁵⁴ Peter Gullestad and others, ‘Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts’ (2017) 77 *Marine policy* 104, 105.

²⁵⁵ Sect. 11 (1) MRA.

²⁵⁶ Gullestad and others, ‘Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts’ (n 254) 105.

²⁵⁷ Sec. 11 (2) MRA.

²⁵⁸ See 11 (1) MRA.

The group quotas from Section 11 MRA are then passed on to each vessel under Section 12 MRA in the form of the so-called "Individual Vessel Quota" (IVQ). In principle, only vessels that either hold a licence granted at the point of limitation of access or are affected by Section 12 (2), (3) MRA are the addressees of the IVQ.

The IVQ were introduced in response to the 1990 cod crisis to tackle problems of overcapacity, to promote decentralized quota sharing, and to make fishing more effective in terms of profitability and ecological impacts.²⁵⁹ Therefore, it was necessary to limit the access to fishery resources through restrictions. The government aimed to adopt a flexible management mechanism that can generate more profitable fisheries.²⁶⁰ In its first adoption the IVQ-system was divided in two groups. Group I addressed mainly the offshore vessels and covered active vessels which made up 90 % of the total TAC.²⁶¹ The vessels received exclusive quota rights with full discretion when and where to fish. Group II covered mainly the Coastal vessels and allowed fishing without restriction as long as the vessel was registered.²⁶² After the cod-stocks recovered the "fine-tuning" started by addressing the overcapacity of the coastal fleet. Therefore, the Structural Quota System was introduced which covers meanwhile also the offshore vessels and allows to trade licenses and annual permits, but only if the vessel is traded.²⁶³ This system is going to be reconciled in 2024 and resulted so far in the stabilisation of the vessels profitability, structural adaption and efficiency improvement and the reduction of participating vessels.²⁶⁴ Additionally, the IVQ system enables the government to adjust the

²⁵⁹ 'Introducing Market-Based Reforms to Manage Overcapacity in Norway | READ Online' (*oecd-ilibrary.org*) 1–5 <https://read.oecd-ilibrary.org/agriculture-and-food/fisheries-policy-reform/introducing-market-based-reforms-to-manage-overcapacity-in-norway_9789264096813-5-en> accessed 6 April 2022.

²⁶⁰ Ibid.

²⁶¹ 'OECD Review of Fisheries 2011: Policies and Summary Statistics | READ Online' (*oecd-ilibrary.org*) 35–36 <https://read.oecd-ilibrary.org/agriculture-and-food/oecd-review-of-fisheries-2011_9789264129306-en> accessed 6 April 2022.

²⁶² Ibid.

²⁶³ Ibid 37.

²⁶⁴ Ibid, p. 41-43.

vessel capacities to the natural resources and to incentives technical improvement in order to keep the fishing permits.²⁶⁵

The IVQ system reflects several approaches of the 2002 FAO report for the implementation of the EA. First, by reducing overcapacity, the pressure of fish on the marine ecosystem can be reduced, thus promoting the rebuilding of depleted stocks and the rehabilitation of critical habitats.²⁶⁶ Secondly, the reduction of harmful subsidies that promote *inter alia* overcapacity is a component of the improvement of conventional management measures.²⁶⁷ Thirdly, by increasing the profitability of fisheries, coastal communities can be targeted, so that fisheries can once again create a sustainable livelihood.

All stocks are managed on the basis of precautionary management, but they are analysed with different objectives and methods in order to make the most efficient use of the available human and financial resources.²⁶⁸ Norway prioritises the individual stocks according to the amount of data available and their economic importance, and thus divides them into "economically most important", "stocks of some economic importance" and "stocks of low economic importance and non-commercial species".²⁶⁹ The purpose of prioritising "economically most important stocks" is to enable the fishing industry to be as compliant as possible, as they also have a long-term economic interest in preserving their earnings base. Another reason is that the fishing of these stocks is, in terms of quantity, the greatest intervention in the ecosystem through the disruption of food chains and ecosystem composition. These stocks represent 85% of the "first hand value" and are fished within the "economically optimal long term sustainable yield".²⁷⁰

²⁶⁵ Ibid.

²⁶⁶ FAO 2002, p. 30-31.

²⁶⁷ FAO 2002, p. 28

²⁶⁸ Gullestad and others, 'Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts' (n 254) 105–106.

²⁶⁹ *ibid.*

²⁷⁰ Gullestad and others, 'Changing Attitudes 1970–2012' (n 228).

