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**CONTRIBUTION TO THE GREEN PAPER ON THE  
COMMON FISHERIES POLICY REFORM (CFP)**

***“A proposal on the EU fishing resources management  
policy: The paradise for scientists and managers”***

**by**

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## ABSTRACT

The EU Commission has submitted to debate his ideas and worries on the future CFP, that will come into force on January 1<sup>st</sup> 2012, through the *Green Paper on the Common Fisheries Policy Reform (CFP)*. In the last Chapter 7, the Commission requests the expression of opinions and invites all the interested parties to propose comments on the questions expressed in the Green Paper before December 31, 2009.

This contribution points out the disadvantages of the management model based on the TAC and quotas system, as well as its negative effect, from the scientific point of view, in achieving a realistic assessment of the stocks and, consequently, in obtaining management regulations of EU fisheries based more solidly on the fishing science.

The author<sup>1</sup> defends as a better alternative the direct application of the management of the fishing effort to achieve the target reference points, with values more adjusted to the reality. The proposed model and its possibilities of application are schematically presented.

## BACKGROUND

The present document is based on two previous articles of the same author (Fernández, 1988; Fernández, 2008), and tries to give constructive answers to the worries, alternatives, needs and questions raised by the EU Commission in the short, but very complete 2009 Green Paper currently submitted to debate and contributions of the interested parts, included mainly is these paragraphs:

*“Introducing fishing effort, such as limiting the days a vessel can operate at sea, as a fundamental tool in fisheries management”... “the objectives agreed in 2002 to achieve sustainable fisheries have not been met overall”... “European fisheries today depend on young and small fish that mostly get caught before they can reproduce. For instance, 93 % of the cod in the North Sea are fished before they can breed”...*

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<sup>1</sup> The author of this note has participated in several stock assessment Working Groups and in the Advisory Committee of Fishery Management (ACFM) of ICES (International Council for the Exploration of the Sea) in the decades of the 70s and 80s of last century, and he was Delegate of Spain in ICES from 1988 to 2004. He was a scientific adviser of the fisheries Spanish Administration from 1975, as expert of the Spanish Institute of Oceanography (IEO) during the years just before Spain became member of the CEE, and continued from 1986 (when Spain became full member) up to today. Since the creation of the Consultative Regional Councils (RACs), he is a scientific observer in the RACs relevant to Spain. He has been 35 years observing closely the application of the fisheries resources management in the European Union.



*Another important consequence of the vicious circle of overfishing, overcapacity and low economic resilience is high political pressure to increase short-term fishing opportunities at the expense of the future sustainability of the industry.” (Chapter 3)*

*“The Commission considers...structural failings”... “a framework that does not give sufficient responsibility to the industry” (Chapter 4)*

*“Could transferable rights (individual or collective) be used more to support capacity reduction for large-scale fleets and, if so, how could this transition be brought about? “ (Chapter 4.1)*

*“Economic and social sustainability require productive fish stocks and healthy marine Ecosystems”... “The economic and social viability of fisheries can only result from restoring the productivity of fish stock”.. .”There is, therefore, no conflict between ecological, economic and social objectives in the long term”... “However, these objectives can and do clash in the short term, especially when fishing opportunities have to be temporarily reduced in order to rebuild overexploited fish stocks...” “Ecological sustainability is therefore a basic premise for the economic and social future of European fisheries.” (Chapter 4.2)*

*“There is also a need to assess the role of consultative structures such as the Advisory Committee for Fisheries and Aquaculture (ACFA) or the Regional Advisory Councils (RACs)” (Chapter 4.3)*

*“It is critical to the success of reform that industry should understand the need for it, support it and have a genuine stake in its successful outcome”. (Chapter 4.4).*

*“Data collection systems to measure fish catches for short-term quota monitoring and for medium term structural evaluations are not satisfactory and coherence has to be improved.” (Chapter 4.5)*

