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PROPERTY RIGHTS, REGULATING MEASURES AND STRATEGIC RESPONSES AMONG THE FISHERMEN OF CATALONIA

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PROPERTY RIGHTS, REGULATING MEASURES AND STRATEGIC RESPONSES AMONG THE FISHERMEN OF CATALONIA

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In recent years, the need for better knowledge of the type and the diversity of responses which the fishermen have given and give to the regulating measures proposed by the administration has become a matter of growing concern among those responsible for the management of fisheries, at both administrative and political levels. Parallel to this concern, various different lines of investigation related to this subject have been opened within the area of the social sciences, whether by initiative of the researchers themselves, or on behalf of the different administrations[1]. However, up to the present time, it cannot be affirmed that the conclusions reached are of sufficient importance to explain satisfactorily the principal characteristics of this process.

One of the first difficulties we have to face when trying to analyse the mode of regulation of fishing resources and the acceptance of these regulations by the fishermen is to be found in the hegemony in recent years of the paradigms of the Tragedy of the Commons and of Co-management, which have had a decisive influence on an important part of the researchers working on this subject from the perspective of the social sciences.

At first, the priority given to these two objects of study corresponded to the need to give an explanation of the causes of the exhaustion of resources, which was already beginning to be detected in an important way at international level in the 1960s. It also corresponded to the need to justify the growth of state intervention in the management of the fisheries, which began in the 1960s and culminated in the general nationalization of coastal zones as far out as the 200 mile limit in 1974. However, a great deal of the research carried out on these two objects of study were dominated from the beginning by markedly neo-functionalist theoretical perspectives, which led to certain aspects of the socio-cultural and historical reality being left on one side. These would later reveal themselves to be totally necessary, if one were to reach a better understanding of the fishermen's reactions.

In this sense, it becomes totally necessary to take into account the great cultural and social diversity of fishing communities, (made manifest by the multiplicity of existent forms of access to, appropriation of, and conservation of the resources, of territorialization of maritime space, of the marketing of the catches, of the solving of conflicts without outside help, and also of the long history itself of the productive fishing process, amply described by the few anthropologists, sociologists, and

[1] See for example the works: (Alegret, 1988): **Les confraries de Pescadors. La dimensió social de la pesca a Catalunya**, carried out on behalf of the Direcció General de Pesca Marítima de la Generalitat de Catalunya (General Direction of Sea Fishing of the autonomous Catalan Government), conveni (agreement) of 20-7-1988, expedient PC:300063/68; and the Final Report of the study **Anthropologie et Droit Comparé des Pêches en Méditerranée nord-occidentale. Les propriétés de résistance des systemes de gestion**, made on behalf of the European Communities Commission, General Direction XIV Contract TR/MED 92/017, June 1995: Giovannoni (Coord.), 1996.

historians who have worked upon the subject), when attempting to explain the responses given by the fishermen to the proposed regulations.

The research dealing with rights of property over fishing resources have become by now a commonplace in the social sciences, but an important quantity of these investigations have been conditioned by the paradigm of the "Tragedy of the Commons". According to this paradigm, the fishing resources which are appropriated as common property tend to be over-exploited and thus tend towards becoming exhausted[2]. However, in order to be able to sustain the idea of the unavoidability of this over-exploitation, it becomes necessary to accept as valid the hypothesis that between the known fishing societies there have never existed, and there do not exist, any more regulating mechanisms than that of the rationale of the formalist *homo economicus* himself. According to this, if no rights of property exist over the resources, the necessary incentives for establishing their protection cannot exist either, and therefore there is no reason to think that the fishermen, faced with the exhaustion of resources, will reduce the size of their catches, since, if they did this, the only thing they would achieve would be to allow other fishermen to catch what they do not.

