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FRENCH FISHERIES REGULATIONS SCHEMES IN THE EC'S
 CONTEXT: TOWARDS FISHERIES ADAPTIVE MANAGEMENT?

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Résumé : Pour parvenir à réduire la capacité globale de capture, la Commission Européenne a exigé des Etats qu'ils élaborent des Plans d'Orientation Pluri-Annuel (POP). Chaque Etat a l'obligation de ramener la puissance et la jauge globale de sa flotte à son niveau de 1985. La France, pour cela, choisit d'instaurer un Permis de Mise en Exploitation (PME) où : tout candidat à la construction, la modernisation ou la rénovation d'un navire doit avoir autant ou plus de puissance que celle qu'il détenait. Le PME, attribué à un individu pour un navire, n'est pas transférable. Le PME est comparé aux mesures adoptées par les autres Etats, et ses conséquences sont examinées. Les causes des refus de toute transférabilité par les professionnels français sont discutées. Il est remarqué que le PME est une forme simple d'encadrement des modalités de gestion déjà existantes; les mécanismes de décision ayant conduit à son instauration sont discutés.

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FRENCH FISHERIES REGULATIONS SCHEMES IN THE EC'S CONTEXT: TOWARDS FISHERIES ADAPTIVE MANAGEMENT?

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After a description of the french fisheries management main features and institutionnal actors, we will try to analyse the rationalities at work in the French fisheries and their level of compatibility. It is generally assumed that a management scheme has to be chosen on the basis of its economical or biological efficiency, which must be optimized. Actually, a constraint from outside seems to be the best incentive for management. The weighth of historical and cultural backgrounds often explains the diversity of answers provided by diverse actors facing the same constraint. In the French case, it also enlightens attitudes towards resource ownership and rights based fishing.

Then, we will compare the advantages of the different management schemes implemented in the ECs and examine the different features of what should be an adaptive management.

I. FRENCH FISHERIES REGULATION AND THE COMMON FISHERIES POLICY

The French fisheries regulation is based on financial incentives (loans and subsidies) at national level, and licensing schemes at local level. Since Spain and Portugal joined the European Community, each member-state has to insert Multi Annual Guidance Programmes (MAGP) within its fisheries policy. The evolution of fleet capacity in Europe led the European Commission (EC), in 1988, to oblige the member-states to return to the level of 1983. Member-states being free to choose the appropriate means for this purpose, France implemented a permit system, called "Permis de Mise en

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Exploitation" (PME). An investor has to withdraw more Kilowatts (hp) from the existing fleet than is required for any new vessel. The PME system preserves the existing local regulations.

1. Fisheries management in France: main features

Despite the existence of historical or informal user-rights and local or regional licensing schemes, open-access is assumed to be the rule for fisheries all over Europe. Fisheries management follows basically the same principles in France and in other European countries (Tucker 1990). Differences arise from institutional and social history..

1.1. Quotas

The allocation of EC-set national quotas is a two-step process based on historical records. First, to determine the share of each of the five regions identified along the Atlantic and North Sea shores, a bargaining process takes place at the national level between state and industry representatives. And second, quotas allocated to each region are shared between fishermen belonging to Producer Organizations (PO) and others. Statistics related to the use of fish quotas are collected at the national level and controlled at the PO level. This allows for the targeting of fisheries closure, once the relevant quota has been exhausted.

Not being individualized, quotas are not transferable. Moreover, there is no direct relationship between EC-set quotas and local or national licensing schemes. The British concepts of pressure stock and pressure stock-licensing thus have no equivalent in French fisheries.

1.2. Loans and grants

National quota sharing between regions and the granting of loans or subsidies for building or modernizing fishing vessels have no direct relationship either. The latter are allocated at the regional level. Regional commissions define allocation criteria according to instructions received from the Ministry of the Sea congruent with MAGP objectives. They have to manage their budget under these constraints (Meuriot 1986, Catanzano 1988).

Loans and subsidies for boat building are granted in two allotments, one of which is not conditional. The other one depends upon EC's decision to reject or to accept an application. The latter may decrease from 22%, to 5% in a sensitive and 10% in a non sensitive area. In a study of this allocation scheme covering the 1977 to 1987 period, Catanzano (1988) shows that the self-financing part of the investment has steadily decreased from 25% in 1950, to 8% in 1987.

The main tool for fleet limitation and/or renewal has been grants and loans management over the past twenty years. But how are the investments to be controlled when they are made without grants or subsidies? A brief analysis showed that the main part of the increase in terms of power was the fact of the units under 16 meters, and these units are not eligible for grants. For small fishing units, the investment was -and still is- self-sufficient, and thus, beyond control.

