Responsible fisheries in the Emilia-Romagna region: some reflections for the governance

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1. Introduction and purposes of the study

The debate over the concept and creation of a governance for the fishery sector first began after observations had been made about weaknesses in the way the fishery sector had been managed over the years. The fishery resource had been over-exploited with use of inadequate and obsolete means that, besides damaging the environment, had negatively affected the economic viability of the enterprises that made their living in the sector. All this, plus serious social impact causing the population to abandon the area and to stop work, a situation that often resulted in the loss of professional traditions. Meanwhile, factors such as these often made the future development of the sector extremely complicated, leading to repercussions that have snowballed over the years.

Over-exploitation of the natural resource along with failure to adapt the relative structures from the technological aspect has deeply affected the vitality of the sector. Apart from other motivations of the sociological and historic type, this sort of attitude has also been caused by policies that

Abstract

As promoted by the FAO and then by the EU, responsible fishery is one of the fundamental scopes of a governance study and one that cannot be neglected. Quite the contrary, training in such principles over time has been an important means for guiding and developing the sector. On the other hand, it has been more difficult to adapt the responsibility principles to the situations along the Mediterranean coasts and this has brought the concept of a *multi-level* territorial governance to the fore.

This paper presents data and calculations concerning responsible fishery in the coastal territory of Emilia-Romagna. The aim was to ascertain whether the Community regulations are effectively being applied and to examine what the operators think about laws that encompass different areas. An interesting result was the evident fact that the rules and actual operating situation did not have much to do with each other, an issue that can certainly not be neglected when foundations for effective governance must be created.

Key words: responsible fishery, governance, coastal territory.

Résumé

La pêche responsable, telle qu'elle a été promue par la FAO et ensuite par l'UE, représente l'un des domaines d'action fondamentaux qu'une gouvernance ne peut pas négliger. Au contraire, l'éducation à ces principes dans le temps a été un outil important pour la direction et l'évolution du secteur. Plus difficile, par contre, l'adaptation des principes de responsabilité à la réalité présente sur les côtes méditerranéennes en mettant sur scène le concept d'une gouvernance multi-level au niveau territorial.

L'article suivant présente les données et les traitements concernant la pêche responsable dans le territoire côtier d'Emilie-Romagne, dans l'objectif d'examiner tant l'effective application des règles communautaires que la perception que les professionnels ont d'une règlementation qui se veut transversale par aires différentes. Le décollement évident entre règles ponctuelles et réalité opérationnelle est l'un des résultats intéressants, facteur qui ne peut certes pas être négligé quand on veut établir les bases d'une gouvernance efficace.

***Mots clé**: pêche responsable, gouvernance, territoire côtier*

have often had little to do with the individual situations, with measures that have been difficult to apply and that have thus been disregarded.

Various institutions, with different levels of competence, have intervened every so often in order to regulate the sector in a mandatory way or merely with simple indications, but the laws have sometimes been created and issued in a rather vague and poorly organized way. This has also led to situations whereby responsibilities and jurisdictions have overlapped one another. In actual fact, the subject of fishery governance has rather undefined geographical limits in itself. The provisions involved range from those of a global character, such as those of the FAO, to others of a more regional or local type, and all this makes planning extremely complicated.

The concept from whence this study began was that of the FAO[1] which, in 2000, defined governance as "[...] a continuing process through which governments, institutions and stakeholders of the fishery sector – administrators, politicians, fishers and those in affiliated sectors – elaborate, adopt and implement appropriate policies, plans and management strategies to ensure resources are utilized in a sustainable and responsible manner. It could be at global, regional, subregional, national or local levels. In the process, conflicting or diverse interests may be accommodated and cooperative action may be taken".

It should be:

a) integrated: to arrive at a strategic judgement considering all the ecosystem elements involved with the purpose of multidimensional sustainability;

b) adaptable in time: the system must appear effective in the long term but dynamic by the development of the situations; adaptable in space: choice of application at a regional, national or international level according to the cases; from a structural point of view: the capacity to manage differing types of fishing;

c) shared: there must be a sharing among all those involved at operational and institutional levels (from the people in charge of government to the citizens of the eco-region affected by the measures);

d) reliability: the scientific contents from the sustainability viewpoint (environmental, techno-economical and social) ecosystem elements and methodology must be comprehensive and deepened;

e) transparency: simplicity and clarity during the procedural phases, in methods and in the assessment of contents;

f) understanding: the key element in a shared and working relationship governance.

