

Cod and Tradition. Cultural Effects of Cod Fisheries in Portugal

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ABSTRACT:

Property rights are in the centre of fisheries management difficulties. In the 90s, Portuguese national fishing fleet lost more than 35% of the tonnage, a third of the fishermen, almost 30% of the production. The segment of distant water fisheries, especially of the cod, is accompanying this crisis. In one decade (1976 to 1986) this segment had to face two new restrictions to the development of fisheries: Extended Fisheries Jurisdiction and the integration in the Common Fisheries Policy. After a profound downsizing process we are still confronted with an overcapacity problem, face to the disposable quotas.

Anyway, while the stocks rebuild, Public managers cannot stop defining social and cultural support policies for the affected populations and try to maintain the memory and the important traditions associated. One area mostly affected is Ílhavo. "The Sea for Tradition" is the slogan of the City hall that attests well the strong connection of the municipality to the sea. The guidelines for public management highlight the role of fisheries in the local development (anchored in reasons of geographical and historical nature), and the continuous exaltation of the maritime culture, with its maximum expression in the Maritime Museum and in other cultural manifestations of cod-oriented traditions (as religious festivities). The purpose of our paper is to study the socio-economic and cultural impacts of the institutional change in cod Portuguese fisheries.

Introduction

Property rights are in the center of fisheries management difficulties. The Portuguese cod fisheries give good examples of this kind of management difficulties (Coelho (1999), Coelho e Lopes (1999)). Consideration of the effect of changes in the rules of access to resources has normally been undertaken from the standpoint of coastal states. However it is obvious that these changes can have much more dramatic effect upon countries which undertake long distance fishing. Their fleets worked in the High Sea areas where rules of access allowed from fishing without restrictions. In many cases, this traditional use created genuine "historical rights" and the process of "creeping jurisdiction" (the slowly side to the coastal states jurisdiction of areas and resources that used to be res-nullius /open access) that we've been attending since the 40/50s, generate a lot of problems. The institutional change and the new forms of ocean governance imply a new operation- code and new game rules.

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The difficulties and the stagnation were not peculiar to Portugal, it happened worldwide as a result of far-reaching alterations in the juridical and bio-economic framework of fisheries (Leal, 1984). However, in Portugal, given the important (in European terms) contribution of fishing to GDP and the high consumption of fish of Portuguese population, this situation is more acute.

In global terms, in the 90s - only, Portuguese national fishing fleet lost more than 35% of the tonnage, a third of the fishermen and almost 30% of the production. At the same time, the population maintained a high level of fish consumption; so, the commercial fisheries deficit almost duplicated only in the first half of the nineties.

The segment of distant water fisheries, especially of the cod, it is accompanying this crisis in the fisheries sector as a whole. In one decade (from 1976 to 1986) this segment of the Portuguese fisheries had to face two new situations and essential restrictions to the development of fishing activities: the new regime of the 200 miles and the adhesion of Portugal to European Community with the consequent integration in the Common Fisheries Policy.

The purpose of this paper is to study the socio-economic and cultural impacts of the institutional change of cod fisheries framework in Portugal. The paper is made of two parts. In the first part we make the analysis the socio-economics of Portuguese cod fisheries. In the second, we use the case of Ílhavo, a maritime community in Portugal, to study the cultural impacts and manifestations of cod-oriented traditions.

1. Socio-economics of cod fisheries in Portugal

The "heroic phase"- Cod Campaign

The cod fisheries segment grew (in the 30s and 40s) in the *corporativism* logic of strong intervention and State protection. It had, underlying, the condition of open access to the resources.

In the thirties, a new organization model inspired in the fascist principles of the so called Estado Novo was implemented. Between 1934 and 1939, Ship-owners Guilds and Associations were created in each of the main fishing segments (cod included), as well as Fishing Houses and the respective Central Board, Guilds of trade, of exporters/importers, of canned fish, and the bodies of economic co-ordination. In this last case the most important would be the CRCB – the Cod Business Regulating Board.

The New Fishing Policy was marked by the state interventionism throughout all economic activity:

- At the level of corporate initiative: a conditioning process where the necessary official approval for investments and integration in the Government Plans strongly determinate the evolution of cod fleet and trawling industries,
- In the state organization of fishing corporate associations (capital or labor),
- In the system of commerce, through price control at production level and customs protection against fishing imports.

A regulation from 1934 (DL 23968) instituted the co-ordination board and defined the guidelines of the so called "Cod Campaign". The purpose of this campaign was the increase of national production, currency retention through the reduction of imports and the protection of the industries downstream (naval construction) and upstream (especially the drying industry).