“Stocks of some economic importance” which reflect 5-7 % of the first-hand value are being managed with precautions measures due to the lack of scientific evidence.²⁷¹ Most of these stocks occur in coastal waters and are fished by small-scale fishermen and recreational angler. Therefore, the data on the impacts of discards, catches and mortality are not available, but it aims to manage these stocks in the long-term either within MSY or Maximum Economical Yield.²⁷² So far, the focus is on ensuring a stable long-term sustainable yield.²⁷³

“Stocks of low economic importance and non-commercial species” are managed within the management principle²⁷⁴ due to the lack of data and economic interest. Therefore, it must only be assumed that these stocks and species are “sustainably managed” while preserving biodiversity and ecosystem function.²⁷⁵

With regard to the national quotas, it depends on the classification of the stock which reference points are used to determine the quota. In the stocks where sufficient scientific data are available, limit reference points referring to stock specific, absolute values of spawning stock biomass and fishing mortality are used.²⁷⁶

For stocks with insufficient data, precautionary reference points are set based on Art. 6 (3) (b), Annex II (1) UNFSA, so that the reference points are based on either conservation, or limit, reference and management, or target reference points.

With regard to the legal basis of the stock assessment, the scientific and legal framework in which the quota assessment has to take place is neither explicitly stated in the MRA nor in any of the regulations based on it. The only parameters for the "national quota" are derived from the regional management plans, harvest rules and the principles of sections 7.6 of the

²⁷¹ Gullestad and others, ‘Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts’ (n 254) 106.

²⁷² *ibid.*

²⁷³ *Ibid.*

²⁷⁴ Sec. 7 (3) MRA.

²⁷⁵ Gullestad and others, ‘Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts’ (n 254) 106.

²⁷⁶ Gullestad and others, ‘Changing Attitudes 1970–2012’ (n 228) 7.

MRA. In the latter case, it can be concluded through a systematic interpretation that the national quotas must be applied in compliance with international law. The substantive scope of the relevant interpretation results from the relationship between Norwegian law and international law, as there are no specific provisions in the MRA for the application of the PP or EA.

Norway applies the dualist principle and therefore international law must be implemented through a national law, but international law is also used as a source of interpretation of national law.²⁷⁷ In a case like here, in which no obvious implementation act about more specific requirements of the EA or PP exists, "the principle of presumption" applies.²⁷⁸ This states it must be presumed that Norwegian law is in line with international law if nothing more precise is regulated.²⁷⁹ Consequently, in the sense of a coherent understanding of the term, it is assumed that at least the legally binding elements of the PA and EA derived from the relevant international legislation apply in the MRA.²⁸⁰

The reference points of the PP under the UNFSA provide the legal basis for the reference points used in Norway. Regarding the legal resilience of quota-setting, there are no substantive framework provisions in the MRA, but a link to the reference points in section 7 (2) (a) MRA is established by the word "guidelines" in connection with the precautionary approach, as the UNFSA also speaks of "guidelines" in relation to reference points. This can be understood as an indicator for the application of the "principles of presumption", as this link indicates a consistent interpretation of the terms. Nevertheless, even with this legal design, there is a risk of non-ecosystem-based discretionary decisions, since ecological interests have to be weighed against social and economic interests, and "economic profit" is also an objective of the MRA.

However, to avoid the exploitation of such a flexible design of the quota setting and to promote the implementation of EAFM, Fisheries and Stock Tables have been introduced into the

²⁷⁷ 'Environmental Law in Norway' (n 227) 61–62.

²⁷⁸ Ibid.

²⁷⁹ 'Environmental Law in Norway' (n 227) 62.

²⁸⁰ Ibid.

quota setting as a decision support tool.²⁸¹ These are practical tools to solve and prioritise existing conservation and profitability problems, as they illustrate either problems related to fish stocks or fishery-selectivity for the stakeholders.²⁸² The tables form the basis for decision-making and indirectly serve as a common ground for the reconciliation of opposing stakeholder positions. All unresolved issues are prioritised in the next meetings, regularly updated scientifically, and remain in the tables until they are resolved.²⁸³ The tables are compiled exclusively by scientists from ICES or Institute of Marine Research (IMR), but not by the fishing industry itself. This results in the unhindered application of the best available science and directly serves the implementation of the EAFM.²⁸⁴ In addition, the tables are fully accessible on the IMR website in the sense of the Aarhus Convention, so that the problems listed there are difficult to neglect "with one eye open". The tables are in line with the purpose of the EA, as they categorise habitat and ecosystem impacts and highlight areas where action is needed.