When it comes to standards, the foundations of the issue for the fishery sector have been, firstly, the United Nations Convention on the Law of the Sea (1982) which, along with numerous other bilateral or multilateral agreements, contains important indications about the management of the fishery sector on an international scale. This law was then followed by the United Nations Fish Stocks Agreement (1995), which underscores the responsibility of each country for managing the sea fishery resource and defines certain rules of jurisdiction.

In 1995, the FAO issued the Code of Conduct for Responsible Fisheries and suggested a global governance strategy based on the adoption of sustainable fishery behaviour and a study and application of measures, in a broader outlook of the ecosystem.

To strengthen the indispensable link between governance procedure and consideration for the ecosystem, the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem (FAO 2001) pin-pointed certain fundamental elements able to facilitate that approach:

- decentralizing the decisional moments;
- transparency, awareness and spread consensus;
- co-ordination within the fisheries sector and between this sector and the other ones related to it;
- consideration of economical and social issues (i.e. the employment) in balance with the "ecological" ones (i.e. the biological tutelage areas);
- adoption of a "think to the future" vision (i.e. develop the fishing monitoring).

Thus, creation of a governance policy for the fishery sector must not neglect aspects that are peculiar to the individual areas. This means that the characteristics of the Mediterranean must not be underestimated, especially as in this case, the resources are shared amongst several different countries (Community and non-Community) and the fishery practices are mainly of the artisan type.

In the European Union, policies must indisputably issue measures that help the sector to achieve a univocal goal, but this must be shared and agreed upon by all its members. Thus the goals pursued in the Mediterranean sea must obviously be the same as those established for other Community fishery areas, while the measures adopted must suit the specificity of the fishery practices in that area, so as to take the diversity of biological, geographical and juridical situations in the region into account as well as the experience and skills of the fishery sector.

However, the code of conduct established by the FAO soon appeared to be forcedly generic as it had to provide indications for all the waters of the world.

Recent revision of the planning and coordinating measures for the fishery sector of the Mediterranean resulted in a division of responsibilities between the international/Community sphere and the regional/local one. The aim was to make it easier to introduce and integrate international and Community principles expressed on a voluntary basis, into each individual situation. In actual fact, it is impossible to establish a single juridical system to suit all the countries that conduct their fishing operations within its waters, in view of the numberless situations within the area in question. Ethnic, cultural and economic differences, lack of communication and the intrinsic characteristics of the Mediterranean, such as the highly migratory species that live there, have always prevented representative information about the area and the entity of its resources from being acquired, and this has partly compromised its multispecific heritage.

The EU decided to define the requirements of the Mediterranean region and the measures able to attain common Community and international goals by means of a specific plan of action. Communication amongst Mediterranean countries is therefore of fundamental importance if the fishery section is to develop in a single direction and to allow each country to implement rules for rational fishing operations.

In a reference framework such as this, when it comes to fishery monitoring and management, the role undertaken by each individual country and by the specific areas concerned is clear. Their vicinity to the local problems allows an evaluation to be made as to which are the best measures to adopt and to act if needed.

This study aims to monitor the situation at local level so as to find out whether and how the responsible fishery measures proposed by the FAO and the EU are applied as well as what the operators think about them and their comments: these actions have been defined at a superior territorial and institutional level and to survey the opinion of those who must apply them locally could become a fundamental issue in relation to the sharing and efficacy characteristics that a governance procedure must possess. A methodological-op-

erational approach is proposed, one that could become useful as a measure for dealing with the phase in which the political documents issued by the institutions in order to obtain local opinions are published.

The study also offers an evaluation, as to results achieved and efficacy, of the measures suggested by the FAO for responsible fishing, even though applied to a small area of the North Adriatic, i.e. the coast of the Emilia-Romagna region.

The data refer to the year 2007.

