CFP Reform: Resource conservation and Fleet management
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E-fish

Regulating quantity or promoting e-quality?

Foundations of a new paradigm

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The value of a scarce resource: E-fish and A-fish
Economic perspective: Industrial fishery and post-industrial fishery
Ecological perspective: Heavy impact-fishing and light impact-fishing
Resource protection and fleet management: ITQ and post-ITQ

Fish is perishable. From the second a fish dies, micro processes start to decompose the flesh and thereby reducing the taste and quality. European fish auctions therefore differ between:

E-fish: Fresh and undamaged fish of exceptional quality. E-fish is generally caught the same day as it is landed.

A-fish: Fish that is caught more than 24 hours from the time that it is landed, or fresh fish with damage or signs of decomposition.

E-fish is top quality and a high value product, meaning that kilo prices can be more than the double that of A-fish. Consumers demand both E-fish and A-fish, but for different purposes. A-fish is imported to Europe in great quantities from other parts of the world where this fish can be purchased at relatively low prices. E-fish have to be flown in to Europe to compete with the European E-fish.

This means, that the greater a part of the European fish stocks that are reserved for E-fishery, greater is the value that can be extracted from the resource. From an economic and from a consumer point of view it would be an advantage to allocate as much as possible of the European fish stocks for high-value E-fishery.

Managing the fish resources this way, is a fairly new opportunity, only possible after Europe was industrialised. Before this, fresh fish was only accessible at the local market. With the development

of a sophisticated European road system, it is now possible to supply the common market with Efish from coastal communities all over Europe.

This vision requires that we abandon the idea that all fishing has to be industrialised and capitalised.

Instead, this vision suggests that we reserve as much as possible of our limited and endangered fish stocks for E-fishery, conducted from the innumerable small fishing communities along the coasts of Europe. This will lead to the optimal utilisation of the resources, a better quality for the consumer, and a sustainable economy in small coastal communities.

Economic perspective: Industrial fishery and post-industrial fishery

Since medieval times European fisheries has been dominated by two fundamentally different types of fishing.

One is a mobile long-distance fishery, where shipping companies in European ports financed fleets of large vessels to fish at well known fishing grounds, benefiting from industrial advantages of scale and concentrating their effort in areas where concentration of fish was high in certain seasons. In this type of fishery, the size of the catch is the determining factor, and the large vessels can compete by storing and transporting fish over great distances. In six centuries this fishery has supplied Europe with dried, salted and now frozen fish from distant oceans and fishing banks.

The other type is a multi-species near-shore fishery, practiced by self-employed fishers in the many small coastal communities all around Europe. They fish together in small crews, sharing the earnings in a way so that boat, gear and each crew member get a share. This share system makes everyone on board each boat motivated in operating the fishery sustainable. This fishery delivered fresh fish caught the same day as it is put on the market, and in many centuries it has supplied the coastal regions of Europe with fresh fish.

Share Fishing in European fishing communities
The distribution principle of joint income for a boat with three crew members
Variable costs such as the winch, diesel oil, cleaning, packing, and the auctioneer's fee are paid in advance.
The remaining joint income is paid out as follows:
20% boat
20% nets, lines, snares, etc.
20% skipper (most likely the owner of the vessel)
20% nets, lines, snares, etc.
20% skipper (most likely the owner of the vessel)
20% second crew member (share fisher)
20% third crew member (share fisher)
As a partnership, in the event that the value of the catch does not exceed the variable costs, the partners are financially obligated to make this up, earning, in effect, a negative income.

Through the 20th century, industrialisation with motors and mechanisation has made it possible for

near-shore fishers to invest in larger vessels and expand from the near-shore fishery (with one- and two- day journeys) to longer fishing trips taking several days and sometimes weeks, fishing in areas far away from the home port. In doing so, A-fisheries started to overtake the E-fisheries, and in consequence more and more resources were used in industrial A-fishing.

The reason behind this was that the growing amount of E-fish could not reach the larger European market and get the
higher E-fish prices. Fishers had to pay off their investments with larger quantities of A-fish, and the cost-effective solution was to industrialise, mechanize and expand to a volume-based A-fishery. This process transformed most of the near-shore fisheries and created the pressure we have today on the near-shore marine resources in Europe.