Although this tool is a result of the implementation of the MRA, it has no legal basis in the MRA and is legally non-binding. Thus, there is no legal resilience for this EA tool, as the tables can no longer be applied or replaced at any time without a decision, so that the application of the table depends more on the stakeholders than on the legal design. However, the strength of this legal design lies in the adaptability and flexibility of the available choice of measures, as decisions are made based on the PP and Fishery and Stock specific problems are illustrated and prioritised. In addition, all relevant principles of international law are to be followed through the principle of presumption. Furthermore, the tables could also ensure that the fishing industry's acceptance and willingness to compromise with scientists was strengthened. Although there is no legal resilience of the EA basics, there is a certain degree of adaptivity for the implementation of the EA.

²⁸¹ Gullestad and others, 'Towards Ecosystem-Based Fisheries Management in Norway – Practical Tools for Keeping Track of Relevant Issues and Prioritising Management Efforts' (n 254) 106–109.

²⁸² Ibid.

²⁸³ Ibid.

²⁸⁴ Ibid.

3.2.2 Decision-making

In the following, the decision-making process is going to be analysed to identify where EA is implemented and applied. The decision-making takes place in a centralised top-down approach at which end the Ministry issues the relevant quota.²⁸⁵ The decision-making must be seen in the light of the Norwegian Fisheries characteristics and public-private decision-making.²⁸⁶ The Norwegian fisheries are characterised by a multitude of conflicts between regionals, offshore and inshore fishermen, and processing and harvesting stakeholders.²⁸⁷ The public-private policy making provides a link between the state and civil society to ensure a wide stakeholder participation as they are mainly responsible to comply with the fisheries regulations and to guarantee the best compliance-result possible.²⁸⁸ The private interest groups can either be represented directly through formalized structures like boards and committees or indirectly with delegated public authority in specific issues areas.²⁸⁹

The decision-making is based on scientific advice that originates either from the ICES regarding shared stocks or from the IMR regarding national stocks. The assessments are based upon the precautionary approach and rely on the best available data. The respective quota are forwarded to “The Fisheries Directorate”. The Directorate is an advisory and executive agency for the Ministry and proposes quota and monitors that these are not exceeded. In the decision-making the Directorate closely cooperates with the “Management Council” and the Ministry. The Management Council is also an advisory council and is chaired by the Directorate.²⁹⁰ The Council is composed of representatives from the harvesting and processing industry which held nine of eleven seats.²⁹¹ The Directorate and the “Public” (Aarhus) are only allowed to take place as observers. The task is to advice the Directorate in respective matters based on

²⁸⁵ Knut H Mikalsen and Svein Jentoft, ‘Limits to Participation? On the History, Structure and Reform of Norwegian Fisheries Management’ (2003) 27 *Marine policy* 397, 399–403.

²⁸⁶ *Ibid.*

²⁸⁷ *Ibid.*

²⁸⁸ *Ibid.*

²⁸⁹ *Ibid.*

²⁹⁰ *Ibid.*

²⁹¹ *Ibid.*

the material (e.g. Stock and Fishery Tables) and the agenda which was prepared by the Directorate. There is no legal basis for the exact work procedure, so it is basically informal.²⁹² The prioritisation of the topics can only be derived from the agenda or the materials and there is no legal basis for the exact procedure of the Councils meeting²⁹³ The instructions issued by the Council are usually "the backbone of the next years management plan".²⁹⁴ The Directorate and the Council usually meet at least twice a year to keep in constant touch about changes and adjustments to be made. The opinions resulting from this process are forwarded to the Ministry which must adapt the decisions and bears the legal and political responsibility for those.²⁹⁵

Throughout this process, the IMR can act as a consultative body in a dual role. On the one hand, its recommendations form the basis for the decision-making process and, on the other hand, it advises the Ministry on the adoption of the quotas.²⁹⁶ In the entire decision-making process, all participants are obliged to adhere to the principles of the MRA. This is not regulated in the MRA, but rather arises from a systematic and teleological interpretation, since they must act within the framework of their delegated power and consequently also within the framework of the principles of Section 7.

The main object of current criticism is that in the decision-making process, the Council and the Directorate have a great responsibility with regard to the decisions to be taken, but without having to bear political responsibility.²⁹⁷ This is the responsibility of the Ministry and this was partly exploited in the past, even before the introduction of the EA.

Furthermore, the distribution of seats within the Council is criticised, as a closed circle of private stakeholders is allowed to decide on the distribution and exploitation of public resources.²⁹⁸ While in the CFP the representatives of the general interest are at least entitled to vote in the ACs, representatives of the general interest only have the right to participate in the

²⁹² Ibid.