The link between the subject of governance and responsible fishery was promoted by certain fundamental documents that were intended to regulate the sector, documents issued by the FAO in particular. The main ones used as a reference during this research are listed below:

- the *Code of Conduct for Responsible Fisheries* adopted by the FAO Conference during the 28th session, the 31st of October, 1995;

- the *Regional Fishery Bodies and Governance: issues, actions and future directions*, promoted by FAO in 2000 through the Fisheries Circular No.959;

- the European Code of Practices for Sustainable and Responsible Fishery, adopted by ACFA (Advisory Committee on Fisheries and Aquaculture of EU) during the plenary session of 11st of September 2003;

- Council Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94;

- documents containing national and regional laws about responsibility and sustainability in fisheries sector.

2. Methodology

This research combines quantitative assessments with other aspects of a qualitative nature. To achieve this, the relative methodology was evaluated with care. An entrepreneurial outlook was used for the analysis since the enterprises involved are the foundations on which the findings are based, obliged as they are to put the responsible fishery regulations into practice. However, the model also had to allow a combined examination of the supranational measures to be conducted along with the actions at a Community and local level.

Firstly, the procedure involved in-depth bibliographic studies of the industry from its structural and productive aspects in order to collect sufficient data for a preliminary reference framework of the fishery sector and to then be able to decide how to proceed with the research. The FAO Code for Responsible Fisheries (1995) was studied at depth so as to pin-point the corresponding provisions established by the Community laws - such as the European Code of Sustainable and Responsible Fisheries Practices (2003) and the

CFP (Common Fisheries Policy) measures - and Italian legislation. One notes that the European laws are based on the international ones, of which they fully implement the principles, characteristics and goals but with the addition of official and binding issues that, owing to its very nature, the FAO has been unable to include. Then there are provisions of a local and regional character (due to derogations or other specific situations).

The studies conducted were then examined in order to find the most appropriate model through in-depth research into applications of the SWOT matrices[2], as reference tool for the analyses.

SWOT analysis was chosen as it is flexible and can be adapted, characteristics that were of particular use in the envisaged investigations. This sort of analysis is able to pinpoint all the main factors that may influence the implementation of a plan in a given spatial and temporal context. The issues dealt with were included in a matrix and divided into four categories: strengths and weaknesses in relation to the internal corporate context (e.g. the fields of excellence of the enterprise that can facilitate its competitive success); opportunities and threats, which are those from the external framework in which one works (e.g. threats can be events or changes that may occur in the future and that constitute a risk factor).

This first phase also included direct contact with experts from the sector so as to obtain preliminary opinions about the subject of the research.

After this, we created the matrix diagram so as to record data concerning the strength/weakness elements that can affect the fishing enterprise through application of the official regulations and the voluntary ones advocated by the responsible fishery laws.

It is in the order of 6 * 36: the six columns contained the Community guidelines (in harmony with those of the FAO) for achieving responsible fisheries, the pertinent national/local provisions, details about the reference standards and space for expressing their relative application or non-application plus opinions about the issues. The more representative indications in the regulations for the enterprises were selected in line.

The studied guidelines from FAO and EU Codes are:
- Respect for fishery resources
- Maritime safety
- Social aspects
- Cooperation
- Information and transparency
- Marketing conditions.

The subject of fish farming (an integral part of the factors considered in relation to responsibility on a Community and world-wide scale) was neglected since the research concentrated solely on enterprises involved in fishing activities.

The most significant reference standards were identified for each of these momentous issues and the research then concentrated on the more important practices suggested.

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[2] Use of such a matrix as a model and tool for strategic planning was proposed by H. Weihrich (1982).

The list of all these instructions was then used to create the questionnaire required for obtaining information for the matrix[3], based on opinions about the advantages/disadvantages of actions concerning the fishery sector. This value was then averaged according to the effective application or non-application. The scale used involved a score that ranged from -2 (the rule is an advantage factor but is not applied) to +2 (the rule is an advantage factor and is applied). 0 stood for a situation of independence between application and characteristics of the rule. The other scores refer to intermediate situations (e.g. infrequent application of the standard which, however, would be an advantage) (Bezzi 2005 and 2006).

In actual fact, failure to apply the regulations very often does not depend on personal choice but on local derogations, due to the size of the vessels for example.