Another of the hypotheses underlying this formalistic rationale is that the usufructuary of fishing resources within a regime of free access only concerns himself with short-term economic benefit, without, therefore, being motivated to create any type of institutions whose objective is the preservation of resources. One logical consequence of this hypothesis has been the consequent lack of interest which some researchers have shown for the study of the socio-cultural and historical dimensions of fishing societies, limiting themselves to describing fishing activity as if this were something carried out by a series of isolated individuals, all acting with one single type of rationale, as if they did not belong to any specific social group and as if they lacked a historical past to link them to an ecosystem and to certain specific resources.

In order to try to correct this situation, several research projects have been undertaken, over the last few decades, in the area of social anthropology. These tend to show how the great majority of social groups which are dependent upon sea fishing as their main form of subsistence act, rather than in an individualistic way, as a collective with the aim of organizing the access to, the exploitation of, and the distribution of the resources they work with.

Also through this research it has been demonstrated that the fishermen in general do not apply that kind of economic rationale which would lead them to fish intensively to the point where resources become extinct; instead, they themselves create the forms of organization and institutions necessary for regulating the size of their catches, thus impeding the over-exploitation of resources (and, therefore, their possible extinction), and, at the same time, ensuring more general access to these resources

[2] One of the principal proponents of this was Garret Hardin (1966) who gave birth to the concept in the now classic article which bears the name of "The Tragedy of the Commons". The presuppositions behind this paradigm belong to the formalist current in economics and are based upon the hypothesis that, due to the fact that the fishing resources "do not belong to anybody", nobody, in consequence, protects them, and thus they are exploited until they are exhausted **,** which makes intervention of the public powers-that-be necessary, either in the form of privatization, or in the form of managing the resources as if they were these powers' own property.

at communitary level or collective level, which guarantees the possibility of survival for all members of the group, and not merely that of a few of these.

PROPERTY RIGHTS OVER THE RESOURCES

If we take as a reference the fishing activity which is carried out along the littoral of Catalonia (see maps 1 and 2) and we try to analyse the way in which this process of appropriation of fishing resources is organized within this fishing activity, we immediately become aware that any analysis which is made without taking into account its long history, as well as its profound social and cultural dimensions, is doomed to failure, above all from the point of view of the comprehension of the kind of responses given by the fishermen to the proposals for the management of resources which the administrations responsible for this sector make.

Territorialization as a form of organizing access to and appropriation of resources

In Catalonia, if we ask fishermen who posseses right of access to, or ownership of, fishing resources, the majority give a stereotyped response along the lines of “the sea belongs to everybody”.

In the cultural context in which it occurs, this reply has two meanings. The first refers to the fact that the rights of access to and extraction of fishing resources cannot be thought about in an individualistic way, but that, rather, they are always collective in character. However, when one asks these fishermen to elucidate upon this collective or common character which is attributed to the resources, they usually introduce a second level of meaning which, without contradicting the first, refers to the fact that access to and exploitation of resources can only be carried out through each fisherman’s attachment or belonging to one of the different groups which make up this collective, whether this be the local community, the group of fishermen, or the group of citizens of the nation (Catalonia) or of the state (Spain).

However, if we pose this same question from a formal point of view we find that, at present in Catalonia, the rights of property over marine resources in Catalan littoral waters are legally held in exclusivity by the State, while the fishermen do not formally hold any recognised rights of property over these resources, on any level, neither individual, nor collective, nor communitary.

The state exercises these rights of property through public law, and therefore fishing resources are considered to belong to the general public. This means that they are accessible to any individual or group recognized to this effect by public law, whether this recognition be given under the auspices of communitary (EU), state (Spanish), or autonomous (Catalan) legislation. In consequence, private law has no application, and this is one of the most important characteristics of the process of appropriation of marine resources almost the whole world over.

The public institutions in Catalonia, as with those in the rest of the Spanish Mediterranean, establish two different forms of rights of property over resources. The

first refers to the spatial projection of those rights, which corresponds to what is authorised fishing territory from the point of view of the fisherman and to territorial jurisdiction for fishing, from the point of view of the administration.

Formal territorialization of maritime fishing space in Catalonia.