²⁹³ Ibid.

²⁹⁴ Ibid.

²⁹⁵ Ibid.

²⁹⁶ Ibid.

²⁹⁷ Ibid.

²⁹⁸ Ibid.

consultations, without, however, being allowed to make proposals, express opinions or take part in votes. This contradicts the idea of opening decision-making to a wide range of stakeholders on an equal footing. It cannot be denied that fishermen have a central role in compliance and implementation of regulations, as control mechanisms are limited, but the "public" should also be allowed to participate in such decision-making processes directly and not only through indirectly represented state bodies.

Despite these concerns, scientific recommendations form the basis for decisions on quotas. There is a high level of scientific compliance, which is not due to the legal design of the MRA, but rather to reasons outside the MRA.

3.3 Bycatch management

The Norwegian bycatch management started 1987 with a discard ban of Cod in response to the cod crisis in the mid-1980s.²⁹⁹ The discard ban was preceded by the first RCT which are nowadays only one measure of the bycatch policy.³⁰⁰ Since then, bycatch management evolved towards an obligation which includes all landed species, plants, marine mammals, and seabirds.³⁰¹

As already conducted in the legal analysis above about the EUs bycatch management this part is going to be divided in one preventative part and another part which exclusively analysis hot to deal with bycatch as soon it is landed.

3.3.1 Preventative Measures

The prevention of bycatch is regulated under Chapter 14 Sec.16, 17 MRA and deals with the conduct of harvesting operations to minimise the impacts on marine ecosystems. Due to Sec. 16 MRA the Ministry may adopt regulations including the prohibition of harvesting in certain areas or the application of devices used in connection with harvesting, permitted bycatch, and

²⁹⁹ P Gullestad and others, 'The "Discard Ban Package": Experiences in Efforts to Improve the Exploitation Patterns in Norwegian Fisheries' (2015) 54 Marine policy 1, 4.

³⁰⁰ Ibid 1.

³⁰¹ Ibid.

the design and use of harvesting gear to reduce damage to species other than the targeted species.³⁰² The objective of this provision (“minimise impact”) directly reflects the principles of impact minimization, because these measures aim towards eliminating damaging practices for habitats, targeted and non-targeted species in a preventative matter in the sense of a holistic management.³⁰³ The above mentioned scope of Sec. 16 (2) MRA reflects the same preventative measures as the CFP without naming them CM.

All measures are further specified in the law on "harvesting regulations" (høstingsforskriften)³⁰⁴ and include the geographical and substantive scope of the MRA, as this is the legal basis. In application of the Act, the principles of the MRA are also applicable and technical regulations must thus be adapted to BAT principles and on a case-by-case and site-specific basis for the fishing technique or species concerned.

In contrast to the EU, where the technical measures are issued by the MS and the EU, the technical regulations here follow a classic "top-down" approach and regulate local provisions uniformly, so that the same principles and principles with the same legal effectiveness apply to all regions and therefore legal fragmentation can be prevented.

Among the provisions, the "real time closures" are particularly noteworthy.³⁰⁵ These are spatial closures for a fishing ground if either the permitted number of bycatch regulations) is too high³⁰⁶ or the risk to the catch of juveniles and under-sized fish or bycatch in general is too high.³⁰⁷

A real-time closure can apply to a non-predefined spatial area and can in principle be decided by the head office of the Directorate of Fisheries within hours and communicated directly

³⁰² Section 17 (2) MRA.

³⁰³ FAO 2002, p. 23.

³⁰⁴ Forskrift om gjennomføring av fiske, fangst og høsting av viltlevende marine ressurser, FOR-2021-12-23-3910 (Norwegian).

³⁰⁵ Gullestad and others, ‘The “Discard Ban Package”’ (n 299) 2–4.

³⁰⁶ § 45 Harvest Regulation.

³⁰⁷ § 50 Harvest Regulation.

through the radio to the fishermen concerned.³⁰⁸ In addition, the Coast Guards have the decision-making power to establish "Precautionary Areas" and thus to take unbureaucratic interim measures for ecosystem protection if the "law and order" ("ro og orden") on the fishing and fishing grounds is threatened, for example by the violation of regulations of the "harvesting regulation".³⁰⁹ This design has the advantages that pelagic fish species can be protected at any location without being dependent on a prior restricted areas and that short communication channels and assessments can be avoided in favour of ecosystem protection.