Besides obtaining opinions about individual measures, the idea was to ascertain the degree of importance the interviewees ascribed to the major issues for achieving responsibility in the sector. The research proceeded with a paired comparison deriving from multicriteria analysis and measured according to the Saaty scale. We were thus able to process opinions expressed in the qualitative form in order to obtain differential scores of merit for each trend. In this case, the score ranged from 1 to 9 within square matrices and the only reference for comparison was the greater or lesser ability of a guideline (major issue) to facilitate the achievement of sustainable and responsible fisheries.

This sort of in-depth research was considered necessary as it gave an idea as to what fishery entrepreneurs and the relative organizations think about the measures imposed, and about the degree of importance and significance they ascribe to the individual targets. It was also conducted in order to provide the political decision-makers with information based on the real needs voiced by the trawler fishing enterprises of Emilia-Romagna, information that could be of use when the priority guidelines of future political actions are decided.

The results obtained were considered in absolute value but were also carefully weighted in relation to the representativeness of each regional fishery sector with regard to the number of vessels in the fleet. The weighted opinions are a combination amongst the opinion expressed by the individual fishing sectors about the responsible fishery guidelines, the number of trawlers in the sample and the importance the entrepreneurs ascribe to the dictates.

Lastly, the data were applied to the case in question, the information was recorded and the results processed. These latter were given much thought and were the subject of deep discussion, the aim being to obtain significant indications for governance in the sector, indications that could also be of use in other fields.

There were two main methods for interpreting the results: by FAO Code guidelines and by marinas, and by analysing the weighted scores.

To all events, the methodology chosen attempted to allow ample scope for not only the operators to take part, but also the stakeholders in general. This was because we considered that the efficacy of a measure depends on a comparison between its ability to adapt to regional characteristics (extremely varied in the Community area) while complying with the principles and guidelines established for a common goal.

3. Results

In view of the variety of resources in the area, fishery activities are decidedly multispecies in the region of Emilia-Romagna and this leads to the use of different catching techniques, depending on the species in question. The fleets along the coast generally employ several fishing techniques: trawler systems, offshore fishing, multi-purpose systems and so forth. Not only is the method chosen strictly correlated to the species but also to the size of the fleet itself. Thus fishing activities are conducted by many businesses with more than one fishing license allowing them to outfit their vessels with different sorts of equipment and to thus avoid having to stop their fishing operations at certain times of the year.

This study focuses the attention on regional enterprises that use the trawling method as this is particularly widespread along the coast, second only to mid-water pair trawl fishing as to the annual and daily gross marketable production recorded and, after offshore fishing, has the most numerous fleet, one that accounts for more than 50% of the regional tonnage on its own and for over 40% of the engine power.
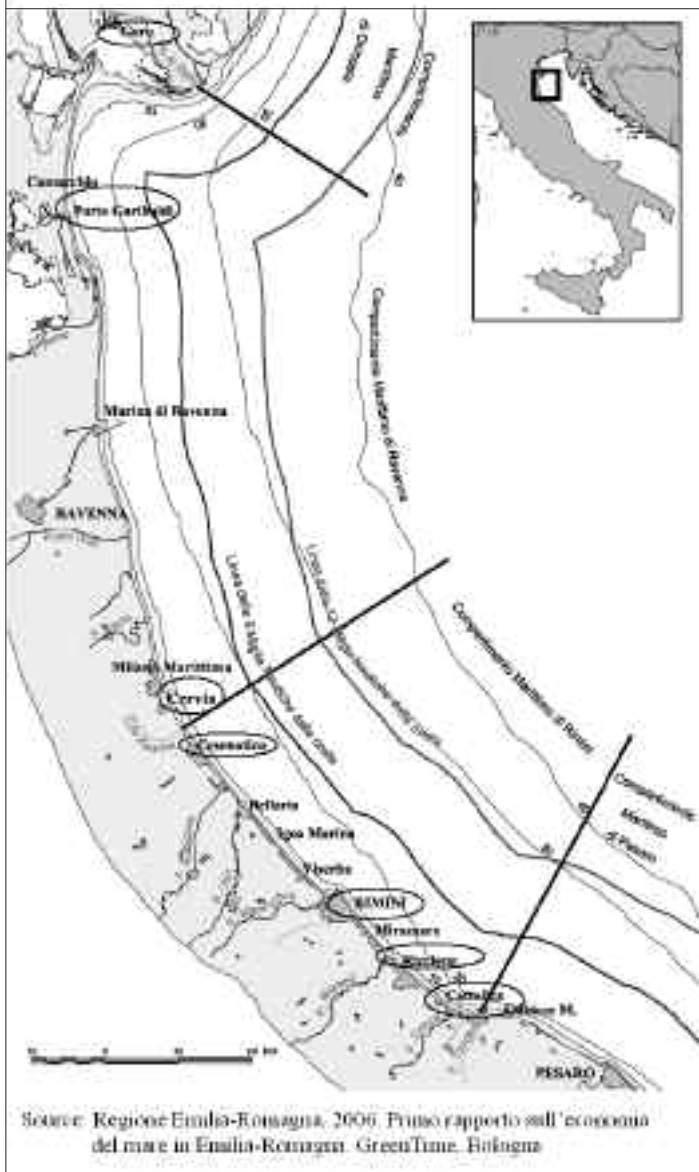
However, one must bear in mind that analysis of the available data shows how the number of vessels engaged in trawler fishing dropped by over 40% during the 2000 to 2007 period and this accounted for a 29% drop in tonnage and a 36% decrease in engine power.