This campaign would follow a strategy of benefiting consumption in order to bring back the traditional ways of consuming cod⁵. Basically, the final purpose was to

⁵ Since the Medieval era it was usual to eat cod in "1000 ways". This is explained with the fact that Portugal was a Catholic country and in the Lent, before Easter, people of Faith should not eat meat, so cod was a

keep food cheap to create a situation of social “equilibrium”, without great reaction from workers. Cheap food permitted the setting of low wages and that was essential to the industrialization process - Not only in the first phase of the development of the model of imports’ substitution but, also, after a period of protection of nascent industries, for the development of a new model of development with the accent in the exports (when Portugal enter the EFTA, in the final 50s). Of course, Portuguese exportation products were assented in the low costs of labor.

In this strategy, the role of the cited CRBR was fundamental in the setting of prices on the domestic market that regulated the tensions between producers and importers. This implied the obligatory purchase by the importers of percentages of national cod at an officially fixed minimum price. And, what it is the most interesting, all this new policy was integrated in the usual ingredients of the Regime’s ideological propaganda in a form that had no parallel in other countries (Garrido, 1977). The cod was called the “Faithful Friend”. Every year, the “take off” of the fleets to the Newfoundland was a real spectacular theater session with holy missal and the Government attending departure. Government, Church, Army, all the real powers, involved in a passionate ceremony of grandiosity. And, of course, all the poor people of coastal communities. The “romantic character” of the fishermen that went to the long distance waters (“brave men fighting against nature”) was celebrated. At the same time, the Regime was also imposing his propagandistic vision of one Government (really confounded with the spirit of the Nation) that was (again) putting Portugal in the direction of those glory days of the “Navigation discoveries”. And the fact is that the results were significant. Up to the mid-sixties when the sector was partially liberalized, the changes were notable.

1964 was the year of largest national catch of cod (near 97300 tones). While, in 1934, the percentage of domestic production was 16% of the consumption level (the other 84% were imported), in 1966 the situation was reversed, more than 82% of the domestic consumption was covered by national production. At the same time, the fleet grew in number and tonnage. From 1938 to 1961, the renewal of the fleet took for 66 vessels, equivalent to more than 69000 gauging tones. Fishing capacity rose by 700% (Moutinho, 1985). State supported this reorganization with subsidies and credits for construction and modernization of vessels. The numbers of workers reached near 4200 in 1965 and more than 10% of those fishermen were aged less than 21 years.

The Regime of 200 miles and the Common Fisheries Policy integration

There was an underlying condition to this productive and organizational system: the free access to the resources. But, by the end of the seventies, the overall sector of world cod fisheries was threatened by two problems: overfishing and overcapacity. The pressure put on the stocks, the catch of immature fish and the difficult renewal of cod were giving signals of biological overfishing in the traditional bancs of Newfoundland and other areas of North Atlantic. An immense fleet from several maritime potencies, strongly equipped, turn the cod fisheries into a “race for fish”, revealing the overcapacity problem.

Also, since the 40s, a real process of institutional change was arriving. Beginning with the Truman Proclamations of the coastal rights over the Continental Platform (and its resources), it then turn to the exigency of coastal states to introduce new rules of access and of the creation of exclusive fishing rights in the coastal areas. Portugal strongly defensive position of the “historic rights” for Portuguese long

very good alternative. Cod, after being dried, can be consumed after a long period because of its high capacity of conservation. This put also the cod as an important food product for our navigators along the important period of navigation and worldwide discoveries (XV to XVI centuries).

distance fleet in Newfoundland in the first and second UN Conferences on the Law of the Sea were significant and revealed the concern of Portuguese Government with the new international attitude.

In what relates with Portuguese cod fisheries at the time, production still increase until 1967 and the modernization process continued. But some signs of stagnation and crisis were emerging: only 75% of the potential capacity was used, the profitability began to decline, catches included now less "adult" fish (revealing the pressure over the stocks and its difficult recovery). The liberalization of commerce imposed in 1967 by our relation with EFTA and the Revolution of 1974, with the extinction of Fishing Houses and the creation of democratic Associations of Ship-owners and Trade Unions from Fishermen, also introduced special changes in this segment.

An interesting element of the analysis is that the number of vessels began to decline, from 91 vessels in 1965 to only 55 in 1973, but the investment, at constant prices, increased between 1966 to 1973 at an average rate of 6,25 %. This means that the modernization of the fleet continued: more tonnage, more technology, and so on - the overcapitalization process.

This situation is not unusual. This means that the development of cod fisheries and its 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 numbers 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.

