



School of Economics and Management

TECHNICAL UNIVERSITY OF LISBON

Department of Economics

Manuel Pacheco Coelho

***Rights Based Management and the Reform of the Common
fisheries Policy: An Evaluation of Portuguese Experience***

WP 18/2010/DE/SOCIUS

WORKING PAPERS

ISSN Nº 0874-4548



RIGHTS BASED MANAGEMENT AND THE REFORM OF THE COMMON
FISHERIES POLICY:
AN EVALUATION OF PORTUGUESE EXPERIENCE

Manuel Pacheco Coelho

SOCIUS/ ISEG – Technical University of Lisbon

coelho@iseg.utl.pt

ABSTRACT

Recently, the Pew Environment Group released a study that finds that E. U. fisheries have failed to reduce fleet capacity thus exerting fishing pressure on stocks at two/three time sustainable levels. The members evaluated in this study accounted for more than 90% of European fisheries subsidies. Overcapacity and overcapitalisation of the sector was identified as the principal failure of the Common Fisheries Policy. The study also highlights that member-states failed to take *environmental* and *social* concerns into consideration when allocating public funding.

This conclusion may be well important in the CFP reform (2012) and put again the discussion about the tools that can be used to get sustainable management and better cohesion.

The idea of creating markets for fishing rights as a means of internalising the externalities derived from the common property nature of fisheries have received considerable attention by the founding fathers of Law and Economics and Fisheries Economics such as Coase, Scott and Christy. The idea is to create a market of individual transferable quotas (ITQs) and confide in the self-regulation of such a system to conduct the fisheries to the economic efficiency and to promote inter-temporal sustainable use of resources.

Rights Based Management schemes have already been experimented in some specific fisheries and localizations. These experiences have a lot of teaching results about good practices of sustainable fisheries management and also about the limitations/risks of these tools. These conclusions are fundamental to explore the feasibility of these tools as instruments of conservation in the CFP.

The purpose of our Communication is to enter this debate and evaluate the Portuguese experience with rights based management.

Key Words: Fisheries, Rights Based Management, Individual Transferable Quotas.

INTRODUCTION

In a drafted “Green Paper” on the Reform of CFP (preview, 2013) the European Commission is launching a wide, no-hold-barred consultation to the national administrations, stakeholders, researchers and other interested people. The objectives are to discuss the problems of this CFP and to explore the alternatives of change and the ways forward the new reform of fisheries policy.

The evaluation of current situation of European fisheries is very clear: besides some interesting results, the Common Fisheries Policy have not delivered a sustainable use of fish resources.

The principle of “Relative Stability” shapes the Common Fisheries Policy. Nowadays the conservation and management regime of EU fisheries is based upon TACs and quotas.

But, in recent years, much attention has focused on ITQs (Individual Transferable Quotas) and other Rights Based Management regimes as an approach that will encourage more efficient use in fisheries by the allocation of private property rights. One possibility of CFP reform that is discussed is the introduction of ITQs and other similar schemes.

Our paper is a contribution to this debate. The paper investigates the feasibility of introducing these new management regimes in the CFP. Our fundamental issues are *if, and how, can we deal with the problems of conflicting objectives in the fisheries policy and what will be the impacts of such a policy in terms of European cohesion.*

We also use this opportunity of reflection to make a succinct evaluation of previous experience of Portugal with rights based fisheries management.

1) E.U. FISHERIES CURRENT SITUATION

Since the early 80s, when “Blue Europe” was settled, almost three decades have passed and the Common Fisheries Policy is confronted with major challenges. Some elements of the CFP were reviewed in 2002, and now, the Commission decided to seize the opportunity of passing another decade (2012) to undertake a new reform of this Policy.

Two fundamental causes explain the current state of European fisheries: *internal systemic weakness* of the management and conservation regime and *external challenges*.

CFP has not delivered sustainable exploitation of the resources. Conservation policy fails. Many stocks are outside safe biological limits. If current trends subsist, many stocks will collapse. They’ve been exploited too heavily, particularly the demersal fish stocks. At the same time, fishing capacity went on growing. Illegal fishing and the lack of effective enforcement are also in the roots of this picture.

This situation isn’t specific to the Community. In fact, worldwide concern about over-fishing and overcapacity in the fisheries sector is well documented. The economic fragility of the sector, reflected in poor profitability and declining employment, is the result of a special conjunction of over-investment, rising costs and diminishing resource stocks.

At the political level, the difficulties, associated with the design and implementation of a regulatory system, are substantial:

- social constraints,
- diversity of socio-economic structural conditions of the fisheries sector in the member states,
- lack of involvement of the stakeholders in the management policy.