In Catalonia, the public institutions which currently possess some kind of territorial jurisdiction over maritime space related to fishing are the central government and the autonomous government.

The central government has formally recognized exclusive jurisdiction over territorial waters as far out as twelve miles, with effect to the ownership over resources and to their regulation[3]. The autonomous government of the Generalitat de Catalunya has constitutionally recognised exclusive jurisdiction over the waters referred to as interior waters[4]. This jurisdiction gives it the right of co-ordination and of management of fishing resources inside this zone, as well as the capacity for regulating all the different kinds of fishing activity carried out in these waters.

However, in exterior waters[5] the jurisdiction corresponds to the central government, but only with effect to property rights, not with effect to regulation, since this competence is shared by both governments, as shall be seen later.

The Fishermen's Confreries, for their part, are the organizations recognised by the state to represent the interests of all the members of the sector and to collaborate with the administration in matters relative to its co-ordination[6]. In order to fulfil this function, the Confreries are given their own legal status as Public Law Corporations, and have their own recognised territorial jurisdictions, over which they exercise this representation in exclusivity. In this way, the Catalan littoral is divided along its coastline into 31 territorial demarcations which correspond to the 31 maritime[7] Confreries currently in existence (see map 1).

However, the territorial jurisdiction of each Confrerie covers only the area of land between two points on the littoral (see map 1), not to the corresponding maritime space. Therefore, formally, the Confreries do not have recognised jurisdiction over maritime space and their formal jurisdiction over the ownership of fishing resources, in law, is non-existent.

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[3] According to Royal Decree 2510/1977, which establishes exclusive fishing rights and exclusive jurisdiction in fishing matters in the six-mile zone from the "straight base lines" (see note 4) and fishing rights in the six-to-twelve mile zone.

[4] "Interior" waters are those maritime zone waters between the coastline of the littoral and the "straight base line", which is an imaginary line traced between the protruding points along the coast, as determined by Royal Decree 2510/1977 of 5th August, 1977 (see map 1)

[5] "Exterior" waters are those which lie between the "straight base line" and its parallel, traced twelve miles out to sea (see map 1).

[6] For further information on the structure and functioning of the Fishermen's Confreries in Catalonia, see Alegret (1988, 1990, 1995, 1996).

[7] As well as the 31 Maritime Confreries there exists another, devoted to lagoon-fishing in the Delta of the Ebro river. This is the Confrerie of Sant Pere de Tortosa, which is the oldest Confrerie in all Catalonia. There are references to its existence which date back as far as the 12th century, when King Jaume I conceded the right to fish in those lagoons to the sailors of the region in return for the help these men gave him in the conquests of Mallorca and Valencia.

Real territorialization of maritime space

The formal division of maritime space between international waters, territorial waters, and exterior and interior waters, does not correspond to the real division which the fishermen use in order to represent territorially their ownership of, and access to, fishing resources. This is because, first, for the Catalan fishermen the principal territorial reference is the demarcation of their Confrerie and not the administrative divisions established by the central and autonomous governments; and secondly, this territorialization is carried out in a different way according to whether we are dealing with pelagic resources or bottom-living resources.

The real demarcation of each Confrerie for bottom-living resources, in other words, that which the fishermen consider to be their own, corresponds to the maritime space which lies between their own home port and the limit of the continental shelf, as long as this remains within the twelve-mile limit. On the other hand, for pelagic resources, the external limit of the shelf is not taken into account, and it is the twelve-mile limit corresponding to Spanish territorial waters in the Mediterranean which is used as a reference.

This differential system of territorialization with respect to bottom-living and pelagic resources is perceived from three points of view: logistical, technical and cultural.