With the expansion of the road systems in the latter half of the 20th century, the local markets are now integrated in to the common European market in a whole new way, which means E-fish can reach a much larger market and get the better prices. As an example, we have Danish fishers supplying restaurants in southern Europe with high-quality fresh E-fish. With the larger market within reach, the old and impoverished near-shore fishery can be transformed into a post-industrial E-fishery, vibrant in all the small coastal communities. If larger amounts of the European fish stocksare allocated to E-fish, these communities and their share system can be the centre of a new sustainable economy in coastal regions.

Ecological perspective: Heavy-impact fishing and light-impact fishing

E-fish has to be freshly caught and undamaged by the fishing gear. Therefore eco-friendly gear types: such as traps, hooks, gill nets, Danish Seine as well as smaller trawls and purse seines, are necessary in an E-fishery. These are all types of light gear that make fishing energy effective with small engines and low fuel consumption. At the same, time these gear types create the least damage to the sea floor and marine vegetation.

Conversely, A-fisheries are conducted by large, heavy trawls with high fuel consumption. It is a general rule in bottom trawling that the larger the engine you use, the more fuel you need to catch a kilo of fish. The large trawlers in the A-fishery use up to 10 times more energy to catch one kilo of A-fish than the post-industrial fisher who uses light gear and small engines use to catch the same amount of fish as E-fish. In addition, compared to light fishing gear, heavy such as bottom trawl is more damaging, squeezes the fish, and has negative effect on the sea floor. From an ecological perspective, the post-industrial E-fishery with light gear is far more sustainable than the industrial volume-based A-fishery.

Resource protection and fleet management: ITQ and post-ITQ

These days a pure ITQ-management is an outdated and highly problematic management system – conceived during the times of industrialization to promote rationalization and monopolization. The

development of the Icelandic ITQ system is a clear case of this.

The experience from Denmark reveals another clear case of the negative effects of ITQs. In Denmark, the ITQ system was introduced in 2003 and 2007 to deal with especially larger vessels accelerating indebtedness and payment difficulties. The idea of the government was to give the banks – that had provided loans to the investments creating fleet overcapacity – economic security by giving the vessels (but not the crew) the property rights to the Danish share of the EU-quotas. Vessel owners could then realize the market value of their quotas in order for the creditors to avoid paying for their excessive risk willingness during the build-up of the industrial A-fishery's fleet. In other words, the financial system got the quota as economic security.

The big vessels had an additional problem, so far they had not succeeded in outperforming the large number of smaller vessels, which fished a great share of the Danish quotas of demersal fish for consumption. With a limited quota and competition from a large number of vessels, the large vessels were not allocated quotas that were large enough to make the A-fishery profitable with large engines and heavy trawl gear.

By introducing ITQs, every vessel owner got the opportunity to sell
his quota and withdraw the money from the fishing sector, while at the same time the most risk willing investors got the opportunity to monopolize the access to Danish quotas by buying up other peoples ITQs. The dominance that the industrial fleet could not get through competition in the fisheries, they now got through privatization and by using the financial capital as their tool to monopolize the quotas as their private property.

In two years, the price of pelagic ITQs rose 3000% and the price on demersal ITQs went up by 1000% in two years. In very little time, this growth had attracted investors with speculative interests who registered their companies as fishers in legal terms and bought quota only to sell for profit later on. Those vessel owners, who sold withdrew the capitalised value of the ITQ given to them by the state as personal revenue. This led to a process withdrawal of the net worth in the fishing sector and subsequently a build-up of debt, which left the next generation of fishers with a heavy burden of interests to pay off if they wanted to buy or lease quotas. In the first year, 25% of Danish vessels disappeared, while at the same time new investments in large trawlers were made. The fishing sector became completely dependent on and subject to venture capital from banks and investors. Most fishing communities disappeared or lost the main part of their fleet, while the share fisherman crew was set a-shore, when the vessel owner sold his rights.[1]

In many small fishing communities, the ITQ system worked as a demolition. While one neighbor became a multi-millionaire, the other became unemployed – even though they had been fishing together all their lives.

Both disappeared from the Danish Fishermen Organisation, which explains
why the members of the organization still are in favour of the ITQ system – they are the ones who

have gathered quotas and consolidated by taking huge loans to survive in an internal fight to get the most quota to fish or rent out to those fishers without quota.

The economic pressure on the remaining companies is enormous, since their fight for fishing rights pushed prices to a level set by the most aggressive and those most willing to take an economic risk to consolidate their company or community. In effect, this has meant an incentive to high-grading, since it is a way to increase the value of the landed fish.