There are, also, external challenges. The enlargement of European Union and the globalisation of the economy, the emergence of new players in world fisheries (especially coastal developing countries) and the increased focus on the environment are, perhaps, the most visible.

In the international scene, the CFP is confronted with a “creeping jurisdiction” process: the slowly slide to the coastal countries’ jurisdiction of many resources which were usually “common- property”. After the relative calm that succeeds the approval of the new Law of the Sea (1982), conflicts and tension increased in the 90s.

As the Commission have been reminding, this picture is not entirely negative. CFP had positive results. It has managed the resources and contained conflicts at sea, provided some degree of stocks stability and avoided the total collapse of stocks in areas with higher fisheries pressure and assured the availability of supplies to the Europeans.

However, according to the Commission, these results have been achieved at a high price in terms of the long-term viability of the sector and with inefficiencies in the allocation of resources that, perhaps, could have been more profitable if they were addicted to other sectors in the global European economy.

The critical problem is that the fleet profitability is jeopardised by the under-utilisation of investments. The excess capacity and a more-or-less constant value of landings to be shared between a large number of actors, reduces the capacity of each vessel to earn an adequate income. In this context, the subsidy policy, artificially reducing the costs and risks of investment, in an already over-capitalised industry, promoted over-supply of capital.

Recently, the Pew Environment Group commissioned a study (see the Report of Poseidon Aquatic Management Ltd, 2010) assessing the economic, environmental and social impacts of the Financial Instrument for Fisheries Guidance, from 2000 to 2006. The study finds that E. U. fisheries have failed to reduce fleet capacity thus exerting fishing pressure on stocks at two or three time sustainable levels. The members evaluated in this study accounted for more than 90% of the European fisheries subsidies (that amounted near 3,2 billion Euros). The key objective of the structural policy, that was to bring the fishing capacity of the European fleet into the line with the available biological resources, was not attended. Overcapacity and overcapitalisation of the sector was identified as the principal failure of the CFP. The study also highlights that member-states failed to take environmental and social concerns into consideration when allocating public funding.

This conclusion may be well important in the CFP reform and put again the discussion about the tools that can be used to get sustainable management and better cohesion.

2) “IN THE BEGINNING ...” - THE DESIGN OF “BLUE EUROPE”

The Management and Conservation Regime of fisheries in the European Union is, to a high degree, the result of an historic process with multiple compromises among national devices and political interests. But it could be an error to look at the CFP as a simple, empirical result of a day-to-day experience.

So, understanding the current difficulties is not possible without paying attention to the philosophy of intervention underlined in the options of 1983, when “Blue Europe” was settled.

The analysis of some basic documents and initial proposals of the Commission, in the 70s, allows identifying the philosophy and theoretical purposes that, implicitly or explicitly, were subjacent to the definition of the common fisheries management regime.

Since the beginning, two basic alternatives for the formulation of a fisheries policy were to be considered. At one extreme, a liberal policy that should only establish competition rules in a common market; at the other, a policy of effective intervention, administered at a superior level, which could manage the resources in a perspective of equilibrium between the dynamic, biological conditions of fish growth and the economic conditions of resource use.

The Commission choice on the second alternative was very clear. To the Commission, the necessity of a “comprehensive” fisheries policy was obvious. This choice rested upon the presupposition that free access (central to the Treaty of Rome) would lead to the overexploitation of the resources. And this conviction was explicitly made: “The straightforward implementation of the principle of equal access is bound to result in the rapid exhaustion of resources; the consequences of such a situation would be unacceptable” (SEC (1975) 4503 final, p. 9).

Of course, that was a real problem for the Commission. Having the responsibility to assure the principles of the Treaty, it was out of discussion the opposition to the

“equal access” principle. But, the fear of the “fishing race” and “overfishing” problems justified an intervention policy that could regulate the activity in the sector and obviate the perverse effects of open access.

For such a policy to be feasible, it needed a central authority. That involved a supranational management of resources because, allowing free arbitration of the sector development by national states, could lead to discriminatory action and poor enforcement and control.

We can also understand the purpose of the designed Common Structural Policy. This policy could help the poorest (and most dependent on fisheries) coastal areas in Europe by funding the modernization of the obsolete fleets of some member states. In this sense, the so-called “fisheries fund” (Financial Instrument for Fisheries Guidance) was one of the fundamental elements of a real policy of structural reform but also of inclusion and cohesion in Europe, in what concerned the fisheries.

Settled the philosophy of intervention, the discussion then turned to the management tools.