*“The MSY concept was accepted by all Member States at the 2002 World Summit on Sustainable Development as an objective to achieve by 2015. It was also part of the 1995 UN Fish Stocks Agreement. This international commitment should now be enshrined as a principle for stock management in the future CFP.”... “In mixed fisheries targeting several species of fish, it creates unwanted by-catches when the quota of one species is exhausted while quotas for other species remain, which leaves fishermen with no choice but to discard the fish which they are no longer allowed to land”...*

*“Management based on fishing effort such as limiting the days a fishing vessel can go to sea would remove this problem but it may not be sufficient to achieve the objectives of the CFP.”...” What should the main management system be for Community fisheries and to which fisheries should it apply?” ... “Fishing effort management?”...” What measures should be taken to further eliminate discards in EU fisheries?” (Chapter 5.2)*



*“Relative stability was established as a principle of the first CFP in 1983.”...” After more than twenty-five years of policy and changes in fishing patterns, there is now a considerable discrepancy between the quotas allocated to Member States and the actual needs and uses of their fleets. In short, it is fair to say that relative stability no longer provides a guarantee that fishing rights remain with their fishing communities.”...” In many cases it creates inflationary pressure on TACs because a Member State that wants a higher quota has no other option but to seek an increase of the whole Community TAC”...” it contribute to discards”...” One option would be to replace relative stability with a more flexible system, such as allocating fishing rights.”...” One option would be to replace relative stability with a more flexible system, such as allocating fishing rights.” (Chapter 5.3)*

*“Scientific knowledge and data are of vital importance to the CFP, because policy decisions must be based on robust and sound knowledge on the level of exploitation that stocks can sustain, of the effects of fishing on marine ecosystems”...” Improving communication between scientists, policy makers and stakeholders, particularly ACFA and the RACs and securing their full commitment, should remain a priority.” (Ch. 5.6)*

This contribution reviews the principal difficulties of application of the current policy of fishing resources management, and offers an alternative, in our opinion more rational and practical, which would provide a better knowledge of the fishing activity. This in turn would lead to a more solid and realistic scientific stock assessment, which would be much better understood and assumed by the fishing sector, and which would achieve the same management objectives targeted by the European Union. It should be taken in account that critiques to the current system and some proposals in line with this alternative are explicitly reflected in the Green Paper currently submitted to debate, as well as in papers by other relevant authors.

## **THE ORIGIN OF THE CURRENT FISHING MANAGEMENT SYSTEM**

The current system of management of fishing resources by means of TACs and quotas is being applied in Europe from 1983, when the sharing key among the EEC member countries at the time was approved. This system, so-called “principle of relative stability” was established basically considering the statistics of the historical catches of the States, after ten years of hard internal negotiations.

The quotas assigned to Spain and Portugal from the Adhesion Treaty, that came into force in Jan 1st, 1986, were not based on fishing statistics (except the anchovy and the Iberian waters), but the result of hard and long negotiations having rather a political than a technical basis. These negotiations were based on the exchange of a restricted access to the waters and to the resources (on the part of Spain) for a free access to an important market of fishing products (on the part of the countries of the “EEC-10”), the reason for that being that the fisheries of the Spanish EEZ were not of interest, for the fleets of the members countries at the time. Anyway, the percentages assigned to Spain were incorporated to a new key of general share.



The only advantage of the current system in effect is that in the Fisheries Minister Councils of December every year, in whom the fishing possibilities are established for the following year, only the TAC level is discussed. This comes very determined by the process of the scientific advice from ACOM-ICES-STEFCF-COMMISSION. Once approved these figures, the distribution in quotas by country is not discussed at all. The "sacred" (principle) of relative stability is assumed and compulsory for all the members countries, as a result of its maintenance in the successive framework Regulations of the CFP from 1983.