From the logistical perspective, the Catalan fishermen consider that their rights over bottom-living resources are directly related to their proximity to the fishermen's home port, creating a kind of nuclear territorialization (Acheson, 1988:79) in which the intensity of the rights over the fishing-grounds is in function of how close it is to a fisherman's base. In this way, any fishing-ground, however far away it may be, is considered to "belong more" to Confrerie "A" than to any other if it is closer to Confrerie "A"'s base than to that of the other Confreries. The maritime projection of the coastal limits of the fishing demarcation of the Confrerie, which is used in order to determine territorial waters is in this case not taken into account as a reference.

On the other hand, from a strictly technical perspective, the Catalan fishermen consider that the right of access and of ownership over bottom-living resources are possessed by those who, as well as fulfilling the logistical condition of "being based close to these", also comply with the necessary condition of having at their disposal the gears and techniques for the capture of these species. This situation is seen, for example, between Confreries which do not possess a trawling fleet and neighbouring Confreries which do. In this case, the Confrerie without a trawling fleet but within whose demarcation the fishing-grounds lie, do not claim these fishing-grounds as their own. Despite the fact that they lie within what formally would be their nuclear territorial space, these fishing-grounds may be exploited with no kind of problems by vessels from other Confreries. However, when a certain Confrerie which before had no trawling fleet has, due to the construction of a new port, subsequently acquired such a fleet, it then, from that time onwards, begins to consider such fishing-grounds as "its own", since it is now technically equipped to exploit them, although formally it can never reach a position of exclusivity over these.

A third element which also plays an important role in the territorialization of maritime fishing space is the mode of symbolic appropriation which each Confrerie makes of this space. This symbolic appropriation is shown in very different ways, although fundamentally it consists of the knowledge which the fishermen have of of the characteristics of the sea bottom and the representation which they make of this through the cognitive maps which each one possesses, and which have been passed on to them through their families or by the community. It is also seen in their "unofficial" toponymy of the bottom of the sea, which is the result of the long history of this process of territorialization and occupation on behalf of the community in question.

For all these reasons it would be more correct to consider that, in the case of the exploitation of bottom-living species which the trawling fleet carries out, each Confrerie territorializes in a nuclear way a maritime zone which comes to be considered as "its own", and is marked out by the continued use which each community makes of it. It is also restricted on its far side by the limit of the continental shelf and on its flanks by the real use or occupation which the trawling units of neighbouring Confreries make of the zone,

However, and despite all this process of appropriation of the maritime-fishing space on behalf of the Confreries, the rights deriving from this territorialization are never perceived as rights which exclude members of neighbouring Confreries, since to these same fishing-grounds regularly come vessels from other, nearby Confreries, without this fact causing any kind of conflict. In this case the basic regulating element of this whole process of shared use of certain specific fishing-grounds are the schedules for port exit and entry which each Confrerie has established in order to regulate not only fishing effort, but also access to the places where fishing activity is carried out.

For pelagic resources, however, this process of territorialization is not produced, due to the migratory character of these species and the consequent impossibility of territorialization of the maritime space in which they are fished for. In this case, as we have indicated earlier, the only process of territorialization is that which is imposed by the limits of the jurisdictional waters of the state in the Mediterranean. This creates a space which is not communitary, (or belonging to the Confrerie), nor regional, (belonging to Catalonia), but which belongs to the whole of the state, which marks thus a great difference between trawling, which is perceived as a more "closed-off" kind of fishing, as opposed to purse-seine fishing, which is more "open".

Therefore, in the purse-seiner fleet the principle of nuclear territoriality typical of the trawling fleet is not complied with, and other types of control of access to and appropriation of resources enter into the picture. Also logistic controls, which are carried out fundamentally through the control of the temporary changes of base and the timetables of port entry and exit, as we shall see in the next section.

REGULATING MEASURES

The group of regulating measures covering fishing activity in Catalonia is characterized by three fundamental aspects. The first deals with the division of

competence established between the state and the autonomous community concerning the regulation of fishing zones, the resources and the organization of the sector. The second refers to the type of regulation of the productive process which is based on the regulation of fishing effort and not of catches. The third refers to the participation of the Confreries in the establishment of regulating measures, either through the Confreries' own proposals, or through compulsory although not binding consultation on behalf of the administration with these institutions.