The introduction of more capital intensive technology resulted in the reduction in employment in the segment. Between 1960 and 1976 employment reduced by half in spite of the increase in the wages. Following the general practice of the extension of jurisdiction to 200 miles, in 1977, Portugal and Canada adopted the new regime that became to be legally defined in the new Law of the Sea of 1982 (UNCLOS, 1982). The introduction of the regime of the 200 miles altered the rules of the game deeply, creating new property rights and putting the traditional fishing zones (most of them in the area of Newfoundland) under Canada's jurisdiction. In the first phase, Portugal tried to cross this restriction through the accomplishment of bilateral agreements that, maintaining substantial quotas, minimized the negative effects of the new economic and juridical context in international fisheries. It was not, however, enough to hide the problems of overcapacity of cod segment and to avoid the current social difficulties of the adjustment process.

With the adhesion to EEC, the situation of the sector became worse. In the origin of this aggravation we can find:

- the transposition of the bilateral agreements for the supra-national management of European Commission; Portugal could not have a bilateral agreement with Canada but only to have access of a defined proportion of the European quota in Canadian waters;
- the (then) bad fishing relationships between EEC and Canada affecting the disposable quotas;
- overfishing and severe decrease of the cod stocks in the 90s; most of the stocks in Newfoundland were put in a situation of fishing "moratorium".
- subsidies evil-guided through the Policy of Structures of CFP (Common Fisheries Policy), reinforcing the problems of over-investment;

- Some insecurity in the definition of the Fisheries Policy to proceed, for this segment, on the part of the national public powers.

Perspectives for the Future

The perspectives, in the short/medium period, are not too optimistic. The cod stocks in the Newfoundland area don't show clear signs of recovery. The shares in the NAFO area are insufficient and the scientific information about the stocks in the Northeast Atlantic area (namely the *Arcto-Norwegian* stock) is also a motive of preoccupation. So, this segment will pass therefore a period of great difficulties, unless someone opens up new perspectives of activities reorientation for new areas and new products. What is depressing, in this case, is that this segment is, perhaps, the most efficient in the Portuguese fisheries. After a profound downsizing process (from a large fleet of we are now reduced to no more than a dozen of big vessels) we are still confronted with an overcapacity problem (face to the disposable resources).

And another interesting situation of institutional change is now putting this segment under discussion. Extended Fisheries Jurisdiction gave the coastal states property-rights and the potential of a sustainable management of fisheries. However, the general evolution towards more exclusive rights didn't mean the exclusion of open access regimes in international fisheries. The Law of the Sea (1982) doesn't exclude the principle of the "freedom of the seas" which remains in force in the High Sea (besides the limits of 200 miles of Economic Exclusive Zones).

One of the most penetrating subjects that emerged as a consequence of this statute was the management of straddling stocks. Given that the fish are endowed with mobility, it was inevitable that the coastal states, after the establishment of EEZs, verified that they were sharing some of those resources with neighbouring countries. Many coastal countries also verified that some of the acquired stocks passed the border of EEZ to the High Seas, where they were subject to the exploitation of distant waters fishing fleets from other countries. There is no rigorous typology: we can designate this last category of fishing resources as straddling stocks. Cod is a good example.

As the High Seas remain with a statute where the regime of Open Access still persists, potentially, we are able to find a "Commons Tragedy" in the resources management, besides the 200 miles limits. And that's what we've been observing. The problems of "unfinished business" in the New Law of the Sea (UNCLOS, 1982) - namely, the imprecise definition of use rights in those areas of High Seas adjacent to the EEZs made the origins of a lot of "fish wars", in the 90s.

The proposed solution is the cooperation between interested countries, in the context of a Regional Fisheries Organization (NAFO, in this case). This answer could be seen as an approach of "Res Communes" type-solution. The members of the organization would agree in the rules of resource use and management. In the sense of Bromley, "property of all, managed by all". However, note that the question of access (especially the question of the possibility of a new-entrant in the Organization) is still unsolved.

The U. N. Agreement (1995) on Transboundary Stocks and Highly Migratory Species pretended to be this formula of cooperation among interested states. Curiously, in the European Union, USA and Canada it was well received, but in Portugal it was seen with reserves.

Despite some interesting results, this Agreement continues to be the motive of discussion, especially in the context of NAFO. The debate is now turning to the problematic of the enlargement of EEZs and a certain rehabilitation of the juridical and economical statute of the Continental Platform.

Facing the weak results obtained in the recovery of the cod stocks, the leaders of the organizations of fishing of the Newfoundland have been proposing the

enlargement of the EEZ to the limit of the 350 miles making it to coincide with the limits of the Continental Platform. The United Nations recognise that the limit of the 200 miles doesn't make any biological sense. As a matter of fact, the statute of EEZ is much more of functional type. On the contrary, the Continental Platform has a geomorphologic unquestionable existence. The coastal countries consider it an extension of their territory. So, for some policy makers a new extension of EEZ would be a logical step in the process that took to the establishment of EEZs, recognising that it was not enough to assure the necessary conservation of the stocks. To extend EEZ for the waters above the continental platform would be in agreement with the rules that govern the bed of the Platform.