Investigations showed that this involved about 190 vessels, equal to almost 70% of the ones dedicated to trawler fishing along the coast in question.

When it came to the territorial scope, the research concerned the coast of the Emilia-Romagna region pertaining to the North Adriatic area (Figure 1). From the administrative-organizational aspect, there are two ports of registration, Ravenna for the part of the area towards Veneto, and Rimini. There are 9 marinas: Goro, Porto Garibaldi, Marina di Ravenna, Cervia, Cesenatico, Bellaria, Rimini, Riccione and Cattolica. Marina di Ravenna and Bellaria were excluded from the research since their importance in relation to the trawler fishing technique is almost null.

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[3] The matrices were solved by calculating the normalised geometric mean of the judgements attributed to each individual guideline, and using this value as the summary indicator of its importance. The importance indicator was obtained from the geometric mean by appropriately weighting the values obtained for each individual port. Finally we checked for "spurious" or "consistency" errors exceeding a given threshold (10%), by performing internal consistency tests; all had a negative outcome.

Figure 1 – *Map of the Emilia-Romagna coastal area.*

Source: Regione Emilia-Romagna, 2006. Primo rapporto sull'economia del mare in Emilia-Romagna. GreenTime, Bologna.

In the first place, data and information had to be acquired so as to form the matrices required by the research. The analysis was conducted by working through different levels of detail, beginning with an evaluation of the norms and then of the guidelines between them. After this, the marinas were compared then, by carefully examining the opinions, an assessment was made of the incidence of importance in the opinions expressed.

The marinas differed deeply from each other. This was due to the size of their fleets, to what extent they had developed as tourist attractions and to the traditions present. Thus the interviewees voiced rather mixed opinions about responsible fishery, revealing different requirements and points of view.

At this stage, the results obtained for each of the major issues researched must be closely examined.

A common line of thought expressed by the interviewees concerned the importance ascribed to *respect for the fishery resource*: for example, all the marinas agreed that obligatory fishery closures were a potentially efficacious means for the purpose even though the matter must be improved. Some of them even prolong the closure period on a voluntary basis. An analysis of the scores obtained by processing the matrices, showed that when the maximum score was combined with application of the regulations, respect for the fishery resources obtained a score of 14 points while the average score recorded by the marinas was 7.57 points (Figure 2). If, on the one hand, particularly high values were recorded for this matter in Rimini and Goro on the other, the marina of Riccione distinctly differed. Since its main activity is offshore fishery, it benefits from numerous derogations, thus its negative score affects the final average. However, an important consideration can be made about the matter: respect for the resources is highly important for the operators. As a whole, it exceeded 50% of the available points and is considered one of the main variables on which to act in order to tangibly improve the fishery activity and to guarantee long-term sustainability.

When it came to the subject of *maritime safety*, the average score obtained by all the researched units was 4.29 points (equal to 21.43% of the total), with undoubted differences amongst the various situations. First and foremost, these differences were bound to the types of vessel used and the activity conducted. What seems to be apparent is that the rules are considered an advantage by those who can act in derogation, while those who are forced to apply them consider them to be an excessive restriction to the freedom of the operators.