## DISADVANTAGES OF TAC AND QUOTA SYSTEM

As it was expressed in the Final Note of our contribution to the British House of Lords (Fernández, 2008), *“This article is based on another article by the same author, published in 1988. We congratulate ourselves upon the fact that since then other, more authoritative pens have questioned the TAC and quota system as the cornerstone of the European Union’s fishery resource management policy. Mike Holden, who applied the policy for many years at the Commission’s DG XIV, criticized it harshly after his retirement (Holden, 1964). The Green Paper on the Future of the Common Fisheries Policy does likewise in point 3.1.2, “The Causes of Current Management Deficiencies” (European Commission, 2001) Michael Sissenwine and David Symes also analysed this problem (Sissenwine and Symes, 2007) in points 4.2. Scientific Information, 4.6. Impediments to Fisheries Management Under the CFP and 6.3. Move Toward Effort Management. Lastly, the devastating report of the European Court of Auditors in late 2007 denounces very clearly that the TAC and quota system is not working effectively in the policy on management of the UE’s fishery resources and generates major statistical defects.”*

Following the bibliography mentioned in this article and the paragraphs above indicated of the Green Paper on the Common Fisheries Policy Reform (European Communities, 2009), we identify this way the principal problems of the current CFP in relation to the fishing resources management:

1. It generates important statistical distortions on the data that, among other utilities, are fundamental for the periodic assessment of the stocks (Fig. 1). This originates sometimes weakly based stock assessments and uncertain target reference points.
2. It originates discards even in species of high commercial value, specially in mixed or polyspecific fisheries with quota by species.
3. It can lead to a low utilisation of the authorised fishing possibilities (countries not catching their whole quota).
4. The distribution of the TAC in quotas does not consider the temporal changes in time (from 1983) of the fisheries: fleet, stocks, fishing gears, species proportion in mixed fisheries, etc.



5. In the December Ministers Council, Fisheries Ministers of member countries having insufficient quotas try to obtain TAC higher TACs than those proposed by the Commission, as the unique way to increase their quotas. This is in detriment of the stocks.

## **PROPOSED ALTERNATIVE: DIRECT CONTROL OF FISHING EFFORT**

It is widely known that in order to obtain that a fishery improve from a overfishing to a situation based on the precautionary limits (Bpa, Fpa), and from here to the target of Maximum Sustainable Yield (Brms, Fmrs, Ymrs), the stocks dynamics factor to correct is fishing mortality, which is directly proportional to fishing effort (given a determined exploitation pattern) (Fig. 2).

$$F = q \times f$$

Where

<b><i>F</i></b>	Fishing Mortality
<b><i>f</i></b>	Fishing Effort
<b><i>q</i></b>	Catchability (constant)

The management by means of TAC is not but a measure of indirect and imperfect control of the fishing effort, which transforms the target **F** in landings. It is imperfect because, in any case, it should refer to catches, which are the consequence of fishing mortality an effort. This system originates the five problems already mentioned, and moreover the general incomprehension of the fishing sector, that thinks and says frequently that "Brussels does not know what the sea and the fishing is about".

For all these reasons we propose a model based on the direct control of the fishing effort in every fishery (Fig. 3). This would provide a better understanding and collaboration of the fishing sector with the new CFP, better information and more reliable stock assessments. If necessary, control of the fishing effort should be reinforced with adjustments of the capacity of the fleets, and by improving progressively the exploitation pattern in long-lived demersal species (cod, saithe, haddock, hake, megrim, monk, etc.). It is well known that the reduction of the fishing mortality in the early ages of the population determines a higher spawning biomass, permitting higher levels of fishing effort and a better conservation of the stock.

To implement the proposed alternative it would be necessary to establish the fishing efforts (i.e. in kw-days) by the Commission, in agreement with the member countries, before the approval of the future Regulation of the CFP by the Council and the European Parliament (2011). These fishing efforts should be established for country and fishery (zone, species, and probably also fishing gear), to take it as a base for the distribution among countries from January 1, 2012. In other words, a "photography" of the EU fishing effort in 2010-2011 distributed by countries.





To assign the levels of fishing effort to every member country the same system of distribution utilised in the principle of relative stability might be used.

Figure 4 shows the model proposed in this document, as well as its possibilities of application and his possible developments. The model uses the same sharing key of the principle of relative stability applied to distribute the TACs, and it allows for possibilities of exchanges among countries, fishing organizations and vessels, as in the TACs and quotas system. However, this model avoids the disadvantages mentioned for the latter. The fishing effort allowed for mixed fisheries should be for an area and not for species.