Does Portugal have advantages to align in the process of "creeping jurisdiction" so wanted by Canada or Norway? In the context of Portuguese fisheries, extension of EEZs would have undesirable effects. Portugal would lose fishing opportunities for long distance fleet, without granting additional benefits or resources, given the closeness of our Platform. In the design of Public Policy Fisheries managers should not forget this.

2. "The sea is our tradition" – cod and culture

Anyway, while the stocks rebuild, given that the time of the nature is very different from human time, the Public managers cannot stop defining, and executing, social and cultural support policies for the affected populations and try to maintain the memory and the important traditions and *ways of living* associated. Knowing the national importance of this traditional product (cod) and its related activities, it is not a surprise if we find a lot of persistent effects (social and economic, but also cultural) in the coastal areas, especially in those that have a special link with cod fisheries.

One area mostly affected is Ílhavo. "The Sea for Tradition" is the slogan of the City Hall that attests very well the strong connection of the municipality to the sea. The guidelines for public management highlight the role of fisheries in the local development (anchored in reasons of geographical and historical nature) and the continuous exaltation of the maritime culture, with its maximum expression in the Maritime Museum and in other cultural manifestations of cod-oriented traditions (as religious festivities)⁶.

Ílhavo - The Relationship with Fishing

Ílhavo is a municipality, made of four administrative units (freguesias): Gafanha do Carmo, Gafanha da Nazaré, Gafanha da Encarnação e Ílhavo /S. Salvador. It locates in the Center region (NUT II) - Baixo Vouga (NUT III), in the Aveiro District. In 2005, the population rounded 38500 habitants.

There are obvious reasons for the link with fisheries in its geographical location, next to coastal area of Atlantic Ocean. This area it is also a mixture of earth (a plain zone with dunes) and water (two Channels of the Ria de Aveiro - Channel of Mira and Channel of Ílhavo/Rio Boco). This nature gives this area a particular originality. The singularities of the landscape have a decisive importance in the tourist potential of the Municipal district.

⁶ The design of this public policy (purposes, instruments and means) is perfectly presented in several interviews with Ribau Esteves, President of the municipality, to regional Journals and in other published material from this (pro-active) President and from the administration services of the municipality.

The region of Gafanhas⁷ is habited since the XVII century but the population settlement was increased in the XIX century thanks to other people from neighbor areas seeking to cultivate those white sanded areas that the natives had not been very interested. The construction of the lighthouses and the work in the maritime ports, the jobs in the vessel construction, in the industries of cod drying, in the salt extraction and in the ceramic industry (Vista Alegre, which is the most celebrated mark in Portuguese ceramic, has industry locations here) were also the most important economic attraction factors to the settlement of populations.

With this framing, the habitants got a strong relationship with fishing: artisanal fishing, in the proper Aveiro's Ria; coastal fishing, in the adjacent waters of the Atlantic, and distant waters fishing, in the banks of Newfoundland and Greenland, traditionally. According to the President R. Esteves, about 10% of GDP of the Municipal district comes from this maritime reality. Craft, fishing (coastal and distant), and fish transformation all have a relevant impact in the job generation and of local wealth. And, of course that must be added, the impact of tourism.

Fisheries have been developing according to the guidelines determined by the presence of Portugal in the European Union, those that are designed in the Common Fisheries Policy. In fact, after a strong reduction of the population used in the distant fishing (in the decades of 1970/80), Ílhavo has, in his Port, all of the big units of industrial fishing of Portugal; now, in a situation of stabilization. Identical situation seems to be verified with the coastal fishing and the artisanal fishing.

In relation to cod fisheries, this activity has, nowadays, a small importance when compared to the glory passed days, given the permanent problems of renewal of cod stocks in the NAFO area and the reduced dimension of the national share that Portuguese trappers use entirely. Besides, the industrial activity, with about 20 companies, has a great importance, for the jobs and for the wealth that generate. Most of the cod that is processed comes from imports of frozen cod or salty green of Norway, Iceland and Russia. This business represents a financial volume of more than 500 million euros/ year.

This relevance of fishing and related activities is also noted in the important infrastructures of support that are presented in the municipality. Inside the area with jurisdiction of the Administration of Aveiro's Port, we can find a Port of Distant Fishing (that integrates a specialized terminal of frozen fish), a Port of Coastal Fishing, with its *Lota* (market for first sell of fish and price determination), and a Wharf for the Artisanal Fishing. These structures are located in Gafanha da Nazaré. Within the administration of the City Hall of Ílhavo, we find the Wharf of the Fishermen of Costa Nova (where the largest community of artisanal fisheries lives) and the Wharf of the Fishermen of Gafanha da Encarnação. In terms of infrastructures, the Municipal district is endowed and, according to the public powers, now is the time to reinforce and give rent-ability to these investments.

