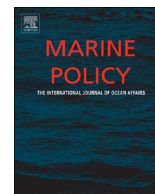




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Social and economic consequences of 40 years of Dutch quota management

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ABSTRACT

The Netherlands was one of the first nations to introduce ITQs in their fisheries to manage national yearly Total Allowable Catches (TACs). These ITQs have gradually developed from an individual quota system in 1976 to an ITQ system in the 1980s. In 1993 the system was reformed into a co-management system. In this paper it is argued that many of the usual negative socio-economic consequences of ITQs mentioned in the literature have been largely absent, due to the embeddedness of ITQs in co-management arrangements. However, cracks have appeared lately in this combined management system, allowing an identification of its vulnerabilities. These findings show that the social and economic structure of Dutch fisheries is changing from a rather cooperative to a more competitive and exclusive system, more like conventional ITQs.

1. Introduction

Since 1976 yearly Total Allowable Catches (TACs) have been implemented step by step for the main commercial fish species in Europe. These TACs have been divided into national TAC portions for each European fishing nation. In the Netherlands, individual quota and later individual transferable quota (ITQs) have been introduced as a way to distribute portions of the Dutch TACs among Dutch commercial fishers on the basis of historical catches and engine power. The Netherlands and later Denmark are atypical European Union (EU) Member States in their ITQs implementation, since most of the EU countries are against ITQs in fisheries. Also in the development of the reform of the EU Common Fisheries Policy in the period 2007–2012, Transferable Fisheries Concessions have been unsuccessfully proposed [1]. For decades the debate on ITQ management in fisheries has been continuous and extensive [2]. According to Yandle and Dewees [3] the economic arguments in favor of ITQs can be summarized as follows: (1) improvement in economic efficiency, (2) higher incomes for fishers and the industry as a whole, (3) elimination of the ‘race for fish’, (4) the ending of overcapitalization, (5) more stability and ability to adjust quota holdings, (6) improvement of operational decisions and investments, (7) better conservation of the resource, and finally (8) more participation in fisheries management.

Consistent findings on the socio-economic impacts of ITQs reveal the disadvantages of ITQs, and the role ITQs have played in concentrating ownership, overcapitalizing quotas, blocking the entry of younger fishers, transferring quota ownership to outsiders and investors, increasing processor control, and hardening class divisions within

coastal communities [2]. Many scholars also point to discarding, highgrading and unregistered catches as a consequence of ITQs [4–6].

Dutch fisheries form an excellent living experiment in the social and economic consequences of ITQs in combination with co-management arrangements. Some of what was theoretically expected occurred but not everything. Access to ITQs by newcomers and small-scale fishers, as well as discarding a part of the catch, have been issues in Dutch fisheries, while in the first decades of the ITQ system overcapitalization of boats, failure to achieve greater efficiency and failure to achieve stock improvement violated expectations. But some of the above mentioned negative socio-economic consequences of ITQs discussed in the literature (e.g., concentration, transferring ownership of quota to outsiders) have been largely absent in the Netherlands. This was most likely due to the embedding of the ITQ system into a co-management system since 1993 [7–9]. A system that fits the egalitarian Dutch culture and management style¹ in which organizations are granted the privilege of influencing public policymaking in exchange for their cooperation was operating. In addition, the system was based on a consensus policy making model, which in practice means that everybody has to compromise, so everybody will be equally (un)happy. Due to the regulatory power and legitimacy of co-management groups, ITQs were transferable only among quota holders which differs from freely transferrable ITQs; and local Producers Organizations succeeded for quite a while in keeping their quota within their own member organizations by facilitating lease possibilities among their members. In this paper, an analysis of the Dutch ITQ system will show that not all developments in an ITQ system can be attributed to that ITQ system alone, and that Dutch historical and cultural features of fishing

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organizations, communities and wider policies and circumstances can play an important role in mitigating the effects of ITQs. That is why ITQ systems should not be analyzed in isolation, leading to generalizations about the pros and cons of such systems.

However, this paper will also show that during recent years some new developments have put the co-management system under pressure. A change has moved the system from a more collective and cooperative though entrepreneurial form towards a more competitive approach, as research findings below support. Consequently, there are signs that many of the negative socio-economic impacts mentioned in the literature on ITQs are increasingly occurring.

The paper starts with a brief history of the Dutch IQ, ITQ and co-management system. This is followed by an account of the evolving social and economic consequences of this system. The paper ends with an analysis of why the change occurred and a brief reflection on what the future may bring.

2. The development from IQs to ITQ co-management in the Netherlands

2.1. The Dutch fleets

Dutch fisheries roughly consist of three² segments³: (1) the *cutter fleet* (279 vessels in 2015) consisting of medium sized vessels (300–2000 HP) with a crew of 5–7 men, which is ideally composed of a family, such as a father and sons or other family members, possibly supplemented by other fishers. The family enterprises divide the revenues according to a share system and mainly fish for sole and plaice (flatfish), shrimp and Norwegian lobster (nephrops); (2) the *pelagic fleet*, consisting of 8 high seas freezer trawlers in 2015, mainly fishing for herring, cod, mackerel, whiting (round fish). The pelagic fleet integrates the various stages of the supply chain, i.e., fishing, fish processing and marketing of the processed fish; (3) *small-scale fisheries* (SSFs) consisting of 241 small vessels (< 300 HP) in 2015 operated by one or two fishers, targeting sole, turbot, cod, mullet, sea bass and razor clams. The cutter and pelagic fleets are subject to a quota system, while the SSFs mainly catch non-quota species. Some small-scale fishers own a few ITQs.