The harvesting regulations concretise the technical regulations to this extent and are even extended to include the obligation to search for lost gear.³¹⁰ This reflects the need to prevent pre-catch losses and ghost-fishing, as well as the resulting negative impacts on ecosystems. As Norway does not define the term "bycatch" in national law, the elements of the term are to be taken from the COCRF and the 2011 FAO Bycatch Guidelines, as Section 6 MRA applies.³¹¹ This is further evidence of the existence and functioning of the principle of presumption, as Norway implements the term "bycatch" in a broad sense, although it is not international common sense to also subsume ghost-fishing and pre-catch mortality as bycatch.

Thus, the measures to avoid bycatch based on a pragmatic approach with a broad understanding of "bycatch" are an effective means to promote EAFM. The legal design of the entire regulations can be described as resilient, as there are no discretionary exemption rules, so that the regulations are clearly understandable for stakeholders and create legal certainty. In particular, the simple formulation of the exemption rules in unit numbers can be easily implemented by fishermen and easily controlled by the coast guard. Finally, the powers of the Coast Guard allow for EAFM-based and adaptive management, as it can react adequately to constantly changing circumstances.

³⁰⁸ Gullestad and others, 'The "Discard Ban Package"' (n 299) 3.

³⁰⁹ Ibid.

³¹⁰ Sec. 19 Harvest Regulation, Section 17 MRA.

³¹¹ FAO 2011, p. 17.

3.3.2 Landing obligation

The landing obligation in Norway includes all fish and these must be counted against the quotas after landing.³¹² In contrast to the EU, there are no exemptions per se, but exemptions are rather issued through "regulations" of the Ministry for site-specific bycatch problems.³¹³ The scope of the term "bycatch" also goes further than that of the EU, as "marine organisms" are covered in addition to marine mammals and seabirds.³¹⁴ This reflects the closer attention to cumulative effects on ecosystems and non-targeted specimens. There are exceptions to the LO for viable fish caught in contravention of harvest regulations or MRA, viable fish, and species exceptions.³¹⁵

In general, 10% of catches below the minimum size are allowed, but derogations are concretised.³¹⁶ Here, in contrast to the "one-fits-all" approach, a graduated system applies that sets the percentages on a scientific basis and does not represent an exclusive economic compromise. The regulation of § 49 is comparable to the de minimis regulation of the CFP and takes into account the fact that bycatch is unavoidable. In the Norwegian version, however, the LO applies to undersized bycatch, so that this must be counted against the quotas. In contrast, in the CFP (Art. 15 (4) (c)), the LO does not apply and de minimis catches do not have to be counted against quotas. Consequently, to a certain extent, additional ecosystem impact is allowed without any incentive for change in the future. In comparison, in the Norwegian version, the "permitted bycatch" is found under Section 16 with the aim of minimising ecosystem impacts, so that in the long term the permitted quantities of undersized fish can be further minimised. In addition, too many undersized fish trigger a reason for a real time closure, while in the EU the LO no longer applies in the same situation.

An important factor influencing the existing LO is that unlike in the EU, quota swaps cannot take place because quotas are not easily transferable. Consequently, fishermen have a preven-

³¹² Sec 15 (1) MRA.

³¹³ See Chapter 11 Harvesting Regulation.

³¹⁴ Section 15 (2) MRA.

³¹⁵ § 51 Harvesting Regulation.

³¹⁶ § 47 Harvesting Regulation.

tive incentive to avoid bycatch and discards, as otherwise the profitability of the fishery suffers. Due to the fundamental absence of scientific data, the strict LO has the advantage that the bycatch can be fed into scientific research so that, in the best case, conclusions can be drawn on technical measures and ecosystem impacts.

Ultimately, the focus in bycatch management here is more on preventive measures than on a complex design of the LO in terms of content. The LO itself, however, leads to an incentive to avoid further bycatch, as there are exceptions only in isolated cases. However, the legal design of bycatch management essentially reflects the requirements of the FAO 2011 Guidelines on bycatch management through aspects such as the involvement of stakeholders, compliance with BAT, adaptive RCT and a simplified form of communication among fishermen through radio. Ultimately, it can be said that the implementation of EAFM is also based on pragmatic and adaptive principles without showing great legal resilience.

This is supported by a broad stakeholder acceptance, since on the one hand there has already been improved bycatch management since the cod crisis and there is therefore sufficient experience in dealing with it, and on the other hand scientific advice is generally heeded, so that the compliance rate with the regulations is higher than in the EU.³¹⁷

4 Discussion

With regard to fisheries management, it can be said that there are significant differences in the legal design of the CFP and MRA which reflect on the TAC and bycatch management.