The conflicts of competence relative to property rights and to the regulation of fishing activity.

The problems which the central (Madrid) and autonomous administrations (Barcelona) are having in reaching an agreement over the definition of the regulating capacity for fishing activity in Catalonia of each of these administrations has been a very important topic in recent years, and is a problem which at present still has not been resolved totally.

When, in 1978, the new Constitution came into force, a process of political decentralization at all levels began in Spain, and which also affected the co-ordination of the fishing sector. However, due to exclusively political interests, this process of decentralization of the fishing policy became a legal problem which brought the state government into conflict with that of the autonomous community of Catalonia.

In the process of decentralization written into the constitution, the Catalan government received a series of competences, among which we find those relative to the capacity for regulation of the fishing activity which is carried out in the Catalan littoral waters. The first problems of interpretation of these norms forced the Constitutional Tribunal to intervene in order to solve the conflicts of competence which arose between both governments. Through five sentences[8] the high tribunal established the jurisprudence currently in force, which establishes the bases for the regulation of the whole of the sector relative to this process of decentralization.

In these sentences, and from a strictly legal point of view, the concepts relative to the ownership of resources, the access to fishing zones, as well as the aspects relative to the co-ordination of the fishing sector were defined and clarified and thus the division of competences between the central and autonomous governments was fixed. At the same time, the necessary jurisprudence for solving the problems which could arise in the future were established.

The jurisprudence contained in these five sentences established a basic and theoretical distinction between **regulation of fishing resources and fishing zones**[9] and **co-ordination of the fishing sector**[10]**.**

[8] These sentences are 158/86, 56/89, 147/91, 44/92, 57/92, 149/92.

[9] By **regulation of fishing resources and fishing zones** we understand the capacity for creation of norms governing:

i) fishing resources (species which may be fished for, minimum sizes, etc.)

ii) fishing zones (permitted depths, fishing grounds, distances from shore and quantities, as well as licences, permits, etc.)

The legislation concerning the regulation of fishing resources and fishing zones in exterior waters became the exclusive competence of the state, whereas interior waters became the exclusive competence of the autonomous communities. The co-ordination of the fishing sector in interior waters became the exclusive responsibility of the autonomous communities, whereas competence for the co-ordination of the sector in exterior waters was shared between the autonomous communities and the state. This shared competence assigned to the state the establishment of the general principles, while the autonomous communities were responsible for the legislative development of these principles and their subsequent application.

The consequences of this legal and political conflict have been very negative for the Catalan fishing sector. First, because of the initial damage caused by the fact this fundamentally political conflict of competence could not be solved without going to court, with the loss of legitimacy which this entailed for both administrations. Secondly, because both administrations published their own (different and conflicting) legislations, there was a consequent lack of clear legal definition in the fishing sector until the Tribunal finally pronounced sentence. This confused situation lasted over five years, causing disorientation within the sector, and also loss of confidence in the politicians on behalf of the sector's professionals.

Regulation of the productive process

The second fundamental characteristic of the set of regulating measures governing fishing activity in Catalonia is that which refers to the kind of regulations of extractive activity currently in force. These are based upon the control of fishing effort, and not on the control of the total maximum weight of catches (Quotas).

Control of fishing effort is established fundamentally according to three parameters, despite the fact that the current norms cover many others, which come into play when dealing with the regulation of fishing effort. These parameters are: the size of the fleet, the maximum power of the boats' engines and the timetables for port exit and entry.

The size of the fleet has been contained for several years now, which means that the number of units cannot be increased, and that in order to be able to build new units, an equal tonnage of shipping must be scrapped. In this sense, it may be said that since the application of the II and III MAGPs, the size of the trawling fleet has remained virtually the same, whereas the purse-seiner and small-scale fleets have grown slightly larger (see Fig. 1).