The choice was on command and control instruments (direct, non-economic controls). The control of catches and selectivity in fisheries, with the establishment of TACs and quotas, and technical measures of conservation (closed seasons, closed areas, minimum dimensions of fish caught and so on) were the preferred forms of regulation.

The motives of this option were based on several reasons that included an implicit evaluation of the advantages of this kind of controls vis-à-vis other regulation alternatives, namely, those usually designed as indirect-economic tools, like taxes or ITQs, whose principal objective is efficiency in resource use.

At least, five fundamental reasons made the justification of that choice.

First, the Commission recognised that a common policy had costs and generated a lot of administrative problems. In this sense, the advantages of direct controls were clear. The design and control of these tools were simpler. The necessary biological information existed. The Community could count on the experience of organisations like CIEM, NEAFC or NAFO.

On the other hand, the implementation of the regulation was a task that the Commission could not develop without the collaboration of the national administration services. The diversity of those, in terms of structure and efficiency, implied the existence of a simple and clear regulation, of unquestionable scientific hardness, as a pre-condition for an effective implementation. Of course, a policy based on economic tools should bring problems almost insurmountable: exigency in information, high transaction costs in the preparation and negotiation of regulation, doubtful capacity of execution of some of the member states administrative staffs.

Second, the political constraint. Despite its complexity, this issue can be put in a simple manner. For example: difficulties in tax harmonisation in EU are well known; taxation is a sensible question, it is seen as a domain of national sovereignty and all concessions in this field are problematic. So, taxes and other economic tools, which are very exigent in political negotiations, were simply abandoned.

We know that the defence of what is defined by politicians and lobbies as the “national interest” (and the results they reach in negotiations), is the way to win elections and maintain jobs. In this context, direct controls are less exigent and facilitate the compromises.

Third, the problem of control and enforcement. The Commission has always given this question a central role in the Common Policy. Reasons are obvious. The Commission put the problem in terms of ethics: “It’s the only way to assure that the sacrifices of some member states in the recovery of the stocks are not in vain because of the irresponsible action of others”.

Once again, direct controls had advantages: enforcement was easier with simple regulation that agents could understand, less costly in administrative terms, and, if there existed effective means of inspection, evasion was minimised.

Fourth, the Commission’s preoccupation with uncertainty in stock evolution and environmental and economic changes, made the need for flexible tools. The possible necessity of urgent actuation in situations of environmental crisis, give the direct-control tools a strong advantage, because they are easier to manage and modify. For example, it is easier to establish a new closed area than to get involved in the definition and execution of a new system of individual transferable quotas.

Finally (the central point, in our opinion), the Commission emphasised the objective of minimising the social costs of the fisheries policy. In an original proposal of September 76 (COM (76) 500 final), the Commission explicitly expressed the preoccupation with social inclusion in the fisheries sector and with the European cohesion. In the opinion of the commissioners, the management regime should assure “an equitable distribution of the limited resources between the member-states”, and “maintain, as far as is possible, the level of employment and income in the coastal zones and in the areas mostly dependent on fisheries”.

The European Parliament made pressure in this way, too, stating that the biological basis on which conservation and management regime should rest upon, could not be more than a starting point and, at least in the short run, the guarantees of employment and social inclusion were irreplaceable objectives.

It is true that direct controls can not avoid the sacrifices of fishermen, unemployment and social tension. However, the reaction to other management economic tools that result in the abandonment of the less efficient producers can be worst.

Facing these constraints, the answer was very clear: A system of TACs (total authorized capture) and quotas was a simpler solution for the problems of equitable distribution of fishing opportunities, depending only on the quotas distribution formula between member-states.

This formula of definition and allocation of use rights in European fisheries is now dependent upon several factors like the dependency on fisheries of some coastal areas, level of employment and the redistribution of quotas by means of minimising the effects of Extended Fisheries Jurisdiction on distant water fisheries. This is the so-called Principle of Relative Stability that shapes the Common Fisheries Policy and it can be seen as a means of establishing a balance between the promotion of economic efficiency, in the long run, and the necessary social-economic equilibrium in the coastal areas, in the short run.

3) THE REFORM OF CFP: LESSONS FROM THE QUOTA HOPPING CASE

Besides the “balanced” fundamentals of CFP, this economic and juridical construction did not obviate the results we highlighted in the point 1).

As we said, the choice of direct control tools, in the regime that was designed in 1983, means that those instruments were, implicitly, better evaluated. But there were costs. Direct controls do not eliminate “common property” externalities. These tools can help the recovery of stocks but they do not exclude competition and inter-temporal rationality is not imposed to the agents. So, inefficiency is maintained and overcapacity and overexploitation persists.

