

Title:**Designed for Failure: A Critique of the Common Fisheries Policy of the European Union****1. Introduction**

The Common Fisheries Policy (CFP) is the European Union's (EU) instrument for the management of fisheries, aimed at enhancing the sustainability of fish stocks and the economic competitiveness of the fishing industry. However, neither the living aquatic resources, nor the profits of the fishing industry have benefited from it, with 88% of the stocks being overfished and profit margins of fishermen continuously in decline [1].

An ideal fisheries policy should foster the sustainable use of fish stocks, provide for coherent laws and regulations that yield adequate economic incentives, and guarantee consistent enforcement of the legal framework. Furthermore, the regulation scheme ought to be based on transparent rules rather than a discretionary political decision-making process, which may be blurred by short-term interests. None of these principles are met by the CFP. In this article we explore the biological, economical, legal and political shortcomings that have led to its failure. We then evaluate how these shortcomings are addressed in the recent Green Paper [1] which aims at promoting the reform of the Common Fisheries Policy after 2013.

2. Biological Reasons for Failure**2.1 Background**

The catch that can be obtained on a sustainable basis from a given stock is a function of its size and age-structure. With regard to stock size, the following reference points are widely recognized: The first one is the unexploited stock size (B_0), i.e., the biomass the stock would have without fishing. This size can be used as a baseline to evaluate the impacts of fishing. The second reference point is the size at which the stock provides the maximum economic yield (MEY), near $B_{MEY} \approx 2/3 B_0$. At this size the stock is likely to be able to fulfil its natural ecosystem role as prey or predator. The third reference point is the size where the maximum sustainable yield (MSY) is produced, at about $B_{MSY} \approx 0.5 B_0$. At this size further increase in fishing efforts will result in smaller stock sizes and lower catches. The fourth reference level is a precautionary lower biomass limit B_{pa} with $B_{pa} \approx 30\%$ of B_0 . This is the stock size below which the reproductive capacity of the stock may be reduced. Note that below B_{pa} , annual fluctuations of recruitment and biomass increase, the stock is unlikely to fulfil its ecosystem role, and, because of the low densities, the cost of fishing is high.

With regard to age structure there are three important reference points: (1) the age when juveniles recruit to the parent stock and become accessible to fishing; (2) the mean age and size at first maturity (L_m); and (3) the age at which the individual growth rate and unfished year-class biomass reach their maximum, corresponding to a body length of $L_{opt} = 2/3$ of maximum length [2]. Starting fishing after fish have spawned at least once makes overfishing theoretically impossible [3]. Starting fishing at maximum year-class biomass minimizes the impact a given catch has on stock biomass [4]. Moreover, the delayed onset of fishing is likely to reduce unnatural selection pressure [5] because the fish have reproduced already several times before being caught.

2.2 CFP

The CFP *de facto* uses $B_{pa} \approx 30\%$ of B_0 as a management target. Government scientists annually present the status of the European stocks relative to B_{pa} and advise the Commission and the Council of Ministers about the total allowable catch (TAC) that can be taken without the stock falling below this level. This advice is ignored on a regular basis with reference to socio-economic requirements, with TACs being on average 48% higher than those advised by the scientists. As a result, 88% of European stocks are *MSY*-overfished and 30% of these are outside of safe biological limits [1].

With regard to size at first capture, relevant instruments under the CFP provide for legal minimum landing sizes which are below the size where 50% of the individuals have reached maturity. As a result, the majority of fishes had no chance to reproduce before being caught, and stock sizes are much smaller than needed to obtain current catches [4]. Since legal gears catch a large proportion of fish below legal landing size, about 40% of the catch is discarded dead at sea.

The recent Green Paper for the reform of the CFP acknowledges the poor status of the European stocks and suggests *MSY* as a new target [1]. However, no related action is suggested, such as drastically reducing catches of overfished stocks and increasing legal minimum sizes beyond size at first maturity. Rather, recovery of stocks seems to be expected as an eventual outcome of the structural changes in the “new CFP”, to be implemented after 2013. But even in the unlikely event that fishing is completely halted, most overfished stocks will need 5 years or more to rebuild towards biomasses that can produce *MSY*. With ongoing fishing, that process will take much longer. The Green Paper vision of fish stocks being restored to biomasses that can deliver maximum sustainable yields by 2020—well after the previously agreed deadline of 2015 [6]—is thus highly unlikely.