The social aspects refer to the ability to create a productive workplace climate on board. The maximum score that could be obtained was 10, but the average remained at negative values since none of the marinas totalized a sum of

Figure 2 – *FAO Code's topics applications: comparison between the maximum achievable result and the average registered scores.*

Source: our elaboration.
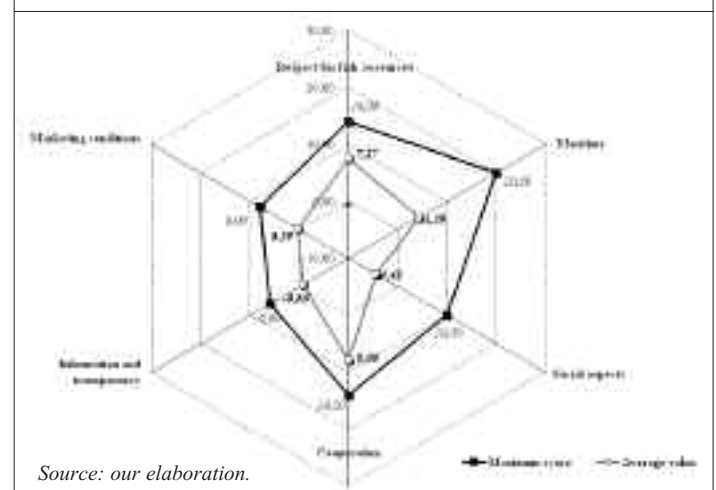
more than zero. One should note that there are very few rules about the matter. Only two targets out of five of those in the matrix are official, even though such conduct is generally considered to be an advantage factor. One should also note that the targets of these guidelines are linked to improving the relations amongst the crew and the way the crew is hired. However, in this specific case, the vessels are small in size and the crews mostly comprise 2/3 persons including the boat owner or captain.

The maximum potential result for *cooperation* was 14 points, while the average value obtained by the marinas was 8 (an incidence of more than 57%). This result highlights the attempt to improve the forms of collaboration in a rather competitive industry, this not only amongst the individual operators but also amongst these and the public and institutional Authorities with a view to encouraging a more careful control and management of the fishing activity.

Dissimilar results were expressed by the marinas in relation to the subject of *information*, but the average was little less than zero (-0.86%). The causes on which such conduct was based were varied but primarily, those who are in possession of derogations do not apply the aforementioned regulations although they agree that these latter could improve the business. Goro is the only marina that applies all the references in the matrix and that considers them a strong point and a requirement with which to comply.

The last guideline in the matrix was the one concerning improvements to *fish product marketing*. The average value obtained was rather low (0.29) and of the researched group, that of Riccione took the most care to respect the regulations and to comply with them in full, obtaining benefits from them for the activity of the marina itself. On the contrary, Cervia, which almost exclusively supplies the local market, tends to be rather uninterested in product marketing improvements, although they are considered to be a possible strong point.

Figure 3 – *Comparison between weighted and unweighted scores of the fishing ports (percentage incidence on the maximum achievable result for every fishing ports).*

Source: our elaboration.

These evaluations were made on the assumption of equal weight amongst the seven marinas as well as homogeneous conditions and, consequently, requirements. In actual fact, adaptation to the local situations must actually end up by defining the characteristics of the individual contexts so as to ensure that the Community/international decisions are efficacious at all levels. For this reason, the scores obtained by processing the basic matrices were weighted according to the sizes of the fleets, as shown in figure 3. To interpret the results, one must remember that, in the case of a weighted value that is lower than an unweighted one, this could be due to the fact that a marina with a higher number of vessels expressed an extremely contained opinion about the efficacy of the guideline or that a marina considered the guideline of particularly low importance. This would have involved a reduced weight that exercised a multiplying effect on the opinion about the efficacy of the guideline. Vice versa, the reason for a weighted value being higher than an unweighted one is due to a situation that is opposite to those of the first two cases described.
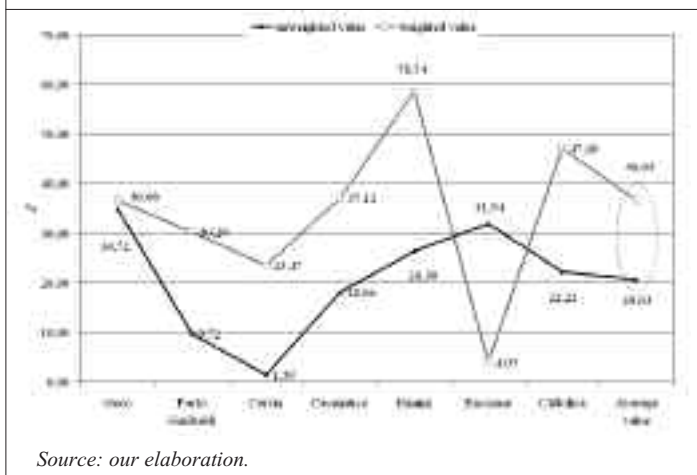
The main results obtained are synthesized further on, while more detailed considerations are given in the conclusive part in relation to governance for the sector.