Also very important is the "immaterial capital" and the infrastructures of cultural domain. Aligning with the important historical and religious patrimony (which includes beautiful churches) we call our attention to two important structures: the Marine Museum of Ílhavo (one of the most frequented museums in Portugal) and the Ship Museum of Santo André. We also check for a comfortable number of sport and leisure equipments and of a significant number of Associations of cultural, recreation or religious purposes (27, only in Gafanha da Nazaré).

⁷ The name Gafanhas can be linked with a possible area of *Gafarias* (treatment of leper), or the place where one pays the *Gafar*- a fee for passing a river, or even with the expression *Gadhanha* - an instrument to cut *canas*, a very common vegetation in this area.

Maritime Vocation and Public Policy

All this, material and immaterial, capital is put into the service of a public policy that puts the maritime vocation of this municipality in the first place of its objectives and cod is, of course, one of the "Mark-Images" of this policy.

In the words of the President, the municipal powers have been acting essentially at three levels:

- Institutional cooperation with the Administration of the Port of Aveiro and with firms and Associations of Industrial companies and Producers, in the struggle for the accomplishment of investments in infrastructures and materialization of support policies for the sector. That is, becoming a proactive member in the search (near the national or the E.U. instances) of subsidies and other means for the modernization of the fleet and infrastructures of support;
- Accomplishment of investments in the construction and the management of the necessary Wharf for artisanal fishing. In this domain two structures from Costa Nova and Gafanha da Nazaré received important support from the Fisheries Community;
- Accomplishment of investments in structures and initiatives of promotion of the so called "Culture of the Fishing."

This last point deserves a special attention in our research. In fact, our study detected an interesting program of initiatives that puts the cultural impacts of this policy in a central role and represents a notable form of maintaining the memory and ways of leaving of the community. Although our presentation is necessarily general there are some elements that we must highlight.

At the level of the great structures, we have cited the Marine Museum of Ílhavo and the Ship Museum of Santo André (an investment about six million euros). We should also note that the Marine Museum and the Ship Museum, as well as the Cod Port or the Museum Casa-Gafanhua, and the patrimony of the fish companies that still rests economically active or simply re-qualified, even if inactive; all tell a story that is solid in the memory of the community.

The Marine Museum of Ílhavo represents, also, an important place of communion of knowledge and fishing skills while an important pole of development of scientific research on fisheries (socio-economics, ethnography, policy). His publications and the documental collection in its library are very significant as well as the databases existing on several domains, especially those that relate with workers in the fishing industry. Also to be cited: the important investments in the new forms of attending and using the information with the support the new technologies of information. The educational services of the Marine Museum of Ílhavo develop an important work near the youngest people, in narrow collaboration with the schools, through programs as "Ílhavo Step by Step - Roads of the Earth and the Sea". With several other activities they work an intense, regular and planned "teen" promotion of the culture of the Sea. These initiatives are complemented with the professional formation: the Delegation of Ílhavo of Forpescas develops several courses, regularly.

Another interesting initiative is the annual realization of a divulgation-memory-action in an ancient *lugre*⁸. The so-called "Experience Sea-Creoula" is the most expressive and emblematic action developed with the major participation of youths. Annually, 200 citizens are provided with an experience of Sea on board in a training-sea ship (the ancient *lugre* Creoula that was transformed in a training vessel).

⁸ *Lugre* is the designation of the big vessel used in the cod fisheries. It was the main vessel wherein the fishermen went to the long distance bancs of cod. When they arrived in the cod bancs each fisherman had a little boat (*Dori* it was its name) and practiced a line fishery. After recovering the cods that he could capture, then the fisher took the product of his fishing to the *Lugre*.

Cod, Gastronomy and Religion. Final Remarks

There are also a lot of initiatives that use the fish, especially the cod, to affirm this memory and that, at the same time, are linked with other nautical activities of sport, leisure and tourism promotion.

Fig. 1 Promotion of Cod Festivities in Ílhavo



Fig. 2 "Confraria do Bacalhau"



The center of these activities takes place in the so-called Municipal Parties (in August) and are complemented with a lot of religious festivities, most of them in September. These initiatives include the so called "Tasquinhas" of cod (spaces of traditional presentation in which one can eat several dishes of cod as the *ex-libris*). The programs serve as a support to the "Confraria Gastronómica of the Cod", a group of experts that intends to promote the research, the development, the divulgation and promotion of all interesting aspects that relates to cod and its use in the Portuguese gastronomy.