Firstly, the CFP is characterised by an open market in which new fishery participants can apply for quota allocation,³¹⁸ whereas in Norway the limitation of accession results in a closed market and the number of quota holders tends to be reduced by the IVQ system to achieve greater efficiency in the fishery.³¹⁹

³¹⁷ Stig S Gezelius, 'Monitoring Fishing Mortality: Compliance in Norwegian Offshore Fisheries' (2006) 30 *Marine policy* 462, 468.

³¹⁸ Penas Lado (n 160) 355.

³¹⁹ Dag Standal and Frank Asche, 'Hesitant Reforms: The Norwegian Approach towards ITQ's' (2018) 88 *Marine policy* 58, 137.

Second, in the EU, EAFM and PA are designed as concepts in the CFP and not as principles as in the MRA. Therefore, the Norwegian implementation goes beyond the international commitments. Concepts are formulated in general terms and are not to be considered as legally binding and the normative character is decisively shaped by the embedding in the respective law. A principle must be integrated in a legally binding manner during the decision-making process and its application is also justiciable. This different weighting is reflected in the design of EA(FM)-based CMs, as within the CFP the non-compliance with the EAFM can be justified within the framework of proportionality.

Thirdly, the MRA does not define the EA or PP and is thus weakened in its adaptivity to the implementation of the EA, because no legal foundations for the interpretation of the term are existent. The meaning of the MRA principles is determined by the presumption principle and through this, legally binding international agreements must be implemented if national law does not regulate anything in this regard. This can be considered as successful in the case of Norway, as measures are basically based on best scientific recommendations and accepted by decision-makers, which strengthens the resilience of EA implementation in fact. In contrast, the EU defines EAFM proactive as an integrated approach to manage fisheries within “ecologically meaningful boundaries”. The problem with the design of the EAFM is that the definition of the term and the objective are not further substantiated in the law, which would make it possible to create a materially binding framework that must be observed in the application and implementation. This problem is exacerbated by non-binding nature of the concept combined with undefined legal terms which hamper an effective implementation even more. Although in the CFP cumulative impacts from other horizontal sectors are to be considered in decision-making, linkages are found at most in the Recitals and not in the legally binding articles themselves so that these impacts are easily disregarded. In comparison to that, in Norway cumulative impacts on habitat and biodiversity must be included in decision-making in a legally binding way through the designation as a principle and the mention in Art. 7 (2) (b) MRA, as this passage links to Art. 10 Nature Diversity Act. Furthermore, compared to Norway, it is not possible to judicially review a disregard or breach of EAFM principles. The undefined legal terms and lack of justiciability cumulatively weaken the relevance and legal resilience of the EAFM, as access to information and justice are effectively made impossible for the public and the judiciary. The effect is that existing practices can continue as in the past and EAFM-consideration continue to be disregarded. Ultimately, the existence of a definition

does not determine the success of the implementation. Even if the definition of EAFM in the CFP appears at first glance to be more resilient than the design in Norway, it shows that the degree of legal bindingness of the EA(FM) and access to the relevant information have a central role in the implementation.

Fourthly, the CFP is characterised by a larger number of multilevel institutions and stakeholders than in Norway. While in Norway the CM is issued exclusively by the Ministry of Fishery and the subordinate institutions, the CM in the CFP are basically based on the measures and proposals of the MS due to the sovereign rights over natural resources. In the case of the TAC, a decision must be taken by the Union and the quotas are allocated to the MS and the applicants as individuals on the basis of the principle of relative stability. In contrast, in Norway, quotas are issued directly by the Ministry to the entitled vessels and the quotas are linked to the ownership of the entitled vessels. Therefore, the EAFM adaptivity is only comparable to a limited extent in this respect, as decision-making processes in a more complex multi-level system by their nature require more time and resources due to the involvement of the relevant institutions. Nevertheless, the legal requirements for decision-making and the substantive requirements to issue a quota can be compared in terms of on which data, are used, how transparent decisions are made, and which stakeholders are represented.

Fifth, the differences in the implementation of the EA(FM) are also significantly shaped by stakeholder acceptance and compliance between the EU and Norway as a decisive factor of resilience. While in the EU there is massive discord and mistrust on the part of the public, within fisheries participants, and scientists, this is the basis for the lack of resilient legally binding anchors of minimum standards for decision-making. The involved stakeholders are not clear about the division of roles in the decision-making, and it seems like that this is not about to change. Therefore, scientific data are only part of the "consultation" and are considered equivalent to economic advice.