In our perspective, what is interesting to analyse, now, is the following:

Recognising the difficult situation of the fisheries sector and the management problem, the EU went on a great effort of CFP reforming. The last Reform of 2003 pretended to mark a new beginning for the CFP. The main changes implicated a long term approach in fisheries management, a simpler policy of fleet capacity putting on the Member states the responsibility of reduction of the fishing effort and of adapting it to the existing resources, a better application and enforcement of common rules and the stakeholders’ involvement in the CFP.

But some problems subsisted. In our opinion, in the core, they had to do with the persistence of conflicts between objectives. One of the most important is the problem of the contradiction between decreasing of fishing effort and the need of maintenance of jobs and of some socio-economic balance in the coastal areas. The maintenance of decent standards of living for fishermen would demand increases or, at least, the same level of captures. Such seems to be contradictory with the urgent need of stock recovery.

The so called “Quota Hopping” problem is a very good example of our doubts and preoccupations (and then we find again the Relative Stability principle ...).

The fixed formula of quotas distribution between member-states reflects the fact that European fishermen representation is still linked to national and local communities. But this territorial logic is in perfect contradiction with the development conditions of

a free market (as supported in the Treaty). In fact, free movement of capital and the “Free Establishment” principle rest under a different logic.

“Quota-hopping”, usually understood as the flagging of fishing vessels in order to fish against the catch quotas of another country, is a by-product of CFP. By purchasing vessels and quotas in different countries, some fisheries enterprises act like perfect multinational firms capturing fishing stocks that were supposed to belong to national fishing communities.

UK situation gives a “good” example. Although not restricted to this member state, it is the case of UK fleet that has attracted the most foreign investment, especially from Spain and Netherlands, and gave the phenomenon visibility for discussion. Something like 25% of British quotas were held, in the end of the nineties, by foreign-owned quota-hopping vessels.

This situation represents an important critic of the stakeholders to the CFP rules. They attacked the way the quota system is being circumvented by the so-called “flag” ships, which are vessels owned in one country but registered in another to allow access to its waters. This is an example that puts the CFP between two seemingly contradictory principles, “Relative Stability” and “Free Establishment”.

“Quota-hopping” analysis may give important lessons for CFP reform.

The first lesson has a special interest for several Social Sciences, from Sociology to Politics, from Economics to History. In fact, this is a good field to investigate the dichotomy between a national oriented policy and the process of de-territorialisation arising from single market construction. We can demonstrate how quota hopping emerges under the incompatibilities between the trans-nationalization process promoted through the “Europeanization” of EU policies and the territorial logic claimed by the national governments.

In this context, an important issue is revealed that, perhaps, surmounts the CFP, itself. That's the pure question of democracy: how can economic powers, in the process of market development, pass over the political decisions made by the democratic, elected institutions? And, in a certain sense, surmount the objective of cohesion that was implicit in the supranational management?

In such a policy, both government and non-governmental agents no longer have the monopoly over the political agenda. CFP is defined through permanent interactions and negotiations. The non-territorial logic of EU governance challenges the social order inherited from European welfare states. These transnational actors, using EU rules, move permanently in the search of more favorable conditions and profits. This mobility of capital encourages more competition in the European fisheries sector, and, at the same time, raises more social uncertainty in the Member states.

Economic and social actors in the EU are no longer subject to one political authority that is able to guard the values of justice and equity. It seems that there are some actors who are playing “the rules of the game”, but, also, surmounting the power of elected governments. The dynamics towards trans-nationalisation encourages a diffusion of power and blurs the exercise of political democratic elected administration.

4) RIGHTS BASED MANAGEMENT

Quota-hopping analysis highlights another important subject for the future of Common Fisheries Policy: the issue of Rights Based Management.

All fisheries management systems in the world have introduced some form of use/access rights to face the problems derived from the “common property” nature of fisheries.

The idea of creating markets for fishing rights as a means of internalizing the externalities derived from the common property nature of fisheries have received considerable attention by the founding fathers of Law and Economics and Fisheries Economics such as Coase, Scott and Christy. The idea is to create a market of individual transferable quotas (ITQs) and confide in the self-regulation of such a system to conduct the fisheries to the economic efficiency and to promote inter-temporal sustainable use of resources.

There are several possibilities of doing this. In general, we first need to determine the TAC that guarantees the sustainable use of the fish stock and then we can divide this

total amount in several unit quotas that are distributed between the fishing enterprises. A market for quotas can also be created. The objective is that, after some time, the property rights will be driven to the most efficient agents, those that can allocate the resources in a perspective of optimal sustainable use along the time. Because they are the “real owners” they will internalize the effects of externalities.