3. Economic Reasons for Failure

3.1 Background

The main economic problems in fisheries can be summarised in two points: First, the “common pool nature” of fish stocks is also known as the open-access problem. Ill-defined or non-existent property rights¹ in respect of fish stocks induce both excessive market entry and immoderate fishing efforts by each vessel [7]. To gain larger shares of the catches than their competitors, fishermen invest in overcapacity, further exacerbating the overexploitation. Secondly, similar to managing forests, cattle stock, and other living resources, managing fish is an inter-temporal management problem. While on markets for “regular” commodities competitive market prices reflect the private marginal cost of production and the consumers’ willingness to pay, and thus also the economically true value of the product, this is different for products resulting from renewable resources. In that case, the optimal price of a product should be higher than the pure marginal cost of production (here: the cost of fishing). This is so because a fish can either be consumed today, or it can be left in the water and thus can contribute to a

¹ While economists use the notion of “property rights”, legal experts prefer to talk about exclusive usage rights. In fact the concept of property rights in the literature of the New Institutional Economics is more general including “exclusive usage rights” as a special case.

growing stock, resulting in higher potential consumption tomorrow. This additional value of the fish *in situ* is not reflected by market prices that settle in a regime of open access fishery.

The problem of excess entry and overcapacities is further exacerbated by the payment of subsidies to fishermen tending to support their domestic fishing industry as has been done intensively by both the European Commission and Member States.

There are basically two ways to deal with these problems. One option would be to reduce the number of fishery entrepreneurs, ideally to one, and thus to give all fishing rights and responsibility for the fish stocks to a single economic unit (which may also be a corporation). One drawback of this solution would be monopoly pricing and thus under-provision of consumers with fish. This is a minor problem though compared to overexploitation through open-access. For obvious reasons, however, such an approach is hardly feasible for the sea as a whole. As an approximation to this exclusive use rights approach, exclusive territorial fishing rights could be defined. However, for migrating fish species such a system will clearly not work either, since economic agents in parts of the migratory range would have incentives to overexploit stocks migrating through their territory.

An alternative to this exclusive use rights approach is regulation of many fishermen. There are two fundamental ways of (efficient) regulation. One measure is to manipulate the market prices of fish by charging landing fees. Another is to issue different forms of exclusive usage rights, that is, to issue allowances to catch certain quantities of particular fish species. These allowances can be either issued forever, or on a yearly basis, and can also be further constrained, for example by fixing a minimum body size of fishes, for reasons explained above. Under both regimes the regulating authority fixes the TAC which is then distributed among the fishing entrepreneurs, for example on the basis of historical catch quantities. To insure an efficient allocation of such allowances, these could be made tradable, as for example is the case in Iceland, Western Canada, New Zealand, and other countries. Such a system is referred to as ITQ system (individually tradable quotas).

Despite successful implementation of ITQ systems in several countries, and despite being praised by economists for efficiency [8], ITQ-systems may have their drawbacks too. Unlike a single owner of fishing rights, the quota owner does not feel responsible for the sustainable management of the stocks. Thus, monitoring and enforcement is necessary for all these policy instruments: landing fees, ITQs, and non-tradable quotas. Anecdotal evidence from Iceland and other countries suggests that the stronger the social coherence within the fishing community, the less severe the enforcement problem tends to be. If, by contrast, ITQs are sold to foreign fishing entrepreneurs, these have little incentives to comply with catch limits set by the quota they have bought. This argument does not speak against ITQs *per se*. ITQs are a good instrument if monitoring is feasible and relatively cheap. ITQs may, however, fail for a variety of reasons. A simple ITQ system setting a catch quota in terms of biomass of some species, say cod, also does not succeed in maintaining a healthy age structure of the fish population. However, ITQ systems can be fine tuned to account for this important aspect. For example, different ITQs with varying TACs can be defined for different size classes of the same species. Finally, it is important to emphasise that all catches including by-catch should be

counted and be covered by ITQs of some type or other. Discards, by contrast should be prohibited, except for certain species that have a sufficiently high survival probability.

ITQ systems are also criticized for several reasons. One argument put forward against ITQs is that they may create equity problems and a redistribution of wealth. The equity problem can, however, be solved through a suitable choice of the initial ITQ allocations. If ITQs are allocated according to historical catches, no significant redistribution of wealth will occur. The equity problem is thus a typical transitional, but not a long-term problem. A second argument against ITQs is often made by tourist communities harbouring small craft fishing. These communities are afraid that the quotas may be sold to big companies and the flair of the fishing village will vanish. The economic reasoning is weak, however. If the small scale fishing activity is a tourist attraction, the communities could buy the quotas to keep small craft fishing alive.

ITQ systems are also often criticised by ecologists, in particular when fish stocks did not recover despite the implementation of such a system. However, it is important to note that the implementation of a quota system *per se* does not suffice to protect fish stocks. In order to guarantee sustainable outcomes it is the *total* allowable catch in the first place which has to be set at *MSY* or better *MEY* levels.