1.3. Markets stabilization: Producers Organizations

Producers Organizations are involved in fisheries management through quota allocation and the stabilization of ex-vessel prices. This they achieve through the setting of withdrawal prices within limits defined by common market policies. Providing they use their own resources and still respect these limits, POs are now allowed to extend their support from species not previously agreed upon at EC level to other species of

local interest. However, POs are excluded from any direct participation in licensing schemes or grants and subsidies allocation.

1.4. Licensing schemes

The licensing schemes found in France are totally independent from MAGP's implementation. They deal with specific resources or fishing methods, they exclude transferability, and in most cases operate on a localized basis as for the schemes instaurated :

- in 1973, for the scallop fishery of the Bay of Saint Brieuc,
- in 1972, for the Mediterranean groundfish trawl fishery,
- in 1983, for the fixed gear fishery of the Charentes coastline,
- for the crustacean fishery of the English Channel,
- for the mussel fishery of the eastern coastline of the Cotentin peninsula,
- and for the migratory fisheries (eels, elvers, salmon, etc) of all estuaries.

These schemes have all been devised to face localized problems of overcapacity and of crowding on fishing grounds. As mentioned earlier, they are independent of national quota allocation (in contrast to U.K. pressure stock licensing schemes).

2. Fishing fleet management before and under MAGP

The Common Fisheries Policy has been resource based from its beginning in 1983 to 1986. When Portugal and Spain joined the Community, the problem of global overcapacity was emphasized. Since 1988, each member-state has to reduce its fleets capacity. The introduction of a general Exploitation Allowance Permit was chose by France for achievement of the objective.

2.1. French fishing fleet evolution

Between 1945 and 1987, vessels and crew numbers within the French fishing fleet have been drastically reduced, while horsepower and capital invested increased considerably. Within 42 years, employment onboard fell from 57.000 to 17.600 men. while productivity per unit of power or per man increased steadily (Meuriot, 1986). As an illustration, when 120 crewmen using 121 Kw could land 1000 mt in 1945, by 1970 only 68 of them using 188 Kw were needed to land the same amount of fish, while 40 crewmembers using 212 Kw did the job in 1985. This trend was maintained between 1983 and 1988: the number of vessels decreased from 11.161 to 10.361, while horsepower increased from 1.103.327 to 1.196.360 Kw, and tonnage from 212.841 Grt to 213.302 Grt.

The rate of change was not the same for all classes of fishing vessels, however, as horsepower increased more rapidly for those under 16 m than for those above. This is particularly obvious for the recent past: between 1983 and 1988, total horsepower for vessels of the former category increased by 28.000Kw against 7.400 for the latter (Lantz et al. 1989)

The regional diversity of the fishing fleet is important:

(i) The ratio KW/GRT varies largely within the length classes; from 11.4 to 16.2 under 12m; from 7.1 to 9.5 for the 12-16m; from 4.3 to 8 for the 16-38m, and from 1.7 to 2.9 up to 38m.

(ii) this regional variability is observable over the time. The ratio KW/vessel increased by 73% in the Mediterranean against 21% in the Atlantic from 1983 to 1989.

2.2. Multi Annual Guidance Programmes (MAGP)

The first Multi Annual Guidance Programmes were drawn in 1986, by each member-state and by Portugal and Spain, recently admitted in the European Community. The programmes established the situation of the fleet from 1983 to 1988, defined objectives of fleet capacity control for 1988. This first MAGP was indicative.

If the first MAGP, issued from EC's Decision 2098/83 and covering the period 1983-1987 was indicative, the second MAGP, was constraining: the EC's Decision 4028/86 obliges the member-states to achieve the objectives of MAGP if they want to obtain Structural Grants for their fleet renewal. The objective at the end of 1991 is to restrict the fleet capacity at its level of 1983, in KW and GRTs. The objective for France was a reduction of 3% of the global power.

Each member-state was free to define appropriate means to achieve this goal. Denmark implemented a buy back scheme, U.K. instigated a transferable licensing system, Spain decided a replacement KW per KW and GRT per GRT. The Netherlands implemented ITQs before MAGPs and added decommissioning schemes and fishing days limitations; France instituted a permit system, called "PME" (Exploitation Allowance Permit).

2.3. Implementation of "PME"

It may be important to recall that the Exploitation Allowance Permit is the first fleet regulation scheme implemented in France *at the national level*.

