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Common Fishery Policy and National Fisheries Management

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Introduction

Individual member States of the European Union (EU) have to carry out national fisheries management schemes within the Common Fishery Policy (CFP) of the Union. Broadly the CFP aims at managing fisheries' output through Total Allowable Catch (TACs). The first TACs were established in 1975 by the North East Atlantic Fishery Conference (NEAFC). After the declaration of a common EU Exclusive Economic Zone (EEZ) in 1978 the system was taken over by the Union.[1] Along Multi Annual Guidance Programs (MAGPs) fleet capacity is meant to be restructured to reduce overcapacity. TACs are translated into national quota and MAGPs result in guidelines on national fleet capacity to be pursued.

Within the CFP, individual member States only have votes in the management of fish stocks and in the derived decisions concerning TACs, quotas, and fleet size directives. Their responsibilities go as far as national management schemes within this frameworks (Sutinen 1997). In pursuing a national management plan, a member state must balance fishing capacity, fishing effort, landings, employment, and incomes while maintaining a healthy fishing industry, irrespective of fish stock issues. The outcome of these management schemes will be described in this paper for the demersal North Sea fisheries of The Netherlands, along with arising problems that must be tackled.

Dutch North Sea Demersal Fisheries Management System

The demersal North Sea fisheries of The Netherlands has a management history (Salz 1996). When TACs and national quota were issued by the NEAFC in 1975, the national government promptly organized an ITQ system for the two major flatfish species: sole and plaice (Davidse 1995, 1996a).[2] This was accompanied by a decommissioning scheme to decrease a supposedly superfluous fishing capacity. Regarding roundfish (cod, haddock, and whiting, which are economically less important), the management developed more slowly. Until the 1990s this management consisted of weekly catch limitations.

The initial disturbance of the fishing sector, including several vessels leaving the sector, made room for smart reactions from fishermen within some years. They tried to dodge the system, putting up a smoke screen around landings declarations.

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[1] Incidentally, the CFP only became firmly regulated in 1983.
[2] A description of this sector and its developments are described in Smit (1996c).

This reaction was more or less successful because the national administration was not prepared for a rather large system to keep track of landings (of each individual vessel in Dutch and foreign ports) and enforcement was weak (De Wilde 1993). In the course of the next decade, the government gradually acquired some control over the situation, and the development of the management system indeed led to a match between actual landings and quotas.

However, the ITQ system has to share the credit for this success with other developments. Beginning around 1987, control was intensified, but it was accompanied by licensing, input management (maximum days-at-sea), and maximum gear width for double-beam trawls. The days-at-sea restrictions had a strong impact, especially in the early years. These restrictions gradually became less important while a development towards fleet reduction developed. A small part of this reduction was supported by decommission schemes, but most vessels leaving the fishery, including their owners, could be traced to fisheries in adjoining EU countries (quota hoppers, Hoefnagel 1996b). In addition, a supposed error in stock assessment (too high plaice quota in the end of the 1980s) made it easier to fish within ITQs and quotas. Even when quota management gradually succeeded, the Dutch Agriculture and Fisheries Minister resigned in 1990, in the aftermath of all the management problems.

In the 1990s, a co-management system was added to the ITQ system. ITQs were pooled within groups of boat owners, and responsibility for ITQs were delegated to the groups. The government's responsibility was then reduced to group (and national) quotas. Accordingly, within these groups, and gradually between groups, mutual trade in (parts of) ITQs was liberated, which gave fishermen the opportunity to adjust ITQs to a certain extent for a set of species to (expected) catches in this multispecies fishery (Hoefnagel and Smit 1995; and Smit 1996a). In the meantime, roundfish fishing rights were converted into ITQs within the same system. The co-management system absorbed the shock of a downward redress of plaice quotas (and of days-at-sea) after 1994, without too much inconvenience.

Economic Consequences of the Utilization of Quota

While in the beginning there was no firm grip on individual quotas, the government could not guarantee the right to fish the quota, keeping the national EU quotas in mind. It is no surprise that in such a situation a "race to fish" occurred. In the 1980s and up to the early 1990s, this resulted in several bans on landings in the latter months of the year when it became clear that national quotas were exhausted. These developments naturally disrupted the marketing system, leading to relatively low prices and thus to less favorable returns, both for the fisheries as well as for the processing and trade sector. Even when the national fisheries management succeeded in keeping the landings grossly in line with the quotas, the deep-seated mistrust in the system led to quotas being exhausted prematurely before the end of the year (Smit 1996a).

The intensification of national fisheries management around 1987, with strict control and input restrictions, had a strong impact on the fisheries industry. The fishing sector responded by decreasing the fleet, mostly by quota (or flag) hopping. This concentrated the quotas on a smaller number of vessels, which gradually opened opportunities for more days-at-sea per vessel (strengthened by the high plaice quota).

The establishment of a co-management system provided some mutual social control, and created trust in the system and mutually between fishermen to such a degree that fishermen dared to spread their landings to the end of the year. Average annual prices improved and so did yearly proceeds. The reduced quotas and ITQs in the mid 1990s could then be adhered to, while increased fish prices and a lower in-

put of the fleet (therefore lower variable costs) grossly made up for the loss in landings (Hoefnagel and Smit 1995; and Smit 1996a).

The trade and processing industry made up the loss in available raw material to a certain extent. Landings from the quota hoppers overwhelmingly took place at Dutch auctions, replacing some of the previous landings. Second, the processors imported raw material from adjoining countries. In that way a relatively large portion of flatfish quotas of other EU countries found their way to the Dutch processing industry (Smit 1996a). It is meaningful that the recent establishment of a new fish auction in Urk (the largest in Europe) was based on an expected share in national landings and on expected landings from vessels under foreign flag.