3.2 CFP

Measured against this, it is fair to say that the CFP did not succeed in implementing a sustainable fishery policy from an economical point of view. First of all, compared to the recommendations made by ICES, and even to those made by the European Commission, the Council of fisheries ministers has continuously set TACs much higher, presumably due to short-term political considerations. Secondly, both the Commission and the Member States create counterproductive incentives by paying different kinds of subsidies to fishermen. Even though landings are not subsidized in a direct way any longer, direct and indirect subsidies have been paid on inputs, such as tax exemptions for fuel or for modernisation of fishery fleets. Such subsidies either induce further market entry, or at least maintain the fleet capacity at an excessively high level. Since 2005, the EU has focused on more subsidies for vessel decommissioning combined with strict limitations on new entry of capacities. Despite this policy, overcapacity and overfishing remain the key problems of the CFP. The Commission's recent Green Paper [1] makes clear that overcapacity is artificially maintained due to the heavy public financial support to the fishing industry via aid from the European Fisheries Fund and indirect subsidies such as exemption from fuel taxes. Overcapacity in turn leads to poor economic performance such as low profits of the fishing industry which creates a vicious circle of overfishing.

Further regulatory CFP instruments include effort limitations, capacity ceilings and regulations on technology and fishing gear, or closed territorial areas. In particular effort regulation is considered as a viable alternative to a quota system. Indeed, effort limitations have certain advantages compared with quota systems. In particular, monitoring is relatively easy, especially if effort is measured in days-at-sea or fleet capacity. The major disadvantage, however, which is most often overlooked, is that effort regulation triggers technological progress to move in a detrimental direction. Fishermen develop methods to catch more fish in shorter time periods. Therefore effort regulation has to be adjusted permanently to the new level of technology. Furthermore, many of these highly efficient catching technologies, such as drag net fishing, result in an

increased negative impact on the ecosystem, while more time consuming and therefore effort intensive practices such as trap fishing are more sustainable. Moreover, the sum and the interaction of many different regulatory measures, as currently employed, are economically rather inefficient. A quota system, by contrast, tradable or not, is independent of any technology level. TACs have to be adjusted to recruitment and stock size, but not to technology.

A further problem of CFP is that discard is not recorded and is presently not sanctioned in European waters, creating incentives to discard less valuable catches or any catches in excess of the quota. This unaccounted excess fish mortality undermines the effectiveness of the TAC system and the credibility of the CFP's sustainability goal from the perspective of fishermen.

4. Legal Reasons for Failure

4.1 Background

In order to minimise conflicts of interests, a well functioning fisheries management regulatory framework is subject to the exclusive competency of one regulatory body. The management measures adopted by that body are compatible with its statute, i.e., supreme law, and its international obligations. Relevant laws and regulations are transparent, based on the notion of sustainability, and effectively enforced in accordance with the rule of law in all areas to which the regulatory framework applies. This includes the imposition of adequate sanctions whenever the rules concerned are violated.

4.2 CFP

When measuring the CFP against this standard, one should first of all note that the Treaty on the Functioning of the European Union (FEU Treaty), which organises the functioning of the Union and determines the areas of exercising its competences (cf. Art. 1 (2)), does not contain a single competence title for fisheries. Rather, the existing competence of the Community to enact fisheries management measures is integrated in the provisions on the common agricultural policy (cf. Art. 38 FEU Treaty). This policy is characterized by the payment of subsidies for crops and land which may be cultivated, as well as by price support mechanisms (including guaranteed minimum prices and import tariffs). It reflects the cultivation of land, the allocation of which to States and their individuals is clearly defined by borders and boundaries. However, its objectives differ significantly from that of a management scheme that applies to sea areas and resources that move across State and regime boundaries. Therefore, inclusion of the CFP in the common agricultural policy does not take sufficient account of the factual differences which exist between the two fields. Against this background, it is unlikely that fishing regulations satisfy the particularities of the subject matter.

Secondly, the conformity of certain CFP measures with the requirements of primary European law (i.e., the FEU Treaty) is questionable. In particular, it must be doubted whether the majority of EU fisheries regulations and directives, which have to a considerable extent worsened rather than prevented the decline of fish stocks in European waters, meet the requirements of the precautionary principle as laid down in Article 191 FEU Treaty. In many cases, States and fishermen oppose stricter conservation measures by arguing that there is not enough scientific evidence and data to justify such measures. However, a reasonable application of the precautionary

principle within the context of European law would entail that the burden of proof with regard to the sustainability of fisheries lies on the fishing industry itself. The precautionary principle particularly aims at avoiding that the implementation of long-term and sustainable environmental policies is rejected or at least delayed due to a lack of sufficient scientific evidence proving the harmful effects of the activity concerned on the environment. Article 191 (2) of the FEU Treaty States that any Community policy on the environment “shall be based on the precautionary principle [...]”