In Norway, CMs are made through public-private decision-making and the fishing industry is significantly involved, and the scope for decision-making is within scientifically defined frameworks. However, it should also be pointed out that sustainable fisheries management has been practised in Norway since the mid-1980s and it might be concluded that both man-

agement strategies are in different stages of acceptance, because direct stakeholder involvement only exists since 2002 without significant changes.³²⁰ Although the assessment of cultural and historical differences in terms of legitimacy and voluntariness in the area of stakeholder compliance is outside the scope of this paper, it cannot be rejected that these constitute a decisive factor in the decision-making process, since no holistic control can take place at sea and the success of the CM depends largely on the participation of the fishermen.³²¹ While within the EU there has long been a general “mistrust of measures from Brussels”, in Norway it seems that there is a certain trust and compliance in CM. Consequently, the implementation of the EA in Norway can also be considered more resilient due to the level of stakeholder acceptance and voluntary action.

In the area of CMs analysed, differences have also become apparent, which are internal.

The legal resilience of TACs in the EU must be regarded as generally weak, as there is inconsistency with the legal design of TACs in a highly fragmented and complex sector and due to the insufficiently legally binding concept of MSY and PA. The decision-making of the TAC takes place within a fragmented structure that considers all represented interests as equal.

With regard to the implementation of EAFM, the concept of regionalisation through ACs is a first step, but within the ACs economic interests are mainly represented. Moreover, decision-making within the ACs takes place with data that does not have to comply with the CFP, so that ultimately there is neither legal certainty regarding the application of the Good Governance Principles, nor can the influence of the ACs on the Commission be clearly determined. The cumulative effects of the lack of legally binding consideration of scientific data, the economic misuse of the principle of relative stability, the stakeholder conflicts with predominant economic interest representation make adaptive exploitation management almost impossible and cause the EAFM implementation to fail.

While only the categories of quota are defined in the MRA, the determination of the reference points and amount of allowed catch are entrusted to the responsible scientific institution. The result builds the basis of the decision-making framework for the Management Council as an

³²⁰ Ibid.

³²¹ *ibid.*

element of public-private decision-making. The prioritisation of stock-specific and fishery-specific problems further limits the decision-making framework for the TAC and can be used as a basis for communicating opposing interest groups. Within the Management Council, however, the same concerns exist as with the AC when it comes to the adequate representation of the public interest, as economic stakeholders are overrepresented. Due trend that the fisheries sector tends to be limited to fewer stakeholder due to the IVQ, risk of an over-privatization with an unsustainable outcome arises.³²² Nevertheless, if the scope of decision is determined by best scientific advice, opposing wills can be mitigated either in a preventative way or through judicial review. Here, too, there is a clear difference in implementation. Norway relies on an adaptive strategy through pragmatic solutions such as the EAFM tools, whereas adaptivity in the EU is significantly impaired by the complexity of the factors mentioned above. An additional legal factor here is the design of the EA and PP in Norway, as these have to be taken into account in the decision-making process.

In the area of bycatch management, there are considerable differences, but also common features in the EU. The common features are that both have legally regulated RCT in conjunction with move-on obligations and the LO as conservation measures. The enforcement of RCT measures in the EU is characterised by the cumulative effects of a lack of legal certainty, multilevel discretion and the absence of a real-time element, and this is intensified by the inadequate design of the PA due to need of certainty that harm will occur. In contrast, RCT in Norway are based on the precautionary principle and is a tried and tested measure since 1984. Moreover, simple communication channels and additional powers of the Coast Guard allow for a fast and effective implementation of the measures, which is in line with the principles of adaptive EA management, as changing circumstances in the ecosystems can be taken into account through legally binding policy measures. Despite the institutional complexity in the EU, this aspect could be balanced out by a corresponding temporal element as an adaptive management element, which does not give the authorities any discretion and would ensure not only adaptivity but also legal resilience.

³²² Standal and Asche (n 319) 137.