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iii) periods of fishing activity (timetables for fishing, close-seasons, biological recuperation periods), and iv) the ways and means for the carrying out of extractive activity in the sea (kinds of gears, kinds of vessels, etc.).

[10] By **co-ordination of the fishing sector** we mean the regulation of the productive economic sector of fishing in everything that is not direct extractive activity, but which rather has to do with the internal organization of the sector. In this is included the capacity to decide who can directly carry out fishing activity and the conditions which such subjects must satisfy in order to form part of the sector, as well as the way in which the sector is organized. Consequently, also in this section are included the competences relative to the professional conditions of the fishermen, the norms referring to the constuction and safety of vessels, official registers, the constitution and functioning of the Fishermen's Confreries, the quayside markets, etc.

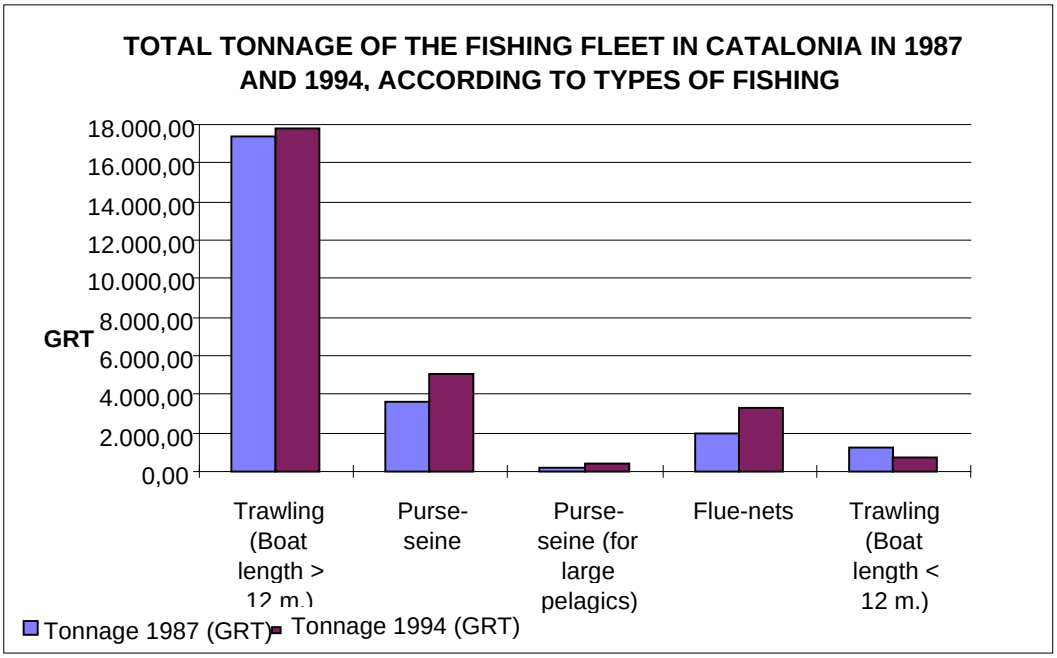

FIG. 1. Source of data 1987: Alegret, 1987, data supplied by Confreries. Source of data 1994: DGPM (General Direction of Sea-Fishing), Registre de la Flota Pesquera de Catalunya Any 1994 (Register of the Catalan Fishing Fleet for the year 1994). Elaboration of data by author.

The current regulations have not achieved the objective of containing the increase in the engine-power of vessels, despite the fact that the norms are very clear on this point. The greatest amount of non-adherence to these norms is found in the trawling fleet, which rarely complies with the regulation limit of 450 Hp of maximum on-board power. The purse-seiner and small-gear fleets, on the other hand, have remained within or very close to the limits imposed by the current norms.

However, the central element of the control of fishing effort are the fishing timetables. Through these schedules not only is the limiting of total fishing effort achieved, but a nuclear territorialization of the fishing zones is also achieved, since only the vessels which have their base nearby can accede to each fishing zone, unless they wish to waste the greater part of their allotted fishing time in travelling.