The fleet considered in MAGP is constituted by all the fishing vessels, excluding:

- vessels operating only in lagoons and estuaries
- transoceanic tuna purseiners.
- oysterculture and aquaculture vessels
- vessels fishing exclusively bivalves, coral, sea urchin and sponges

A vessel is considered an "active vessel" if it has fished one or more days over the past two years. The fleet is divided in length categories: < 12m; 12-16m; 16-25m; 25-38m; >38m.

The general feature of the system is that the applicant for PME has to withdraw :

(i) an equivalent power when the withdrawn vessel or engine belongs to the applicant for at least two years.

(ii) the withdrawn power must be equal to 1.3 times the power entered with the PME. The resulting 0.3 is used to reach the objectives of MAGP and, for a part, to help the applicants who need a few KW to achieve their investment project. For this purpose, a public KW funds is constituted and shared among the regions, who can use it in order to facilitate the entry of young investors.

(iii) tuna purseiners and vessels operating exclusively in lagoons and estuaries, as well as unmotorised canoes obtain full-right PME.

(iv) the investors who engaged investments before the date of the decision obtain full-rigth PME: these PME are familiarly called "started shots".

The KW issued from withdrawn vessels in a defined length category must be utilised for a PME in the same length category. The exception is for the categories 16-25 and 25-38m, among which the KW are transferable.

Aggregation of KW is allowed within the same length category. Furthermore, several PME may be aggregated within the same length category.

The PME is boat and person specific and is therefore not transferable.

The impact of PME has been evaluated (Weber et al. 1990) after one year of implementation.

(i) The system proved its ability to stabilize total Kilowatts within the French fishing fleet at a set level, not of reducing it.

(ii) The necessity to withdraw Kilowatts (when at the same time PME is not transferable), increased the value of second-hand vessels value, by capitalizing the expected future value of the corresponding Kilowatts. The average value of KW reached to 2,700 French Francs early 1990, and then decreased to 1,700 French Francs at the present time.

(iii) The usual effects described in the literature (Rettig 1990) are exhibited by the PME. The constraint of length classes, linked with the possibility of accumulating Kilowatts within one class results in new Kilowatts-saving vessels, and widening the vessels near to the upper limit of each class. "PME vessels" (catamarans) appeared in advertising one year after the introduction of the permits, and this implied a shift in gears, from trawling to gill and drift netting.

II. DISCUSSION

The origins of the complex situation described above are legal and historical. The map of institutional actors of fisheries management partly explains the inadequacy between national and local management schemes which refer to different decision-making and enforcement processes: management measures are introduced to face a constraint from outside more than to solve any resource-fleet adequacy question. In the same way, the refusal of any individual ownership to resources is consistent with the wish to keep the possible evolutions within limits controllable by fishermen groups.

1. Institutional actors

A special law (Ordinance) passed in 1945 defined fisheries interprofessional organization. The latter comprises :

- Geographically defined Committees, which represent fishermen, fish mongers and fish processors either at the fishing port level as for the "Comité Locaux des Pêches Maritimes" (CLPM), or at a regional level for the "Comités Régionaux des Pêches et des Cultures Marines" (CORPECUM)

- Interprofessional Committees, such as the "Comité Interprofessionnel des Gros Crustacés", defined at the level of a specific fishery (in terms of resources or of harvesting method). These Committees are responsible for the instigation of all licensing schemes thanks to the regulatory power granted to them. Their members are

not elected but designated by the various trade unions, syndicates and cooperatives of the fishing sector, but not by the POs.

- A National Committee or "Comité Central des Pêches Maritimes" (CCPM). The members of this group are also designated rather than elected and the POs are represented only by one delegate.

2. Fisheries management as a consequence of constraint from outside

In all the french cases, fisheries regulation have been implemented under pressure of external constraints. The purpose was less to manage a fishery than to preserve a community from "the others", or, in the case of MAGPs, to preserve the EC's funding by achieving the objective with the minimal change in the existing whole system.

In the Mediterranean case, the fishermen asked for a licensing scheme for trawlers as soon as 1965, in answer to the additional fishing effort generated by the expatriates from Algeria. Seven years were necessary to obtain the introduction of licences limiting the number of vessels and their horsepower (Meuriot and Dremière 1987).

The licensing scheme for the scallop fishery of the Bay of St. Brieuc was instigated under pressure of the industry: the main objective was to preserve the stock from fishermen who did not belong to the Bay. The first scheme was invalidated by the court base on the argument that it was possible to exclude types of vessels or gears from the fishery, but not types of people (Meuriot and Foucher 1987).