Rights Based Management schemes have already been experimented in some specific fisheries and localizations. These experiences have a lot of teaching results about good practices of sustainable fisheries management and also about the limitations/risks of these tools. These conclusions are fundamental to explore the feasibility of these tools as instruments of conservation in the CFP.

This kind of economic methods has a special advantage in the sense that they introduce mechanisms that should conduct the fisheries to the efficiency, eliminating the less efficient producers and changing, effectively, the agents' behavior.

ITQs are usually considered the best regulation choice on efficiency grounds. Granting the fisherman an individual quota may reduce the incentives to race for fish. We can expect benefits at the capacity level and fishing effort rationalization, reduced fleet size and optimal vessel configuration, flexible and extended fishing seasons, higher catch-per-unit of effort. This may, also, enhance the quality of landings and improve markets and safety operations by avoiding the landings glut, by reducing storage costs and so on.

But there are also a lot of problems. Professor Copes, in the mid 80s, when the first experiences with ITQs were evaluated, referred the problems of property concentration and, of course, the consequent problem of unemployment.

After a period of change of quotas in the market, the problem of monopolization of the sector is well documented in several fishing-cases analysis. The number of owners tends to decline in time and there may be widening income disparities.

The unemployment is a huge difficulty of this method. The abandonment of the less efficient producers creates a lot of difficulties in some coastal areas where the mostly dependent on fisheries populations live. Given the poor capacity of inter-professional mobility of many fishermen, the introduction of these methods accelerates the social

crisis in those depressed maritime worlds and put in danger some important cultures and ways of living.

But we can also introduce other important issues. One relates with the mechanism design of this kind of methods. For example: How can we make the initial division and distribution of quotas? In a system of “Grandfathering”? Should the initial distribution take account of “historic catches” from the companies? And what about those companies that, in a certain moment, did not enter a certain fisheries, but has now a real interest in the business? For those who were in the initial distribution, the quotas seem like a “windfall gain”.

Also, owners of initial quota will sell at a price representing the full present value of the stream of rents generated, that is, the ones wishing to enter will have to pay, in advance, the full value of resource rents – it’s what we call a “transitional gains trap”. According to Ronald Coase, this is not a problem, because what is important is the final result. Something like the “Invisible Hand” will drive the system to the best equilibrium solution. But, in the short time? What are the social and political reactions to these uncomfortable situations?

Also, the problems of monitoring. Usually, economists highlight these methods because they introduce some kind of self-regulation. In fact, the sense of ownership should give the property-rights users, the real perception that the results of their actions will affect the net economic benefits that results from resource utilization. So, they should manage the resources in a sustainable way. But, the reality shows that without a government control policy a lot of problems subsist including data fouling and quota busting, discarding, more intensive utilization of best fishing grounds, etc.

And, of course, the problem of revenues distribution. The question of equity vs. efficiency is still a debate issue in economics. The economic theory proves the equivalence, in terms of efficiency, between the pigouvian tax and a scheme of ITQs, but the distribution gains between agents is still different. In the first case (pigouvian tax), the rents are optimized by the regulation Agency and, in the second (ITQs), rents and welfare gains are distributed between the private agents.

Besides this theoretical discussion, still persists the practical, fundamental question. Rights based management can improve the efficiency in fisheries management. But,

who will ultimately receive the gains of sustainable use of resources. How will the rents be distributed? Welfare gains: who are the winners, who are the losers? “The winner takes it all?”

5) PORTUGUESE EXPERIENCE WITH R.B.M.

Fisheries is an important sector in Portugal (almost 1% of gross value added). Seafood consumption per capita is one of the highest in Europe.

In terms of Fisheries policy, the use of Rights Based Management schemes in the Portuguese fisheries is still recent. The analysis of this experience is still a “work in progress” that highlights some of the following conclusions about the Portuguese case (see, for example, the interesting study carried out for the European Commission by a Consortium of fisheries research centers - MRAG et al, 2007):

Currently, Portugal uses three types of RBM systems to manage its fisheries:

- An ITQ system to manage the demersal fishery in waters of the NAFO (North Atlantic Fisheries Commission), Svalbard, and NEAFC (North East Atlantic Fisheries Convention) and Norway. These are mixed fisheries developed by trawlers that harvest demersal stocks as cod, and other species as shrimp, mackerel, blue whiting, herring, red fish, tusk, Greenland halibut, ray, horse mackerel and sarda.
- Another ITQ system is utilized in the swordfish fishery in the the areas of jurisdiction of ICCAT and it is applied to long-liners fishing to the north of 5° N parallel.
- A Community quota approach applied to POs (Producer Organizations) comprising coastal boats fishing sardine. This is an approach in which POs receive a ceiling of catches by the national authorities but have the autonomy to impose restrictions on the vessels number of fishing days and catches.