The promotion of the so-called "The Route of Fish" is also a permanent preoccupation of public powers. This appeals for the creation of tourism routes that put in evidence the fundamental place of fishing in the spirit of the municipality and, at the same time, the diversity of landscape, the existence of beautiful beaches (as Costa Nova) and optimal conditions for the practice of nautical sports. The extensive literature of tourism information introduces references to *Veleiros* regattas, bike races, sea-photography expositions, canoeing, etc.

To support this activity it is important the participation of the City hall in the context of the National Association of Portuguese Municipal districts and of the European Federation of the Cities of the Fishing. Ílhavo is geminated with other fishing cities. The same can be said about the collaboration with the Associations of Producers and of firms from the transformation sector, as well as with the Associations of Nautical Activities, in the area of formation and sport development. Note that the district has a beautiful marina (Marina da Barra) with 800 fastening places (total investment foreseen about 150 million euros).

Finally, a reference to the strict relation between cod and religion. This relation is the center of the most intense cultural effects of fishing. The community intense reference on fishing designs her soul and life-meaning, her primordial desiderata and profound form of being. All of these are strongly related with this binomial: God and Nature (Sea-Fish).

He has been told about the importance of cod in the catholic diet of Easter, the nice price (in the past!) making it a good friend of poor people, the conservation capacity and its use in the period of Portuguese discoveries. We could also speak of other cultural demonstrations in which cod is the center. For example, the so called

“Cod-Burial”, the day after Carnival Day, or the usual presence of cod in a lot of satiric poems and songs. But it is in the domain of the religious parties that this relation is more relevant (and revealing).

The religious parties, with an intimate connection to the fishing in Ílhavo municipality, are especially three:

- Our Lady of Health, in Costa Nova (fourth Sunday of September), organized for the main fishing community of the municipality;
- Our Lord Jesus of the Navigators, in Ílhavo (first Sunday of September);
- Our Lady of Navigators, in Gafanha da Nazaré, with the impressive Procession of vessels at the Aveiro’s Ria.

These are very strong expressions of people's intimate relationship with the Fishing and the Sea, still today lived for many thousands of people, with the City hall’s institutional, logistic and financial support. The figures tell a lot of the spirit of those manifestations of popular faith and culture. So, only two notes: first note the involvement of the population and of all the elements of maritime life in the Procession of Our Lady of Navigators, “enjoying a blessing promenade” in a vessel, along the Aveiro’s Ria. Many embarkations surround this vessel and attests a total sentiment of communion between the Sea (and its Fishermen Community) and the Divine. Second note the special design of the image of our Lord of Navigators. Since the 20s, the usual image of Christ agonizing in the Cross had a new element. Standing at Christ’s feet we find a sculpture of a *Lugre* that was made by a fisherman. In a situation of trouble in the Sea, this fisherman made the promise of sculpting a *lugre* to offer to Our Lord of Navigators. The *lugre* that he made was included in the image that gives a new meaning: the profound relation with cod fisheries and the sense of interconnection between the Passion of Christ and the hardness of fishermen life.

Fig. 3. Our Lady of Navigators Procession
(Retrieved from a You Tube video)