Mono-Species ITQs in a Multispecies Fishery

Quotas and ITQs are established by individual species. The fishery, however, is a multispecies fishery. TACs and quotas of the various species may not represent the actual fishing opportunities the fish stocks offer. One of the causes of such an imbalance arises from policies to protect one species in particular. Another factor may be mistakes in the assessment of the extent of the stock of one or more species. Moreover, when ITQs were determined, the individual fishermen's history (comparable to the "track records" in the UK) was only partly embedded, and about half of the ITQs were calculated using vessel capacity (de Wilde 1993). The tradability of these individual rights was only hesitatingly permitted, and only gradually extended to parts or yearly slices of a species' quantity and to a longer period of the year.

When the fleet is fishing along the quotas, the imbalance between these quotas and the actual fishing opportunities may oblige fishermen to fish in a pattern different from the one in a "free" fishery. Furthermore, while the fishing pattern and the relationship between target species of individual fishermen diverge, the way individual rights were originally established led to extra risks of mismatching the fishermen's usual fishing pattern. It is conceivable that all this could reduce the efficiency of fishing. These effects can be visualized by comparing the assessed input of the fleet, or fishing effort data, to the fleet's catch rate. This catch rate can be defined as the percentage of fish stocks landed by the fleet. In that way, it is a measure for the real effort exerted on the fish stocks. Both time series are shown in figure 1.

In the mid 1970s a major divergence between the data occurred. It is feasible that the establishment of the quota and ITQ system caused this inefficiency in the fleet's effort. As the fishermen discovered loopholes in the system in the years after, this inefficiency disappeared. Around the mid 1980s enforcement became better organized and again efficiency fell, especially since 1987 when management and enforcement were strongly intensified, this efficiency has declined. After 1989 efficiency seemed to recover, perhaps as a result of ample plaice quotas in relation to stocks, giving room for more or less "free" fishing. Then the establishment of the co-management system may have had a positive effect through the flexible adjustment of ITQs. However, after 1994 even this system could obviously not prevent some deterioration of fishing efficiency resulting from the plaice quota redress policy.

Conclusion

Within the European Union's Common Fisheries Policy, national fisheries management must be executed within the boundaries of that policy. Given the EU concentration on output restrictions, national administrations also rather naturally also tend

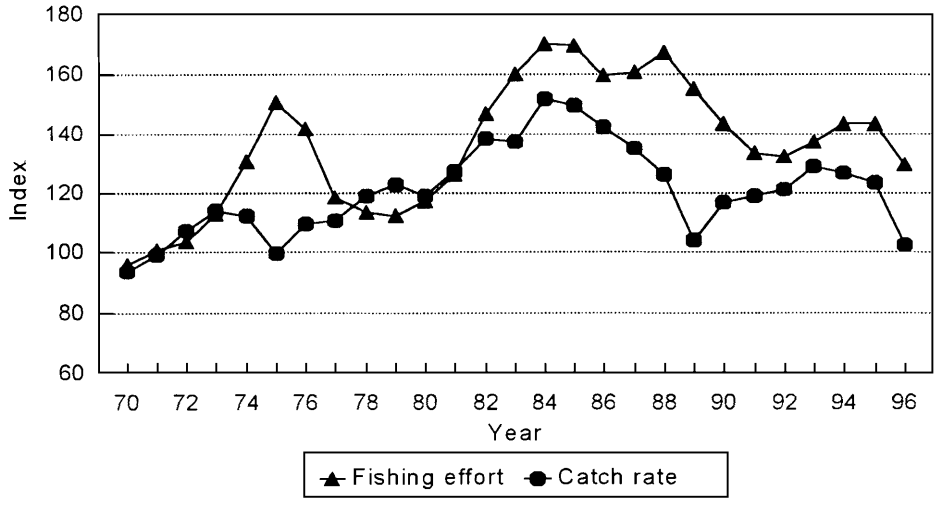

Figure 1. Fishing Effort and Relative Catch Rate

Note: Standardized hp-days and landings divided by fish stocks; index, 1970–72 = 100

to management of output. The use of only input restriction systems causes too many risks of landings being not in line with quotas. Such systems will, at best, produce an equilibrium between landings and quotas on an aggregate level, especially in multispecies fisheries, but will scarcely produce that effect for each individual species.

In the Dutch demersal North Sea fisheries, an ITQ system was chosen and supported by other measures such as input restrictions when obviously needed. One aspect, not quite unimportant, was that input regulations were far less difficult to enforce than output regulations. Incidentally, using an input restriction system also presented an opportunity to limit the race-for-fish by splitting up yearly days-at-sea, for example, by quarters of the year.

Restricting fishing by quotas, translated into ITQs, seems to affect fishing efficiency severely in a multispecies fishery. The creation of a system that among others can serve as a "clearing house" for the exchange of (parts of) ITQs may reduce such effects, as was the case after the establishment of the co-management groups in The Netherlands (Smit 1996a).

One is tempted to compare the pros and cons of a quota and ITQ system to input control systems, but such an elaborate piece of work goes beyond the scope of this report. At least in the situation of the European Union and its Member States, the systems adopted by those states should be in line with the EU systems. Therefore the choice should primarily be made at the EU level, taking into account its repercussions on a national level (at least of those countries taking part in fisheries on certain common stocks). Discussions on this topic are on-going since the CFP is to be revised in 2002. Meanwhile, researchers and policy makers, aware of the disadvantages of quota (and ITQ) systems, are already discussing adaptations to the quota systems, such as multispecies and multi-annual quotas (Salz 1993; Salz *et al.* 1996). However, in the end, stock assessment techniques may lack the precision (and the timing) to prevent undesirable effects on fishing effort and on fishing efficiency while managing the fishery by quota.

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