In general terms, drivers to the implementation of RBM systems in Portuguese fisheries have been conditioned by resource sustainability and fleet and community balanced equilibrium, at least in the short term.

Individual Transferable Quotas

In the first experiences of RBM, those that relates to ITQs systems, the main instrument used to manage fishing effort is an annual licence to fish. The authorities grant licences and permits on the basis of several criteria and requirements: status of the stock, operating areas, previous year's catch, gear selectivity, amount of fishing gear per vessel, vessel's characteristics and condition. Cases of repeated failure to comply with the rules may be cause for retirement.

Demersal fisheries

In 1992, individual quotas per vessel were allocated for the first time. The objective was to regulate the distant water fishing especially in the NAFO areas. These use-rights per vessel are transferable but subject to prior authorization. The bundle of property rights considers 13 trawlers fishing in these waters.

The fundamental problem to face is the difficult situation of some straddling stocks (as cod) that were the most focused species of this activity. Long distance fisheries always had a special tradition in Portuguese fisheries and presented perhaps the most efficient segment in the sector (at least, the best in terms of fleet modernization).

Quotas are established annually and depend on the level of the TAC. The surpassing of a given vessel's quota implies the reduction of its next year's share by the amount exceeded. Initial allocation of rights was undertaken on historical catch records. Transfer of rights is allowed between boats in the initial census. Transfer between Portuguese boats and other Member States boats are allowed but only after permission from the Portuguese administration authorities. There is a limit on participation, which is restricted to boats in the group of vessels established by Dispatch (Despacho). New entrants can only enter the fishery when buying a vessel from the fleet. No new vessels and no new licences are allowed. However, a new boat may replace an old one.

Swordfish fisheries

Portugal also applies an ITQ system in the swordfish fishery that is based on a TAC recommended by ICCAT.

There are 61 vessels that participate in this swordfish fishery.

The order 1221-A/97 established the census of long-liners with rights to fish in ICCAT waters to the north of 5° N. The census, established in 1997, comprises 52 vessels with fishing rights. Up to 9 long-liners of the census could be able to fish to the south of the parallel of 5° N but have to obtain a permit from the authorities and demonstrate navigation and security conditions. These fishing rights can be withdrawn or modified by national or Community decision.

Vessels that fish in the northern zone may fish in the southern zone but are allowed to catch swordfish only as an accessory catch and cannot surpass the 5% of the total catches per vessel.

The initial allocation of rights was done through historical catch records. Transfer of rights is allowed only between boats in the long-line fleet. Limits on participation are restricted to boats in the original census. Transfer of right is allowed but it has to be communicated to the concerned authorities. As in the previous case, new entrants can only access to the fishing rights by buying a vessel from the fleet. No new vessels, and thus no new licenses, are allowed, but a new boat may replace an old one.

Note that no other Member States have access to the fishing rights distributed by Portugal under this RBM system.

Sardine fisheries

The third situation described is very interesting in the sense that we can not talk strictly of rights to fish but, better in “rights to manage”.

The participatory approach that is applied to the case of sardine fishery involves 151 purse seiners. In the past few years, this participatory approach to resource management has allowed national authorities and POs to ensure the control and

surveillance of the sardine fishery. An important attention is given to the status of the stock and its capacity of recovery.

Sardine is the main Portuguese species in terms of catch (36% of total landings) and it is managed under an 'Action Plan' that aims at wider protection of juveniles and regulates harvesting and marketing. The measures adopted include restrictions on catches, catch handling and marketing. They also include annual restrictions on fishing effort and the volume of landings by group of vessels in each PO.

POs receive a catch allocation from the Fisheries Administration and then divide it among its vessels. What is interesting is that the cooperation between POs (for example in the Peniche area; important port of sardine landings) has a significative role in the process of defining certain rules and fishing restrictions that may also pass the proposed government measures, with the objective of better recovery of the stocks.

The 'Action Plan for Sardine' is complemented by technical restrictions that set up restrictions on the sardine fisheries. These regulations establish the limit of days to fish sardine - 180 days per boat. Portuguese authorities impose catch ceilings on POs based on scientific recommendations but can also grant rights to POs that are consequently empowered to impose restrictions (daily catch limits) to fishing boats.

Rights are allocated to POs permanently. Vessels can be transferred from one PO to another but the catch ceiling set up for the PO receiving the new boat may not be surpassed. This may lead to revision of the PO catch allocation.

Initially rights were allocated to POs by authorities on a historical harvest record basis.

Newcomers are permitted to enter when buying a vessel.