Nevertheless what we have just indicated, the author of this article believes that the current sharing key, which will remain unchanged during almost thirty years in 2012, should be reviewed in the light of the considerations above indicated.

Once agreed and established by the Ministers' Council the target fishing mortality for the following year in every management unit of stock by means of the level of total fishing effort of the previous year and its corresponding fishing mortality, a simple proportion serves to calculate the fishing effort for the following year

$$f_{y+1} = \frac{f_y \times F_{y+1}}{F_y}$$

*Where*

*f* Fishing effort  
*F* Fishing mortality  
*y* Year

We are aware that we are not discovering anything, since this system of calculation of the target fishing effort for the following year is the same that the one that is being used for the calculation of the TACs: it is calculated from the TAC of the previous year multiplied by a factor that represents the proportion between the target fishing mortality for the following year and the **F** of the year in which the last assessment was done (usually there are two years of difference between both, since the information needed is not available the year in which the assessment is being performed, and consequently it is not incorporated to the assessment). We want to point out once again that both with landings (TACs) and with fishing effort (**f**), what we want to obtain is certain mortality for fishing. In case of recovery plans, management plans and application of the precautionary approach (in absence of assessments), the target points for the following year can be likewise established in fishing effort. A precautionary fishing effort would be the average effort of the previous years, whose number would have to be established by the Commission.



The distribution of the total fishing effort in effort by member country (Kw/day) by area or fishery would be established according to a sharing key to be defined (relative stability). This model allows to distribute the fishing effort by fisheries organization or fishing harbour according to the proportion between **F** and **f**, and thus it would be possible to obtain individual transferable effort (**ITf**). It also permits exchanges of transfers of effort in any link of the chain (among countries, organisations, vessels), as in the case of the quotas (tons) to reach **ITQs**.

With the proposed system, the fishing skippers would not have any difficulty to declare all the catches and landings in the log books, and a considerable amount of discards would be avoided. The scientific assessments of the stocks would be more realistic and the fisheries management would be more effective. It would be said to them, in a simple language, in what zone, with which gear and how many days a year they could fish. And they might land legally their whole catch. This would be **“The paradise for the scientists and managers”**. Also, it would be less hell than now for fishermen. And perhaps this way the Commission could say, not too late, what is expressed as a wish in chapter 1 of the Green Paper: *“Rampant overfishing, with a large impact on coastal economies, has become a thing of the past. Nearly all of Europe’s fish stocks have been restored to their maximum sustainable yields...”*

By other hand we believe that the proposed management system would contribute with a grain of sand to give fulfilment to de Articles 2-B-1-d and 163-a-f of the Lisbon Treaty that enter in force just today.