In this sense, for the purse-seiner fleet the current legislation establishes that extractive activity may be carried out a maximum of five days per week, with a compulsory rest-period of not less than forty-eight consecutive hours between midnight on Friday and midnight on Sunday[11]. A maximum of five days' fishing is also fixed for the trawling fleet, in periods not exceeding twelve hours, so that these include the greatest possible number of daylight hours. The responsibility for the establishment of the specific timetables within these limits belongs to each Confrerie[12].

The basic difference between these three systems of control of fishing effort occurs in the different degrees to which the fishermen participate in them. Although the

[11] These regulations are found in Royal Decree 2349/84.
[12] As established by Royal Decree 679/88.

fishermen do not participate in the elaboration and control of the regulations concerning the size of the fleet and the engine power of vessels, they do participate directly in the establishment and control of the timetables, working out proposals which are passed on to the administration through the Confreries and their Federations. In this way, the control of the timetables has turned into the most effective instrument of control of fishing effort and also the most realistic from the point of view of effectiveness and the degree to which it is complied with.

The participation of the Confreries in the elaboration and control of the regulating measures

The fact that the Fishermen's Confreries in Catalonia participate at different levels in the elaboration and control of the regulating measures governing the productive process is, perhaps, the most important characteristic of this process.

Formally, the Confreries act as organs of consultation and of collaboration with the fishing administration. They possess this faculty in law since they are Public Law Corporations and so, they are organically linked to the state. However, the Confreries have also traditionally been a power with the capacity to influence the administration in certain matters which affect them most directly, and in which the administration needs the collaboration of the Confreries. For this reason we do not believe it is possible to reach an understanding of the process of elaboration of and compliance with the regulating measures in the fishing sector without taking into account the real role which the Confreries play.

In this sense, we can say that at present in Catalonia the Confreries act as true regulating institutions in areas related to fishing within their territorial limits and, by extension, in the whole of the autonomous community. This is possible due to the fact that the Catalan administration does not have either the legitimacy or the force necessary to impose regulating measures on the Confreries unless they have been previously proposed by the Confreries, or at least previously agreed on by these. This situation was consolidated in 1992 when, thanks to the last sentence relative to the conflict of competence between the state and the autonomous community, the autonomous community lost its capacity for regulation of resources and fishing zones in exterior waters, losing in this way what little power and legitimacy it had as regards the fishing sector.

In recent years, however, the consequences of this apparent loss of function of the Catalan fishing administration, and its distancing from the everyday problems of the fishermen, have proved to be positive rather than negative. The fact that the Catalan administration either does not have sufficient political interest to take the initiative in certain matters, or does not have sufficient legitimacy to do this, has led to a situation of greater participation by the Confreries in the process of decision-making in the area of co-ordination of the sector. In this way, the system seems to be evolving, although very slowly, towards a real kind of co-management, in which the Confreries propose and the Catalan government disposes. This occurs despite the low organizational profile which the Confreries have at a supra-local level, limiting the real power which without doubt the Confreries possess in their dealings with the administration.

THE STRATEGIC RESPONSES OF THE FISHERMEN

Anyone who has any knowledge of the real functioning of the Catalan fishing sector will accept that the sector is hyper-regulated and that between the set of legal norms and practical reality there exists too wide a gap to think that those norms can be functional and operative. In this sense, we believe that what really allows the system to function is the series of strategic responses which the fishermen give to each of the promulgated norms, in an attempt to transform or adapt them to meet their own needs, or finding certain kinds of solutions to their problems without waiting for the administration to intervene.

One of the examples of this diversity of responses is found in the strategies for minimizing the impact of the measures of control and vigilance. In this sense, the early-warning network which the fishermen create *de facto* when a police, navy, or other kind of "control and vigilance" vessel leaves port is a good example of the organizational efficiency shown by the sector in "protecting itself" against those norms "which are impossible to stick to". The objective of this early-warning network is to reduce the effect of surprise, and to guarantee fishermen a minimum reaction time, so that they do not suddenly find themselves faced with a "snap inspection". The network gives fishermen time to change the nets with illegal mesh sizes, to cease fishing in, and/or leave the shallower zones which, because of the type of gear they use, are prohibited to them, to throw back into the sea catches of fish of smaller than authorized size, etc.