This is a coastal fishing activity therefore there is no access to nationals of other member states.

Evaluation

The evaluation that was made refers that, in the first case, there is no reference to concentration of fishing rights and the legislation does not make any special provision to avoid it.

ITQs in demersal fisheries may have an impact on discards, but information, in this case, is not yet available. We must note that separating the effects of discards from this approach could be difficult in a trawling fishery because by-catch is an issue closely related to the trawling technology, especially in cases of mixed fisheries. Discarding of non-targeted species shall exist regardless of the rights based regime system. In spite of this, we recognize that the issue of individualization of quotas (allocation to individual fishermen) may exacerbate highgrading and, in the absence of strong regulations to deter discarding, there may be an incentive for a certain level of discarding. But isolating and assessing the impact is a difficult issue to address.

In the case of swordfish fisheries, the evaluation made states that also no problem with concentration of fishing rights has been indicated under this RBM system and the current regulation do not make special provisions on concentration.

Long-lining is a highly selective technology regardless of the management regime. Thus ITQs in this fishery do not have a significant impact on discards and highgrading.

In the case of sardine fisheries the rights to manage can be seen as common pool rights for the members of the PO, thus concentration does not take place among the members.

There are some issues that relate the eventual capacity /necessity of protection of small- scale fisheries in the coastal areas. In fact, small purse seiners (< 50 GRT) also participate in the fisheries thus holding a right to access the resource. However, particular protective measures for small-scale are not found.

Effects on discards were not identified in the study. As a fishery based on a small pelagic species, it is not expected to have acute discard problems. Moreover, the cooperation between the players in the game of such a participatory and community based approach may discourage discards and other undesirable behavior.

In all the three cases, there are important issues relating the social problems and the form they are faced in each of these approaches. The fundamental issue of rent distribution is not yet well documented and evaluated. But, of course, it is referred in all the interviews with the agents: fishermen, owners of the vessels, fishermen families, and coastal areas authorities. It is an important area of future research.

CONCLUDING REMARKS

What can we conclude about the possible introduction and feasibility of these rights based instruments in the CFP?

Within the Common Fisheries Policy the fishing rights are regulated through national licenses and catch quotas. The management of these rights are the competence of individual member states and varies from member to member.

Introduction of transferable rights tends to increase concentration of fishing rights in fewer hands, but, in an economic perspective, would increase economic efficiency. The movement of property rights to the owners that put a larger value in their use is the Coasian response to the externalities derived from common property.

The principle of Relative Stability, which guides the allocation of fishing possibilities to the EU members, is, as we saw, an exemption from the internal market that is embedded in the CFP. However, the quota hopping is a signal that the agents circumvented this principle of territorial definition of rights and the effective “economic link” with the coastal zones mostly dependent on fishing.

Perhaps, by setting up a transparent system for transfers of fishing rights, member states could more easily regulate and monitor such trade in use rights.

Anyway, since quota-hopping can be taken as the evidence of a desire to trade fish quotas at the EU level, we might think that a lot of inefficiencies are resulting from the actual regime of management and expect that in a new free regime of trade a clearly reduction in transaction costs would result. Of course, that would result in more economic efficiency.

Although the economic impacts of quota-hopping may be rather small than those expected, the issue of introducing a more liberal property rights trade system will have to confront the distributional effects of such a Coasian proposal. What will be the social impacts for the coastal zones mostly dependent on fishing? This is a fundamental question to be posed today. Especially when the European Union discusses an integrated Maritime Policy of which one fundamental axis is the promotion of sustainable development in the coastal areas. The evaluation and the comparative analysis of several experiences of RBM, within and out of the EU, are fundamental to this debate. More research is needed.

BIBLIOGRAPHY

CLARK, C. (1985), *Bioeconomic Modelling and Fisheries Management*, John Wiley & Sons.

COELHO, M. (2002), “Blue Europe” Revisited: The Reform of the Common Fisheries Policy”, *Proceedings do 5º Encontro Internacional de Economia Europeia*, CEDIN/ISEG, FCT, Lisboa.

COELHO, M. (1999), *A Tragédia dos Comuns Revisitada, A Pesca do Bacalhau na Terra Nova, Consequências do Regime das 200 Milhas*, Tese de Doutoramento, ISEG/UTL, Lisboa.

COELHO, M. (1989), *Gestão e Conservação dos Recursos da Pesca*, ISEG/UTL, Lisboa.

COELHO, M., FILIPE, J. & FERREIRA, M. (2009), “The Quota Hopping Case: Common Fisheries Policy between Market and Law”, *Proceedings of 9th ESA Conference*, RS06 Maritime Sociology, Lisboa.