## ACKNOWLEDGEMENTS

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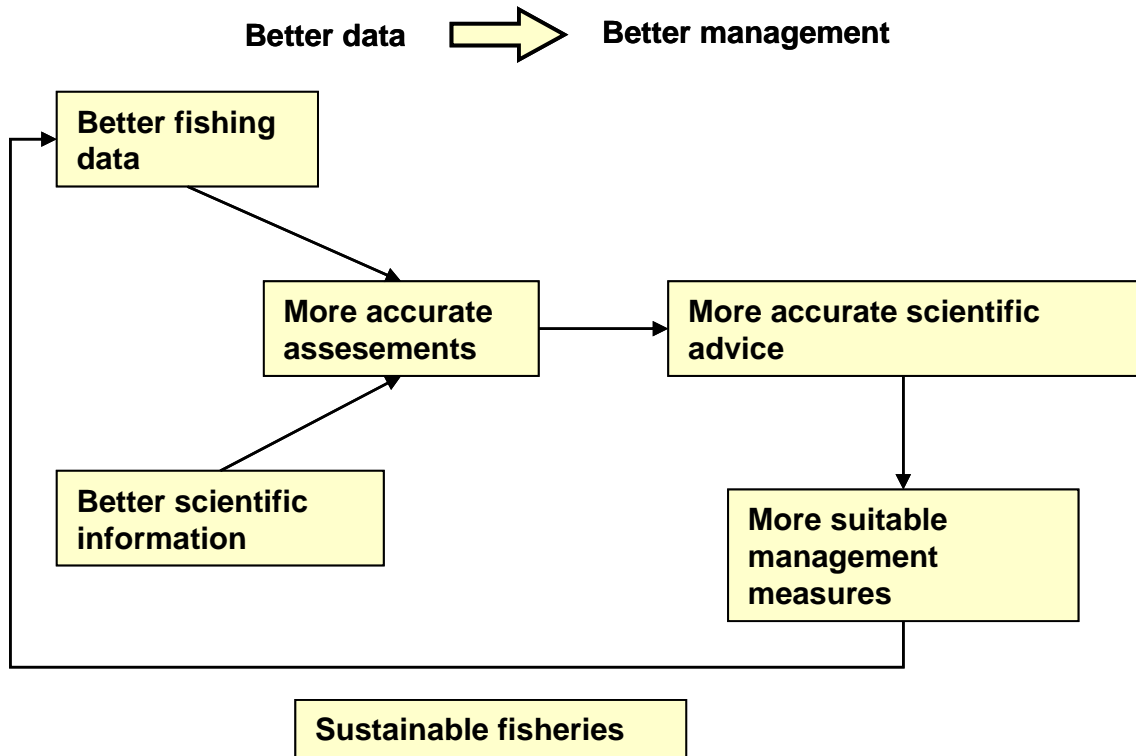