The national "PME" scheme has been implemented as an answer to the EC's Decision constraint. The initiative comes from the Minister, but the decision was taken and implemented by the industry. Officially, the urgency of the decision did not allow for a legislative process, and obliged the Minister to turn to the Central Committee for Fisheries (CCPM) for taking the décision. Two years after, in 1990, the Minister introduced a law project into the parliament, this project including the possibility to instigate licenses, per vessel, area, stock and fishing time. This project faces strong lobby

by fishermen who argue that the present PME system is sufficient though capable of improvement. For the industry, achieving MAGP's objective is more important than implementing a fisheries policy...

All these French management cases refer to an administrative process and to administrative enforcements. The origin of fleet management schemes comes from the industry. Afterwards, the administration designs a system which is finally felt as by the fishermen as coming from outside and, as a consequence, they are reluctant to play the game.

The situation is quite different when the decision is taken within a well identified community and enforcements are based on social pressure. The Mediterranean coastal fisheries are managed by old institutions, the "Prudhomies" (the Spanish equivalent being the "Cofradias"). The Prudhomes are elected by the fishermen; their role is the management of cohabitation among gears, fishing time and technical restrictions in a defined area (Tempier 1985). Their decisions are final judgements, supported by social enforcement: any infringer would have serious difficulties to sell his fish, find cooperation or help and this social hostility will be difficult to bear.

Two lessons arise from these decision making processes:

- first, a constraint from outside seems to be the best incentive for introduction of management measures; the overfishing by itself seems not to be sufficient to result in management decisions,

- second, the same type of decision will be differently accepted depending on its origin, a community or an administration.

3. The refusal of individual ownership in France

Fishermen attitudes as well as the decision processes are difficult to understand without taking historical and cultural background into account. This is observable at the level of fishermen attitudes as well as at the level of national fisheries regulations in the EC, which are differential answers to the same constraint of fleet reduction.

The ancient French tradition of centralism, joint to quite paternalistic relations between fishermen and administration partly explain attitudes towards fisheries management. State ownership is understood as a patrimonial ownership, and the hypothesis of private quasi-property rights is rejected on moral, ethic bases, both by industry and administration.

The main objection to the PME is the market of Kilowatts generated by the system; the proposed solution is not to let the PME be transferable, but to implement a state regulation of KW...

Behind the common refusal of individual rights, two motivations are observable. The artisanal fishermen are afraid of the possibility of accumulating fishing rights (i.e. in the hands of non-fishermen) while the large scale industry fears the eventual opportunity for foreigners to enter into the fishery by acquiring fishing rights (foreigners means here EC's member-states fishermen). They could, possibly, accept fishing rights if these rights were not transferable.

So, the same fishermen who implemented local licensing schemes refuse the principle of exclusive fishing rights on a national basis. The word "license" itself is a taboo at national level: "permit, yes; license, no!" is it possible to read in the newspapers, despite fishermen know that the PME soon is a license... The apparent contradiction in attitudes remain as long as we have not understood their coherence, which is generally hidden and embedded in historical and social background of the discourses.

III. TOWARDS ADAPTIVE MANAGEMENT?

The same constraint of reducing fleet capacity received diverse solutions among the member-states, according to the specificity of each context. The diversity of national fisheries sectors in Europe makes it difficult to believe that the EC can succeed on long-term in regulating specific problems by general decisions. This pleads for elaborating base lines of what could be an adaptive management, taking both diversity and uncertainty into account. Such an adaptive management implies to know more than today about actual decision-making processes at work in actual fisheries management systems.

1. one constraint, diversity of answers

The same constraint of fleet reduction under MAGPs received different solutions among the member-states. Table 1 shows the means implemented in the EC. The Netherlands implemented an IQ's system, partly transferable, partly not, depending on species (Salz 1990); United kingdom instaurated a "pressure-stock" transferable licensing scheme; In Italy, Greece and Belgium, national transferable licences exist for specific stocks.

x General scheme
 . Local scheme

TABLE 1 : FISHERIES MANAGEMENT MEASURES IN THE EC.

MEMBER STATES	LOANS / GRANTS		TEMP.	DECOM.	LICENCES / PERMITS					
	BUILD.	MODER.	CLOSING		GENERAL	Specif Stocks	Fish Days	Capt. Limit.	Transfer.	ITQ
NETHERLANDS		X	X	X	
IRELAND	X	X		?	X			?		
DENMARK		X		X	X	.		.		
GREECE	X	X		X	X					
ITALY	X	X	X	X		.	.		.	
BELGIUM	X	X		X	X	X	.		.	
DEUTSCHLAND	X	X	X	X	X	?				
FRANCE	X	X		X	X	.	.	.		
SPAIN	X	X	X	X	X				?	
PORTUGAL	X	X		X	?	?				
U.K.	X	X				.		.	.	