Although the legal foundations of the CFP are part of the treaty provisions on agriculture, Article 11 FEU Treaty obliges the Union organs to integrate environmental protection requirements into the definition and implementation of all Union policies and activities referred to in Article 7 FEU Treaty. This means that the organs of the Community are obliged to respect the precautionary principle also within the context of the CFP. While the European Court of Justice has repeatedly affirmed that the EU has a wide scope of discretion to legislate in accordance with the objectives of the EU Treaty, this must not result in the precautionary principle being completely ignored when enacting fisheries management measures. Even though the European Parliament, individual Member States and NGOs have recently submitted actions for declaration of nullity of certain Community acts and have based these actions, *inter alia*, on breaches of the precautionary principle (Joined Cases C-14/06 and C-295/06; Case T-229/04; Case T-91/07), the Commission in its Green Paper of April 2009 did not touch upon the issue of compatibility of CFP measures with that principle. Rather, the Commission only stated in very general terms that “ecological sustainability is [...] a basic premise for the economic and social future of European fisheries.”

Moreover, notwithstanding that Council Regulation 2371/2002 on the conservation and sustainable exploitation of fisheries resources gives Member States the power to take unilateral measures protecting the marine ecosystem only under certain procedural conditions (cf. Arts. 8, 9 and 10), it may be argued that some instruments of the CFP potentially conflict with the obligations under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora). Under that Directive, in addition to their obligation to protect individual species, Member States are required to establish and protect special areas of conservation (SAC) and special protection areas (SPA) that contribute to a network of protected sites (Natura 2000 sites). The European Court of Justice held in the Waddenzee Case (C-127/02 [2004] ECR I-7405) that certain fisheries activities (mechanical cockle fishing) may constitute “plans” or “projects” in terms of Article 6 (3) Habitats Directive, which renders the activities concerned, if undertaken inside of marine protected areas, subject to a strict environmental impact assessment. The duty to undertake such an assessment applies whenever it cannot be excluded on the basis of objective information that the plan or project will have significant effects on the site concerned.

Thirdly, the lack of transparency of the existing fisheries management measures as well as of the decision-making process in the Council is obvious. Some estimated 2000 rules and regulations are assigned to the CFP which are difficult to comprehend and often contradictory. For example, the legal mesh size under the CFP is small enough to catch fish below legal landing size [4].

Fourthly, the TAC annually set by the Council and the national quotas distributed to the Member States according to the principle of relative stability depend on effective control

and enforcement, which has been continuously at low levels. In this respect, the Commission stated in its recent Green Paper in very clear terms that “[f]isheries control has generally been weak, penalties are not dissuasive and inspections not frequent enough to encourage compliance” [1]. Arguably, Member States have an incentive to favour their local fleets and fishermen, and to put the costly tools for control and enforcement on a low priority in their budget spending plans. To counter this development, the Community Fisheries Control Agency (CFCA) was created in 2007. This agency aims at pooling EU and national means of inspection and control and at coordinating enforcement activities [9]. However, the development of European fish stocks indicates that the creation of this body has generally not increased the standard of enforcement of the CFP (cf. Report of the European Court of Auditors 2008).

Moreover, it seems justified to state that the Commission does not fully exhaust its competences against this lack of enforcement, irrespective of the Commission’s claim that it lacks sufficient capacities and enforcement tools [10]. Member States that do not enforce the CFP conservation measures still receive structural funds and subsidies from the Commission. Apart from cutting this aid, the Commission ought to bring Member States before the European Court of Justice more often for breaches of obligations on the basis of Article 226/228 EC. Furthermore, while the Commission is generally not competent to enact real-time area closures, it has not used its power under Article 26 (4) of Council Regulation 2371/2002 to immediately stop fishing activities in the event of a Member State’s quota, allocation or available share being deemed to be exhausted as often as it could have. To date, the Commission does not insist on Member States taking all actions called for in the Regulation (EC) No 2371/2002, such as setting up a single authority for the collection and verification of data. Following up on the reporting obligations of Member States is, however, vital because lack of information makes it difficult to determine alternative policies on the EU level.