The first significant issue concerns the comparison of tendencies, regarding their ability to lead to responsible conduct: respect for the fishery resource obtained a lower weighted value than the unweighted one. This was particularly due to the lesser importance ascribed to it by a large marina like Goro.

The weight of the larger marinas, where it is considered important to collaborate towards the collection of statistical data on a national scale, also comes to the fore when it comes to the subject of information and transparency which, unlike the unweighted score, obtained the highest value of all the tendencies (about 76.5%). All this is also confirmed by the analysis of the marketing conditions. Here, the weighted value pointed towards the validity of the regulations as a means for achieving the goals, with a value of 62.54%.

A second approach considered the individual marinas and, in the case of the total weighted score, the overall values ascribed were subjected to important modifications compared to the unweighted ones due to the influence of the opinion given about the individual guidelines of the FAO Code. The average overall value (for all the marinas examined) increased from 20.63% of incidence on the accumulable total (unweighted) to 36.63% (weighted), underscoring agreement when it came to the preservation of fish stocks but perplexity as to the validity of the regulations should they be applied in a more stringent way to extremely different situations. Going into more detail, some of the marinas were above the weighted average value due to both the larger number of vessels than other marinas and for the positive opinions expressed in the matrix (Rimini 58.5% of the total, Cattolica 47% and Cesenatico 37.1%). Regarding this, the Goro situation (36.6%) is interesting as the inter-

viewees expressed contrasting opinions about the guidelines considered although the trawler fleet is large. Lastly, while Cervia (23.4%) obtained a very low unweighted score value but an acceptable weighted score value, Riccione (4.05%) went against the trend with an extremely important unweighted score that was sensibly lowered by the negative opinion about the guidelines, which obtained higher application scores.

In short, the differences in the opinions expressed, the importance the marinas gave to the FAO Code guidelines and their number of vessels allowed interesting conclusions to be drawn.

4. Conclusions and final remarks

At the end of the work, certain considerations should be made about the concept of responsibility in fishing activities as perceived by the stakeholders examined through matrix analysis. On the basis of these observations, an attempt will be made to provide suggestions and to outline strategic policies for assessment during the creation of a governance system of an efficacious and applicable type.

A first observation can be made by considering the subjects introduced by the FAO and the EU as cornerstones of responsibility, i.e. respect for the fishery resources, maritime safety, the social issues, cooperation, information, transparency and marketing (as well as fish farming, which was omitted from the research). They are representative of all the phases forming a fishery industry: these institutions therefore extend a responsibility criterion to the entire system and prompt an overall behavioural framework that is meant to be systematic and organic. To achieve this sort of result, the decisional process and its contents must necessarily be approved at several levels, including that of the target group that must comply with these provisions.

When it comes to the choice of methods, the matrix model used for conducting the marina investigation was created with reference to SWOT analysis techniques, of which it was given the guidelines. It is a logical sort of procedure, as used in business economics. It is able to collect information about a given phenomenon and to organize it systematically so as to allow indications about policies, courses of action, strategic entrepreneurial operations and so forth, to be processed. The method was efficaciously applied to this study and the variety of opinions collected, measured and weighted allowed a detailed qualitative evaluation to be made of the responsible fishery measures, their applicability and efficacy. Based on the six guidelines chosen from the FAO Code of Conduct and that of the EU (plus the relative national laws that implemented these codes), the matrix produced an aggregated outline of the way the rules governing sustainable and responsible fisheries are applied and this was completed by the opinions of the operators as to their being strong/weak points for the sector.