Table 2 illustrates the diversity of fishing sectors in Europe on the basis of capital/labor ratio (KW per crewman) and on the basis of markets (value per landed ton in Ecus). This diversity influences fisheries management tools towards repartition, aiming to preserve employment in Southern Europe, and towards efficiency in Northern Europe, beyond the actual diversity of political philosophies at work among the member-states governments.

T.2 : DIVERSITY OF EC'S FISHERIES 1987

PAYS	Kw/CREW	ECUS/TONNE
PORTUGAL	15	786
SPAIN	18	941
GREECE	20	1 384
IRELANDE	27	150
U.K	36	720
ITALY	35	2 900
GERMANY	35	1 079
DENMARK	39	322
FRANCE	51	1 390
BELGIUM	61	2 065
NEDERLANDS	113	780

Last, the Great European Market is expected to be effective in 1993, which means free trade, free installation of enterprises and uniformisation of social and economic regulations in the EC. The present game for each national fishing sector is to secure its positions in this perspective.

The constraints bearing on EC's fisheries policy are not limited to a catch-effort inadequacy problem.

2. Basis for an adaptive management?

It is generally recognised that fisheries are facing to growing uncertainties together with variability of resources. In the same time, fisheries managers still tend to think in terms of equilibrium or comparative statics, under *ceteris paribus* clause. This may be relevant in theoretical research as it is difficult to integrate and understand the effects from several types of changes occurring simultaneously in an uncertain environment. At the same time, implementation questions are facing this complexity.

In practice, we need management systems based on defined fixed long-term objectives, together with flexibility to deal with variability and adaptability to take diversity into account.

The French PME system is, of course, not sufficient to design a fisheries policy. Its main advantages are its ability to stabilize the Kilowatts in the fleet and its compatibility with locally adapted licensing schemes. On long term, it doesn't avoid overinvestment, through technical innovations and new vessels designs. To prevent overinvestment may also be obtained at local level, in close relation with the peculiarities of local fisheries.

An adaptive management may be necessary to deal with uncertainties of all kinds (resource, fundings, earnings, markets...) bearing on fisheries. An adaptive management, in the opinion of the authors, should be conceived at different levels:

(i) in terms of objectives and rules:

- long-term objectives and global features of a management system to achieve these objectives

- short-term definition of the system's rules, in order to avoid undesired anticipations.

Icelandic management system, with ITQs within three years and annual reallocation of quotas is an illustration of adaptive management, when ITQs are accepted. In the French case, the previous fixity of PME's rules allowed for anticipations about the demand of KW. In U.K. (Rodgers 1990) and France, fixed length bands lead to bunching towards the top of the band.

As we know (Rettig 1990; Mollett 1986) that technical limitations are always turned, short term flexible rules should be a way to achieve fixed long term objectives.

(ii) in terms of decision-making

- Definition of decision's rules at central level (EC or national)

- local decision-making

At the present time, central level tends to decide uniformly for very diverse fisheries. Many fishermen summarize EC's Common Fisheries Policy in a formula: "What's good for North Sea is good for everywhere". The same contention is given to national administrations, to not take local specificity into account. This approach partly explains resistance to any new management system with central decision-making.

An alternative would be for central decision level to concentrate on the definition of decisions's rules, according to long term objectives and let the industry implement the decisions under the centrally defined rules.

3. Decision-making: a wide field for future economic research

As long as we consider Economics as the science of choices, we need, besides theoretical approaches, to multiply case studies of actual fisheries management systems, especially in Europe, and to focus on actual decision-making processes.

Recent theoretical works on multi-objectives modelling (Charles 1989) should be helpfull for understanding, as we are facing various rationalities struggling against each others in these actual decision-making processes.

These rationalities (which can not be reduced to hidden agendas) are not immediately perceivable, and lie beyond expressed opinions: they only appear in the analysis of effective actors choices. This, if accepted, implies that "attitudes towards" surveys are not satisfactory for our purpose. Understanding actual rationality can only be based on ex-post decisions analysis.

Complexity of the European fisheries and deepness of changes currently undergoing makes them interesting to fullfill a collective research programme in the field of decision-making processes for the coming years.

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