This effect is the background for the Danish management's work to introduce camera surveillance on-board every vessel, and the reason to introduce catch quotas instead of landing quotas. Those companies that use high-grading the most will - in the long run - get a better economical base on which to buy up quotas from those who do not high-grade (as much). In this way, the ITQ system promotes and rewards unethical behaviour.

The ITQ owners in Denmark have established pools from which they rent out quotas to those fishers in need of quotas. This system provides a good reason to consider alternatives and better ways to manage the fleet:

You can avoid the damaging capitalisation and indebtedness of the fishing sector by simply not allocated the quotas as individual property, but by managing them in community quota pools, still owned by the state but leased out to the registered fishers in each community. With this approach the vessel owners avoid heavy debts, while at the same time creating a market that defines the price for the quota rent. This mechanism will maintain competition but exclude the monopolisation of the ITQ system.

Today, E-fishery in Denmark is hard hit by indebtedness, the financial crisis, and low fish prices. It was a clear intention among politicians to promote the near-shore fisheries, and many near-shore fishers have bought sufficient quota shares in order to survive. Today, it is the banks that decide the destiny of many of these fishers.

In one fishing community we have been witnessing an alternative solution, which has attracted considerable attention in Denmark since the fishers in this community have a highly developed post-industrial fishery.[i] An estimated 99% of the landed fish in this community go to the EU as high value E-fish.

These fishers formed a common quota company including the crew fishers, and the company invested in sufficient quotas in a common pool to ensure the future fishing rights of the community – and to keep out outside investors trying to take over the quotas. In the neighboring community a similar attempt was unsuccessful and the local fleet was sold in less than a month in the spring of 2007. Today the town is taken over by tourism.

In the successful community, company the fishers annually distribute the quotas between

themselves. They have developed a system that ensures that everyone gets a share and a sustainable economy is maintained by setting a price for members to rent shares of the quota. The individual fishers pay an annual rent to their own company. The rent size is dependent on the pay of instalments and interests in the loans the community company took in local banks.

This example shows that on the basis of the share system and its culture, it is possible to build a common pool of quota rights attached to a single community and ensuring the community a share in the resource and provide fishers an interest in conserving this resource for future generations – legally as well as biologically.

But this experiment also reveals that the rapid rise in quota prices weighed down the community company with a vast debt, making it vulnerable to external factors. The financial crisis (leading to bankruptcy for one of the local banks) and a generally low price of fish in Europe have forced the company into a battle of survival, threatening the company with collapse and destroying the fishing activities in the community.

Before the introduction of ITQs, the fishers in this community had little
or no debt and were resilient to fluctuation in fish and oil prices. Today, the fishers owe 100 million Danish kroner (€13 million), and are in a crisis situation whereby they are completely dependent on the goodwill of the banks, who could enforce a sale of their quotas at anytime. In a time where fishers are weak, capitalists look for quotas with which to speculate on quota prices.

In conclusion, it is that it is possible to avoid the negative sides of the ITQ system while at the same time promote a growing post-industrial E-fishery from European coastal regions by establishing local quota pools and allocating to them a certain share of the national quota reserved for E-fishery.

If there is a need to reduce the capacity, the pool companies can have a resource tax imposed on them, which could be used to buy excess tonnage. If necessary, the demersal fishery can be grouped into three segments: E-fishery, A-fishery and the distant fishery. The E-fishery could be defined by a minimum landing of 90% E-fish and with 80% of trips lasting less than 24 hours.

Thereafter, the E-fishery is allocated an amount of the total quota which is then distributed to the local community quota pools. Afterwards, the same thing could be done for the A-fishery. Finally, you can establish a transferable segment allowing the local community quota pools to buy more quota shares if they have the necessary financial capacity.

Like the ITQ system, this system should be based on the TAC put forward by the EU and the distribution between member countries, which will secure that the quota sizes stay below the carrying capacity of the resources.

It is important to look at the products and types of fisheries we want – and not only the problems caused by the industrial fishery. By developing and promoting E-fish, the common fisheries policy

can create a higher value for the limited fish stocks in Europe, while at the same time supporting economic development in coastal communities dependent on fishing.

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[i] Andreasen, Jesper & Thomas Højrup: "The Tragedy of Enclosure". In: *Ethnologia Europea 38:1*. Museum Tusculanum Press (http://havbaade.dk/fiskeriet.html); *Comments on the Green Paper for the reform of the Common Fisheries Policy* (http://ec.europa.eu/fisheries/reform/consultation/received/index_en.htm)