5. Political Reasons for Failure

5.1 Background

Modern political science explains political processes by interests of politicians whose actions are driven by a combination of selfish and altruistic motives. While some political decision-makers are mainly motivated by the power of their office and, therefore, aim at maximizing their (re-)election probability, others are also motivated by the opportunity to improve the societal framework. Theories of political science also explain how the behaviour and actions of politicians are influenced by interest groups. As a normative science, political science tries to design rules and procedures of decision-making that are in line with the voters’ preferences and that largely avoid distortions and excessive influence of political interest groups. Since the influential paper by Kydland and Prescott [11], political economists emphasize that long-term rules generally outperform discretionary decision-making. While, for instance, competition policy in the EU is a good example for successfully implementing transparent long-term rules, and for politicians not taking influence on particular cases, the CFP is largely based on discretionary short-term decision-making.

5.2 CFP

Whereas in the past two decades the European Commission in its suggestions for TAC has largely followed the advice of the ICES Advisory Committee on Fisheries Management (ACFM) [12], the quotas decided by the Council systematically exceed the levels suggested by the EU. This even happened after the 2002 reform of the CFP [13]. The unwillingness to incorporate scientific advice into CFP policies is partly due to the discretionary decision process within the EU and due to electoral politics of fisheries ministers, who are concerned about their popularity at home. Short-term economic hardship and the threat of increasing unemployment in the fisheries sector in the short run dominate the concern about collapsing fish stocks in the long run. Moreover, the fisheries industry strongly lobbies in favour of high quotas, whereas the individual fishermen are not sufficiently involved in integrative governance approaches [14]. While some effort has been put into bringing together various stakeholders such as fishermen, scientists, politicians, and environmental NGOs in regional advisory committees (RACs) to negotiate on a broad basis and provide advice to the Commission, it can be said that so far RACs are dominated by the fisheries industry which holds 2/3 of the seats, whereas other interests groups have not had much influence on RAC recommendations. Notwithstanding these shortfalls, RACs have increased transparency and could be used to foster support for EU regulations.

Furthermore, due to diverging interests and the application of different conservation measures Member States have problems to find a common position on fishery policy. Different election times further impede this process. In light of this, it is not surprising that fisheries legislation is watered down to the smallest common denominator.

A further problem is that the Council ministers who annually decide on the TAC are also responsible for the national implementation of the fishery policy in their States. This can lead to ill-defined incentives of regulation, and as a consequence, the Council has reverted to a micromanagement on EU level while some States favour their own fishery industry more than other States (see for instance Poland under the Jarosław Kaczyński administration). The Commission has, therefore, rightly concluded that the decision-making processes of the CFP ought to be brought in line with all other EU policies, “i.e. a clear hierarchy between fundamental principles and technical implementation” [1].

Finally, the principle of relative stability, which was established in 1983 to serve as a distribution key for quotas between the Member States, is sometimes regarded as a political obstacle to a better management system. It is argued that it prevents the free trade of individual fishing rights across EU borders because that would change the distribution key. In its recent Green Paper, the Commission stated that relative stability “creates inflationary pressure on TACs because a Member State that wants a higher quota has no other option but to seek an increase of the whole Community TAC” [1]. It is submitted that an ITQ system would be best suitable to solve this problem. While the initial allocation of fishing quotas should satisfy the principle of relative stability in every year, there is no need that the final allocation of quotas after trade also meets that principle.

6. Conclusion

In this paper we have presented an interdisciplinary, comprehensive view as to why the European Common Fisheries Policy has, to date, failed to implement a regime aimed at achieving a healthy, sustainable fisheries sector. From both a biological and an economic viewpoint, excessive quotas set by the Council and payment of direct and indirect

subsidies by both the EU and Member States has resulted in too much fishing effort and excessive exploitation rates, resulting in low stock sizes, low catches, and severely disturbed ecosystems. From a legal perspective, compatibility of the CFP with the FEU Treaty in general and the precautionary principle in particular is at least questionable. The lack of transparency of its regulations as well as insufficient control and enforcement of its provisions add to the failure of the CFP. Short-term political considerations regularly override scientific advice in the decision-making of the Council. Overregulation and contradictory rules result in a low level of acceptance of the CFP among the fishing industry and stakeholders. In summary, the CFP is characterized by opaque decision-making with little approval by the public. This leads to a culture of non-compliance that undermines the CFP even further.

The CFP conservation policy falls short of what the EU agreed to in the Johannesburg Declaration on Sustainable Development [6] and is far behind the goal of implementing sustainable fisheries management. The recent Green Paper [1] correctly names many of the shortcomings of the CFP, however, it fails to identify and address the biological, economical and legal root-causes of the failure of the CFP. We hope we have provided a contribution to that discussion.