COELHO, M., FILIPE, J. & FERREIRA, M. (2007), “Relative Stability and Free Establishment: The Common Fisheries Policy between two logics”, *Proceedings of the Annual Conference on Advances in Management - ICAM 2007*, Niagara, Canada.

COELHO, M. , FILIPE, J. & FERREIRA, M. (2007), “ Common Fisheries Policy and Quota Hopping: Some Lessons from the Anglo-Spanish Case”, *Actas do Seminário Luso-Espanhol de Economia Empresarial*, Universidade da Beira Interior, Covilhã.

COELHO, M. e LOPES, R. (1999), “The Common Fisheries Policy and the Feasibility of ITQ’s”, in Hatcher and Robinson (Ed.), *The Definition and Allocation of Use Rights in European Fisheries*, CEMARE/University of Portsmouth.

CONRAD, J. (1999), *Resource Economics*, Cambridge University Press.

COMISSÃO DAS COMUNIDADES EUROPEIAS (2009), *Livro Verde. Reforma da Política Comum de Pescas*, COM (2009)163 final , Bruxelas

DREXL, J. (1993), “Was Sir Francis Drake a Dutchman? - British Supremacy of Parliament after Factortame”, *American Journal of Comparative Law*, Vol. 41, Nº4 pp.551-571.

EUROPEAN COMMISSION (2009), *Reform of the Common Fisheries Policy, Green Paper*, Luxembourg, Office for Official Publications of the European Community.

EUROPEAN COMMISSION (2009), “Common Fisheries Policy, Laying the foundations for the future”, *Fisheries and Aquaculture in Europe*, Nº44.

EUROPEAN COMMISSION (2009), *Reflections on further reform of the Common Fisheries Document*, Commission Working Document.

EUROPEAN COMMISSION, (2001), *Green Paper on the Future of the Common Fisheries Policy*, Brussels.

FILIPE, J., FERREIRA, M. & COELHO, M., (2008); “The Drama of the Commons. An application of Cournot-Nash Model to the Sardine in Portuguese waters. The effects of collusion”; *Journal of Agricultural, Food and Environmental Sciences*; Volume 2, Issue 1.

FILIPPE, J. , COELHO, M. e FERREIRA, M. (2007), *O Drama dos Recursos Comuns*, Sílabo Ed, Lisboa.

HATCHER, A., FRERE, J., PASCOE, S. & ROBINSON, K. (2002), “Quota-Hopping and the foreign ownership of UK fishing vessels”, *Marine Policy*, Vol. 22, pp.1-11.

HOLDEN, M. & GARROD, D (1994); *The Common Fisheries Policy*, Fishing News Books, Buckland Foundation, Oxford.

INAMOTO, M. (2003); “EC Common Fisheries Policy in the Light of “Quota Hopping” cases “, *The Report of Tokyo University Of Fisheries*, Nº 39, pp-7-24.

LEQUESNE, C. (2000), “Quota Hopping: The Common Fisheries Policy Between States and Markets”, *Journal of Common Market Studies*, Vol. 38, Nº5, pp. 779-793.

MORIN, M. (2000); “The fisheries resources in the European Union. The distribution of TACs: principle of relative stability and quota-hopping”, *Marine Policy*, Vol. 24, pp.265-273.

MRAG, IFM, CEFAS,AZTI Tecnalia & PoIEM (2007); *An Analysis of existing Rights Based Management Instruments in Member States and on setting up best practices in the EU*, Parts I & II, European Commission, FISH/2007/03.

MUNRO, G e SCOTT, A. (1985), “The Economics of Fisheries Management” , *Handbook of Natural Resource and Energy Economics*, Vol. II, North Holland, pp.623-676.

NORDMANN, C. (2002), “The Reform of The Common Fisheries Policy” , *Proceedings of the XIVth Annual Conference of the European Association of Fisheries Economists*, EAFE/ Faculdade de Economia da Universidade do Algarve.

POSEIDON AQUATIC RESOURCE MANAGEMENT, LTD & PEW ENVIRONMENT GROUP (2010), *FIFG 2000-2006 Shadow Evaluation*, UK, Hampshire.

TIETENBERG, T. (2007); *Environmental and Natural Resource Economics*, Addison Wesley Longman, Inc.

TORREIRO, M., ALVAREZ, A. e LAFUENTE, M. (2001), “ Internacionalización de la propiedad en el contexto de la Política Pesquera Común: el caso Quota Hopping desde la perspectiva Española” , *II Congreso de Economía de Galicia*, Santiago de Compostela.

WISE, M. (1984), *The Common Fisheries Policy of the European Community*, Methwen & Co, London.