The economic importance of the Dutch fisheries complex⁴ for the Dutch economy is very small (approx. 1.7% of GNP) [11]. And nowadays, since the Dutch economy is very diversified and the population is highly educated, becoming a fisher is no longer self-evident for a son of a fisher family.

2.2. The introduction of Total Allowable Catches (TACs) in the Dutch fishery

In November 1974 the North East Atlantic Fisheries Commission (NEAFC)⁵ established TACs for the year 1975 for several species including herring, plaice and sole (flatfish); therefore, many European fishing nations had to operate under this new TAC regime from that time on. The direct causes of the implementation of TACs were continual warnings of ICES biologists about the risk of over-exploitation of North Sea stocks, e.g., the herring stocks⁶ (due to

technical improvement of fishing vessels and increasing demand for fish) [13] and extension of the fisheries zone of Iceland [14] which put extra pressure on available fishing possibilities. The TAC system was later officially incorporated into the Common Fisheries Policy (1983). Each European Union Member State receives a yearly national TAC, which is a part of the Total Allowable Catch (TAC) of a species in a certain region in the North East Atlantic and adjacent seas as the North Sea. It was up to each EU Member State how to distribute these national TACs to fishers [9].

The new regulations were not well received by the Dutch fishers, who criticized the top down approach [9] and the limitation of their freedom and independence; the flatfish TAC were set considerably lower than the 1973 and 1974 flatfish landings, and subsequently Dutch catches of plaice and sole had to be reduced by 10% and 40% respectively to meet this TAC [15,16].

At that time regulations in the Netherlands had to be approved by a public corporation called the Fish Commodity Board (FCB). The FCB represented both the fishing industry and the government, a hybrid government institution involving cooperation among several parties in the fish product marketing chain, with specific tasks allocated to this public body, locally known as ‘productschappen’ (produce, or commodity or marketing board). The Fish Commodity Board (FCB) was asked to implement the new regulation, a difficult task. The FCB developed implementation regulations to limit effort and landings in the flatfish fishery. So the first quotas in 1975 were national quotas against which fishers were fishing with a constant capacity, but lower effort, and a reduced allowable catch. This worsened the race for fish and before the end of 1975, the sole fisheries were closed because the national sole TAC had been completely exhausted [15].

2.3. Individual quotas

At the beginning of 1976 the FCB returned its onerous and unpopular TAC management task to the government. Soon thereafter, the government introduced individual quotas (IQs) in the fishery for plaice and sole.

The quota was allocated on the basis of historical catches. The individual quotas received by fishers who operated their vessels prior to the 1st of January 1974 were based on the largest amount of plaice and sole landed in the years 1972, 1973 and 1974. The system was revised in 1977, adjusting IQs both to engine power and to historical performance. Also some small-scale fishers received (a few) ITQs, since they were fishing for or had bycatch of sole and plaice, and consequently had track records when the quota system was implemented. The 1977 allocations are still the basis of the present quota system [15,17].

TACs, which are major production limitations, were quite new at that time and they conflicted with previous national policy, which included support for production increases, especially for agricultural products [16]. Flatfish fishers in particular reacted furiously as a consequence of the restrictive quota measures, which had reduced the TACs of several species. Fishers were not yet accustomed to such restrictive measures and felt they had not been consulted. Therefore, they over-fished their individual quotas in a race for fish, for fear of being shut down when the national TACs were exhausted, as had happened in 1975. High prices for sole and plaice motivated fishers to continue fishing. Conflict after conflict occurred; riot police and fishers came across each other in the harbors. Fishers also started legal disputes about quota management, but in the end they were not successful [18].

2.4. How the birth of ITQs could not stop the race for fish

When the individual quota system was introduced in 1976, flatfish quotas were only officially transferable together with a vessel. The sale was subject to the following rules, which were established in coopera-

² A fourth sector is the shellfish sector.

³ Figures are from Lei Agrimatie 2016 [11].

⁴ Fisheries and auxiliary industries.

⁵ NEAFC was founded in 1980, it replaced an earlier commission by the same name established by the North-East Atlantic Fisheries Convention of 24 January 1959. The conventions stand for long-term conservation and optimum utilization of the fishery resources of the North-East Atlantic area; however, nowadays in contrast to before 1982, their territory is outside the 200 mile zone of coastal states/EU. (<http://www.neafc.org/system/files/Text-of-NEAFC-Convention-04.pdf>) [12].

⁶ The recruitment failure in the 1970s has had a profound effect on the herring fishery, not only in the North Sea, but also in adjacent waters. By the end of June 1977, all directed herring fisheries in the North Sea came to a halt [13].

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