Fig 4. Our Lord Jesus of Navigators



Bibliography⁹

- Acheson, J. (1981), "Anthropology of Fishing", *Annual Review of Anthropology*, Vol. 10, pp 275-316.
- Armstrong, C. (1994), "Cooperative Solutions in a Transboundary Fishery: The Russian-Norwegian Co-Management of the Arcto-Norwegian Cod Stock", *Marine Resource Economics*, Vol. 9, pp 329-351.
- Arnason, R. (1994), "Fishery Management in Iceland", in: BANCO MUNDIAL (ed), *Managing Fishery Resources*, Banco Mundial, N° 217, Fisheries Series.
- Azevedo, M. (1982), "O bacalhau na economia portuguesa", *Revista de Marinha*, N° 110, Fev.
- Bromley, D. (1991), "Testing for Common Versus Private Property: Comment", *Journal of Environmental Economics and Management*, Vol. 21, N° 1, pp 92-96.
- Cauvin, D. (1979), "Regulating Access in Canada's Inland Fisheries", *Journal of the Fisheries Research Board of Canada*, Vol. 36, N° 7, pp 827-836.
- Chan, K. (1978), "The economic consequences of the 200-mile seabed zone: The replenishable resources case", *Canadian Journal of Economics*, Vol. 11, N° 2, pp 314-318.
- Charles, A. (1996), "The Atlantic Canadian Groundfishery: Roots of a Collapse", *Dalhousie Law Journal*, Vol. 18, pp 64-83.
- Charles, A. (1997), "Fisheries Management in Atlantic Canada", *Ocean & Coastal Management*, Vol. 35, Nos. 2/3, pp 101-119.
- Christy, F. (1970), "New Dimensions for Transnational Marine Resources", *American Economic Review*, Vol. 60, N° 2, pp 109-113.
- Clark, C. (1985), *Bioeconomic Modelling and Fisheries Management*, John Wiley & Sons.
- Coelho, M. (2010), "Rights Based Management and the Reform of the Common Fisheries Policy: An Evaluation of the Portuguese Experience", Departamento Economia /SOCIUS- ISEG WP 18/2010/DE/SOCIUS
- Coelho (2006), "Creeping Jurisdiction - O estatuto da Plataforma Continental revisitado?"; *Jornadas do Mar, Colóquio: Os Oceanos, uma Plataforma para o Desenvolvimento*, Escola Naval.
- 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. A., Ferreira, M. A. M. (2011) "The "Turbot War" revisited: Game Theory and High Seas Fisheries Management", *PJQM-Portuguese Journal of Quantitative Methods*, Vol. 2 (1), pp. 67-83.
- Coelho, M., Filipe, J. A., Ferreira, M. A. M. (2011), "Applications of Game Theory to Natural Resources Management: The case of High Seas Fisheries", *Aplimat-Proceedings of the 2011 Aplimat Conference*.
- Coelho, M., Filipe, J. A., Ferreira, M. A. M. (2011) , "Rights Based Management and the reform of the Common Fisheries Policy : The Debate" , *International Journal of Latest Trends in Finance and Economic Sciences*, Vol. 1, N°1, pp. 15-21.

⁹ See, also, the site from Câmara Municipal Ílhavo.

- Coelho, M., Filipe, J. A., Ferreira, M. A. M. (2010), "On Commons, Anticommons and Tragedies, In *Homenagem ao Professor Doutor Adelino Torres*, Coleccção Económicas, Série II, N^o 14 , Romão, Silva & Ferreira (Eds), Almedina, Lisboa, pp.587-600.
- Coelho, M., Filipe, J. A., Ferreira, M. (2010), "Straddling Stocks Management and the Enlargement of Exclusive Economic Zones", *IAES- 69th International Atlantic Economic Conference*, Prague (IAES).
- Coelho, M., Filipe, J. & Ferreira, M. (2009), "Tragedies on Natural Resources: A Commons and Anticommons Approach", Working Paper, Departamento de Economia; ISEG/UTL, N^o21/2009/DE/SOCIUS.
- Coelho, M., Filipe, J. & Ferreira, M. (2010), "Between Market And Law: Common Fisheries Policy And The Quota Hopping Case", *Annuals Of Marine Sociology*, Polish Academy Of Sciences, Gdansk-Szczecin, Vol. XIX, Pp. 33-46.
- 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., Lopes, R. (1999); "Overcapacity and overcapitalisation in the Portuguese cod fleet", in: Hatcher, A., Robinson, R. (edt), *Overcapacity, Overcapitalisation and Subsidies in European Fisheries*, CEMARE, University of Portsmouth.
- Conrad, J. (1999), *Resource Economics*, Cambridge University Press.
- European Commission (2009), Reflections on further reform of the Common Fisheries Document, Commission Working Document.
- Ferris, J., Plourde, C. (1982), "Labor mobility seasonal unemployment insurance, and the Newfoundland inshore fishery", *Canadian Journal of Economics*, Vol. 15, N^o 3, pp 426-441.
- 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*; Vol. 2, Issue 1.
- Filipe, J. , Coelho, M. E Ferreira, M. (2007), *O Drama Dos Recursos Comuns*, Sílabo Ed, Lisboa.
- Fraser, C. E Jones, J. (1989), "Enterprise Allocations: The Atlantic Canadian Experience", in: Neher, Arnason E Mollett (Eds), *Rights Based Fishing*, Kluwer Academic Publishers.ó
- Garrido, A. (2009), *Henrique Tenreiro, Uma Biografia Política*, Temas E Debates, Círculo De Leitores.
- Garrido, A. (1997), "O Estado Novo e as pescas - "A Campanha do Bacalhau", *Vértice*, N^o 78, pp. 73-85.
- Garrod, D. (1986), "North Atlantic Cod: fisheries and Management to 1986" in: Gulland, J. (ed), *Fish Population Dynamics*, 2nd edition, John Wiley & Sons.
- Gordon, H. S. (1954), "The Economic Theory of a Common Property Resource: The Fishery", *Journal of Political Economy*, Vol. 62, pp 124-142.
- Guedes, A. (1989), *Direito do Mar*, Instituto de Defesa Nacional, Lisboa.
- Hannesson, R. (1996), *Fisheries Mismanagement: The case of the North Atlantic Cod*, Fishing News Books, Oxford.
- Hardin, G. (1968), "The Tragedy of the Commons", *Science*, Vol. 162, pp 1243-1247.
- Industrias Pesqueras (1998), "Canadá, la hora de la verdad", *I.P.* N^o 1700, pp 3-9.
- Kaitala, V. E Munro, G. (1995), "The Management of Transboundary Resources and Property Rights Systems: the Case of Fisheries" in: Hanna, S. E Munasinghe (eds.), *Property Rights and the Environment*, the World Bank.