Another example of strategic responses are those which the fishermen develop in order to find solutions to problems of the sector without causing the administration to intervene. An example of this kind is currently found in the Catalan purse-seiner fleet. This fleet is one of the most affected by the diminishing of resources and large oscillations in prices, above all of the European anchovy (*Engraulis encrasicholus*). Other elements contributing to what may be termed a crisis in this segment of the fishing fleet are the inexistence of a withdrawal price, since in Catalonia, Producers' Organizations do not exist, and of the entry into the Catalan market of pelagic species captured in France with pelagic trawling gears, which are forbidden in Spain, and which logically have a great impact on prices.

In an attempt to overcome these problems, the northern and central Confreries of Catalonia in possession of a purse-seiner fleet (Roses, Palamós, Blanes, Arenys de Mar, Barcelona and Vilanova i la Geltrú) have, since half-way through 1995, been trying to develop their own management system for the fishing of this species, through the combined use of the system of fishing effort control already in existence, and a new system of catch-control, which is an important innovative element in fishing management in the Mediterranean.

Through the development of this kind of strategic response, therefore, the Catalan purse-seiner fishermen are trying to improve and complete the current norms governing control of fishing effort through a variable system of quotas per vessel which takes into account simultaneously the variations in price and of the size of the catches. However, it is proving extremely difficult to reach a series of general

agreements over the application of this mixed system of catch- and fishing effort control, despite several attempts to do this so far. This is due fundamentally to the incapacity of the Federations of Confreries (Barcelona and Girona) to give more weight to the general interests of the sector than to the particular interests of some Confreries, and the reason for this is that the Federations are too strongly influcenced by the personalities of some of the Confreries' leaders.

Another of the reasons which explain the current dificulties experienced in reaching agreements is that the fishermen are not used to thinking in terms of regulation of catches, since until now, the only control which existed was control of fishing effort. However, the multiplicity of variables which intervene at present in the process, together with the highly experimental nature of the proposals made, are forcing the Confreries to begin to re-consider the problem in a different way from formerly. First, by trying to reach a consensus on the identification and definition of the problem (state of resources, excess of fish captured, fall in prices, excess of regulations, etc.). Secondly, they are begining to realize that the traditional system of representation and participation in the decision-making within the sector must change.

CONCLUSION

In order to reach comprehension of the strategies used by the Catalan fishermen in their attempt to find answers to the enormous set of regulating measures currently in force in the fishing sector, it becomes necessary to know how the fishermen themselves define and re-elaborate their own rights over resources and over fishing zones, and to know what the existing relationship is between these rights, and the rights formally held by the state through institutions with jurisdiction over maritime fishing space. From the kind of relationship which is established between the fishermen and the administration will derive such important aspects as defence of and legitimacy of the proposed regulating measures for the co-ordination and management of the fishing sector, and the acceptance of or collaboration with these measures on behalf of the fishermen .

On the other hand, the vast distance existing between the rights of access to and ownership of fishing resources, such as they are represented by the members of the sector, and the regulating measures elaborated by the administration in order to make those rights effective, forces the fishermen to develop a set of strategic responses through which to defend their established rights and to claim new ones. In this sense, the kinds of strategic responses which the fishermen give to the proposals for regulation and control of the fishing sector elaborated by the administration should be interpreted in relation to the degree of participation which the fishermen have in the process of the elaboration and application of those proposals. These strategic responses should also be interpreted in relation to the degree of legitimacy which the fishermen recognize in the administrative institutions themselves. From there will arise the possibility for the real application of these regulating measures, the possibility for effective control of these measures, and also the possibility they will be adhered to by those subject to them.

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