At the end of the research, the low percentage incidence recorded in both the unweighted scores (20.63%) and the weighted ones (36.63%) led to the following considerations:

- the decision to dictate common rules for different fishery areas governed by several marinas is difficult to implement in a productive manner and is of little use;

- the goals of the individual marinas interviewed were very often discordant owing to the diversified situations to which they refer, and cannot be type-approved in accordance with coded indications;

- the care expressed by the interviewees towards protection of the fishery resource was a common opinion, first and foremost in the interviewee's concerns as a goal unanimously recognized as being of fundamental importance to achieve. All this denotes that the stakeholders have assumed an important responsibility in relation to the environment;

- relations with the institutions are difficult and must improve, even though the fishing entrepreneurs have become more open-minded over the past few years, more willing to dialogue with the controlling bodies and to collaborate with the Authorities and research Institutes. This result is significant since the creation of reliable statistics and information forms the foundation for carefully considered and adequate political decisions, both for those who apply the regulations concerning that information and for those who benefit from derogations;

- lastly, the operators in the sector voiced a desire for greater autonomy when it came to their conduct at sea because they consider themselves to be personally responsible for respecting the natural and biological resource. This request was accompanied by that for rules which are simple to actuate, fit for the situations in the areas in which they work and, a no small thing, of a transfrontier character with a view to guaranteeing equal behaviour and efficacious application amongst the various countries in relation to a common resource.

Thus there is a great variety of forms and situations in Emilia-Romagna's fishery sector: the marinas researched possess extremely different characteristics as to their overall activity and the trawling technique (size of the vessels, equipment used, crew composition, etc.), closely bound to tradition but also rapidly evolving and are all in agreement as to the importance ascribed to issues such as respect for the fishery resource, maritime safety and product marketing. Adoption of responsible fishery conduct can become a *strategic element* for both the resource and the fishery entrepreneurs themselves.

By and large, the research highlighted growing attention from public opinion and from the institutions towards identifying sustainable fishing methods. This not only to safeguard the natural environment, but in relation to revenue-earning capacity and the social aspects bound to the activity. Thus the sector manifests an increasing need to develop and take possession of a "new" way of working and producing. Application of common rules for different fishing areas creates problems and doubts as to their validity, preventing the stakeholders from implementing them in a more convinced way. The characteristics of the Mediterranean

area (and of the Adriatic in this specific case) require dedicated regulations that are more able to safeguard the local fishing methods, bound as they are to a particular territory and deeply rooted culture.

The debate about governance includes extremely different issues, since it is a process that can be defined as "[...] the sum of the legal, social, economic and political arrangements used to manage fisheries. It has international, national and local dimensions. It includes legally binding rules such as national legislation or international treaties as well as customary social arrangements" (FAO. 2005).

When it comes to governance, it is first necessary to establish a concerted strategy for regulating the fishing docks and waters. This will allow collective actions and interventions of a transnational type to be carried out, ones that meet the requirements of a sector in which the resource is migratory. The national sovereignty and the regional and local interests must be respected, but the final goal must be univocal and agreed by all those concerned.

Secondly, the findings for the respect for the fishery resource guideline in the research showed that the stakeholders would be willing to collaborate so as to rationally reduce the general pressure of fishery activities on the biological resource and on the marine environment in the planned long-term mode but with interventions that must be adapted to the zones, the periods and the species in question. The need to develop new, low impact fishing techniques can be considered as part of this issue. Such techniques would limit waste and damage to the environment while encouraging more selective catches by improving the selectivity of the equipment for example, or by reducing its size. Moreover, it is also essential to encourage and involve those who deal with fishing activities first hand, in the various decisions.

The identification of strong and representative denominators to guide the sector is a fundamental and common goal, but it is also essential to integrate them and characterize them with applications and indications tailor-made to suit the territory in question, able to guide but also to turn the local peculiarities to account. This may be one of the best strategies for creating and implementing an efficacious governance, one that is able to obtain the stakeholders' approval of the fishery policies and their active participation at all levels, throughout the entire industry.

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