- Kirby (Chairman) (1982), *Navigating Troubled Waters: A New Policy for the Atlantic Fisheries*, Report of the Task Force on Atlantic Fisheries, Ottawa: Supply and Services.
- Kurlansky, M. (1997), *O Bacalhau, Biografia do Peixe que mudou o Mundo*, Terramar.
- Leal, M. (1984), *As Pescas Portuguesas face à Integração Europeia*, Banco de Fomento Nacional, Lisboa, Estudos 22.
- Limpo Serra, M. (1981), "A Zona Económica Exclusiva, História e Aspectos Jurídicos", *Boletim da Sociedade de Geografia de Lisboa, Série 99^a, N^o 7-9*, pp 210-226.
- Lopes, R. (1985), *L'Économie des Ressources Renouvelables*, Économica, Paris.
- Oliveira Martins, (s/d), *Portugal e o Mar*, II, Edições Ulmeiro.
- MCrae, D. E Munro, G. (1989), "Coastal State "Rights" within the 200 - Mile Exclusive Economic Zone" in: Neher, Arnason, Mollett (eds) *Rights Based Fishing*, Kluwer Academic Publishers, Dordrecht.
- Moutinho, M. (1985), *História da Pesca do Bacalhau, por uma Antropologia do "fiel amigo"*, Editorial Estampa, Imprensa Universitária, Lisboa.
- 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. (1980), *A promise of abundance: Extended Fisheries Jurisdiction and the Newfoundland Economy*, Minister of Supply and Services, Canada.
- Munro, G. (1990), "The Optimal Management of Transboundary Fisheries: Game Theoretic Considerations", *Natural Resource Modeling*, Vol. 4, N^o 4, pp 403-426.
- NAFO (1993), *Changes in Abundance and Biology of Cod Stocks and their possible Causes*, Scientific Council Studies, N^o 18, Dartmouth, Canada.
- Needler, A. (1979), "Evolution of Canadian Fisheries Management Towards Economic Rationalization", *Journal of the Fisheries Research Board of Canada*, Vol. 36, N^o 7, pp 716-724.
- Neher, P. (1994), "Fishery Management in Canada" in: BANCO MUNDIAL (ed), *Managing Fisheries Resources*, Banco Mundial, N^o 217 Fisheries Series.
- Neher, P.; Arnason, R. E Mollett, N. (eds) (1989), *Rights Based Fishing*, Kluwer Academic Publishers, Dordrecht.
- Pearse, P. (Commissioner) (1982), *Turning the Tide: A new Policy for Canada's Pacific Fisheries*, Comission on Pacific Fisheries Policy.
- Pinho, A. (1998), *Pescas Nacionais. Pedços de uma década perdida*, Maribérica / Liber - Editores, Lisboa.
- POSEIDON AQUATIC RESOURCE MANAGEMENT, LTD & PEW ENVIRONMENT GROUP (2010), *FIFG 2000-2006 Shadow Evaluation*, UK, Hampshire.
- Ribeiro, M. (1992), *A Zona Económica Exclusiva*, Universidade Técnica de Lisboa / Instituto Superior de ciências Sociais e Políticas.
- Schlager, E. Ostrom, E. (1992), "Property-Rights Regimes and Natural Resources: A Conceptual Analysis", *Land Economics*, Vol. 68, N^o 3, pp 249-262.
- Schrank, W. (1995), "Extended Fisheries Jurisdiction: Origins of the current crisis in Atlantic Canada's fisheries", *Marine Policy*, Vol. 19, N^o 4, pp 285-299.
- Scott, A. (1955), "The Fishery: The Objectives of sole Ownership", *Journal of Political Economy*, Vol. 63, pp 116-124.
- Serra, J. (1987), *"Uma Política para o Mar"*, Instituto de Estudos para o Desenvolvimento, Lisboa, Cadernos CEE-3.
- Varão, A. E Garcia, A. (1975), *Pesca Marítima: Situação e Perspectivas de Desenvolvimento*, Banco de Fomento Nacional, Lisboa, Estudos: 8.
- Wise, M. (1984), *The Common Fisheries Policy of the European Community*, Methwen & Co, London / New York.