The LO in Norway is characterised by a broad interpretation of the term "bycatch", which also includes ghost fishing. Compared to the EU, all catches must be landed and counted against quotas, whereas in the TAC only catches subject to a catch limit or minimum size must be landed. Exceptions to the LO exist only through individual cases regulated by law, while there are already exceptions within the CFP where the LO does not apply. The exceptions are characterised by a low level of stakeholder compliance, weak enforcement, and undefined legal terms, which work against a reduction of bycatch and discards. Another problem is the principle of stability and the QS system, which suffers from a massive lack of transparency, making it impossible to assess the effectiveness of fishing efforts. This is because in the EU it is allowed to freely dispose of and trade quotas in a way that does not contribute to the goal of reducing impacts on ecosystems. This is not the case in Norway due to the IVQ system, so that the quota holders cannot "optimise" them through QS. Therefore, the incentive is created from the beginning to avoid bycatch to be able to fish profitably. This can also be seen as a shift to prioritise preventive bycatch management, with the effect that fishing is kept at profitable levels and the impacts on fish stocks and habitats can be reduced. Although bycatch has already been reduced in the EU since its introduction, the actual impact on ecosystems is difficult to assess, but could be reduced even further with comprehensive and detailed regulation. It should also be noted, however, that especially in the area of compliance with the LO in Norway, experience has already existed for about 30 years and the initial opposition of the fisheries sector had to be overcome, while the EU is just at an early stage and has to overcome the oppositional fisheries sector. Ultimately, adaptivity in Norway is largely achieved through pragmatic measures rather than relying solely on legal resilience, while the EU has neither a legally resilient nor an adaptive bycatch management system.

5 Conclusion

The aim of this work was to identify different elements of the EAFM that would enable the EU to implement the EAFM more successfully to achieve environmentally sustainable fishing which could be implemented in the next reform of the CFP.

In both legal acts, fish stocks are common pool resources and not the subject of private property. In both legal systems, the economic and public sectors compete over the measures to be taken. However, since public interests have not been considered in the EU in the past, they

must be better protected by the EAFM. Public and ecosystem-based interests can only be successfully pursued and implemented if there is a certain degree of stakeholder involvement and acceptance. In this respect, Norway and the EU have different starting points and socio-cultural preconditions due to their historical developments. As demonstrated by Norway, EAFM tools can help to increase stakeholder acceptance as a basis for decision-making. In view of the ever-deepening rifts between stakeholders in the EU, a similar approach as in Norway could also take place here.

An indispensable prerequisite is to find the basis for a later willingness to compromise, for example by setting legal framework conditions. Due to the difficult socio-cultural situation in the EU, this is necessary to a much more detailed degree than in Norway, as the past has shown that legal weaknesses are always exploited to enable a resilient implementation of EAFM. However, these framework conditions can be set with the results of this legal analysis.

First, either within the next reform or by ruling of the CJEU, the PA and the EAFM could be upgraded as principles so that CMs could be enacted already at the risk of harm. This would not only directly benefit the ecosystem through preventive measures but would also save resources previously used to scientifically determine the occurrence of damage and facilitate access to justice through an erroneous administrative decision. The strengthening of these fundamental is going to strengthen all analysed CMs and makes EAFM considerations more resilient against opposing interest through limiting discretion.

Overall, the public must be further involved in the decision-making process by increasing transparency through access to environmental information, which also form the basis for access to courts. This aspect must be regulated either generally or for the respective provisions, because so far it almost impossible to obtain information about CM procedures. In the spirit of a Norwegian progressive introduction of EA elements, transparency aspects could be introduced in the ACs. Full disclosure of the protocols and in the decision-making process could already have the advantage of increasing the compliance pressure on stakeholders with regard to EAFM considerations and the liability pressure of decision-makers. Another step to integrate the importance of scientific evidence into decision-making processes in the sense that data in the public interest form the basis for decision-making. This could prevent lobby-based

non-compliant decisions insofar as they do not per se violate public interests and could also be pursued through repressive measures. The combination of these two steps could of course only be introduced gradually, as any fundamental renewal that runs counter to economic interests is rejected, but a start must be made at the European level.

In addition, the legal framework needs to adapt more elements of resilience, as the complexity of institutions in the European multi-level system so far creates both cumulative discretionary powers and a space without precise accountability rules. While there is less need to make use of elements of legal resilience in Norway, there is undoubtedly a need for it in the EU.

Even if suitable solutions must be found in individual cases, it can be generally noted that the use of uniform legal terms in the different legal acts would already be a first step towards a uniform application of the law and better lay comprehensibility. This would also help to avoid having to deal with different interpretations of the terms. Furthermore, the avoidance of indeterminate legal terms would have to be largely dispensed with or at least there would have to be substantive legal limits restricting them. If this were the case and the EAFM were designed as a principle, these terms would also be more justiciable. These and much more steps must be taken by the Commission in the next years to preserve the available stock and to avoid a complete collapse of fisheries.

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