Figure 1

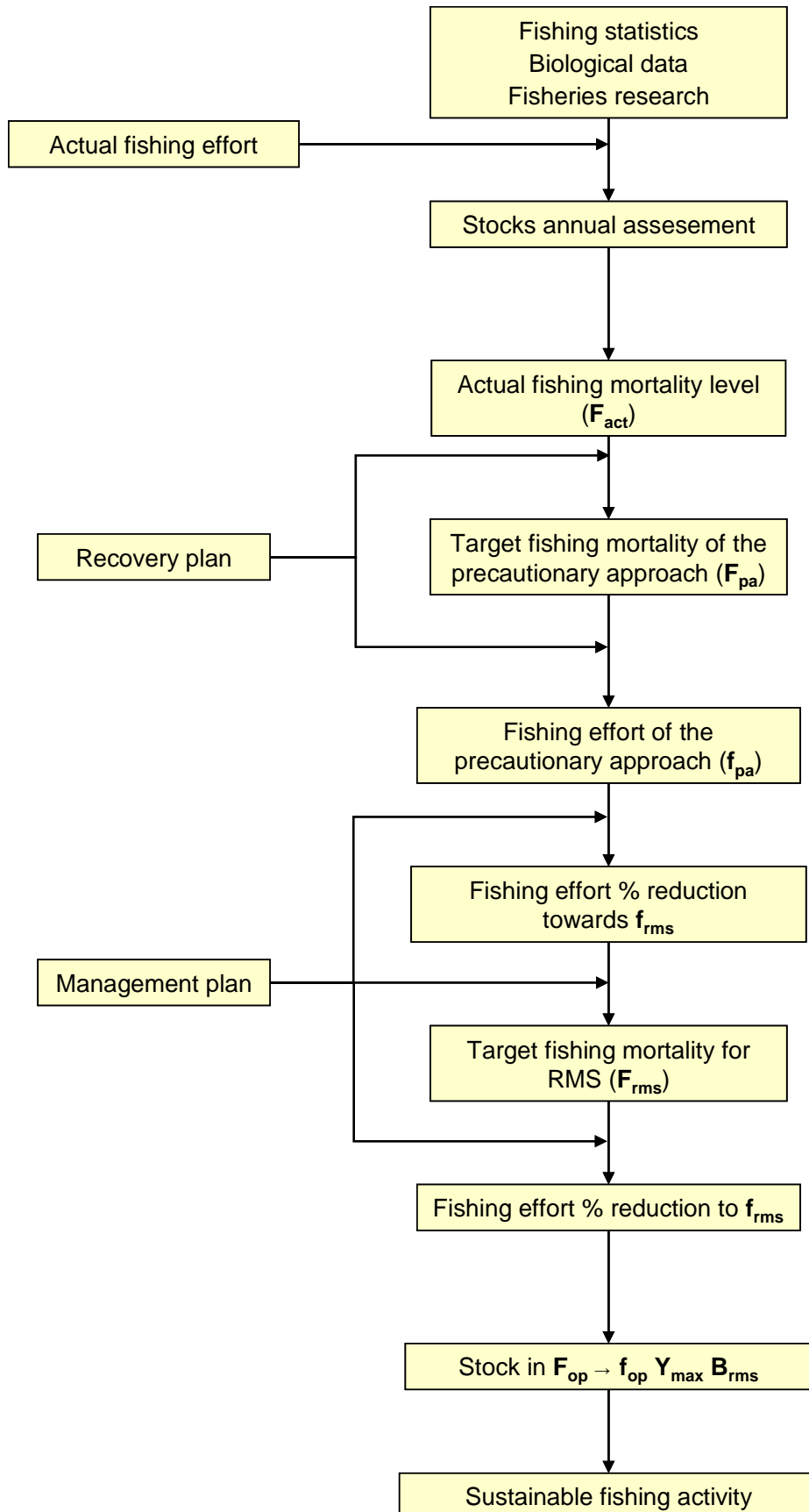


Figure 2

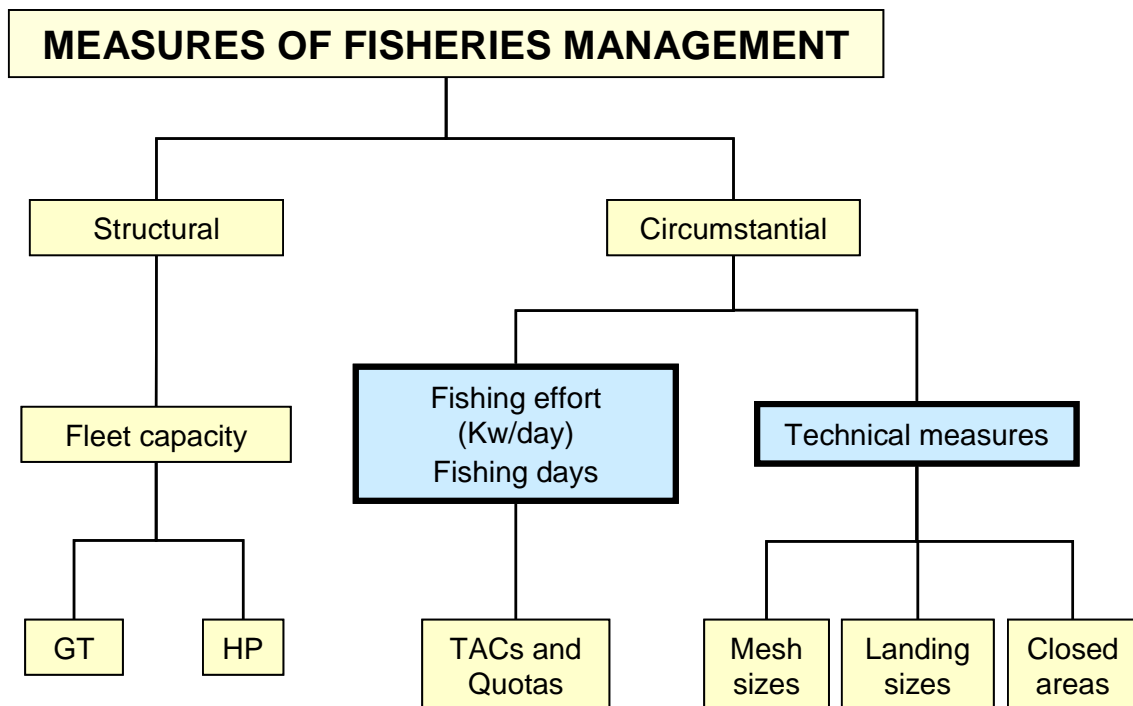
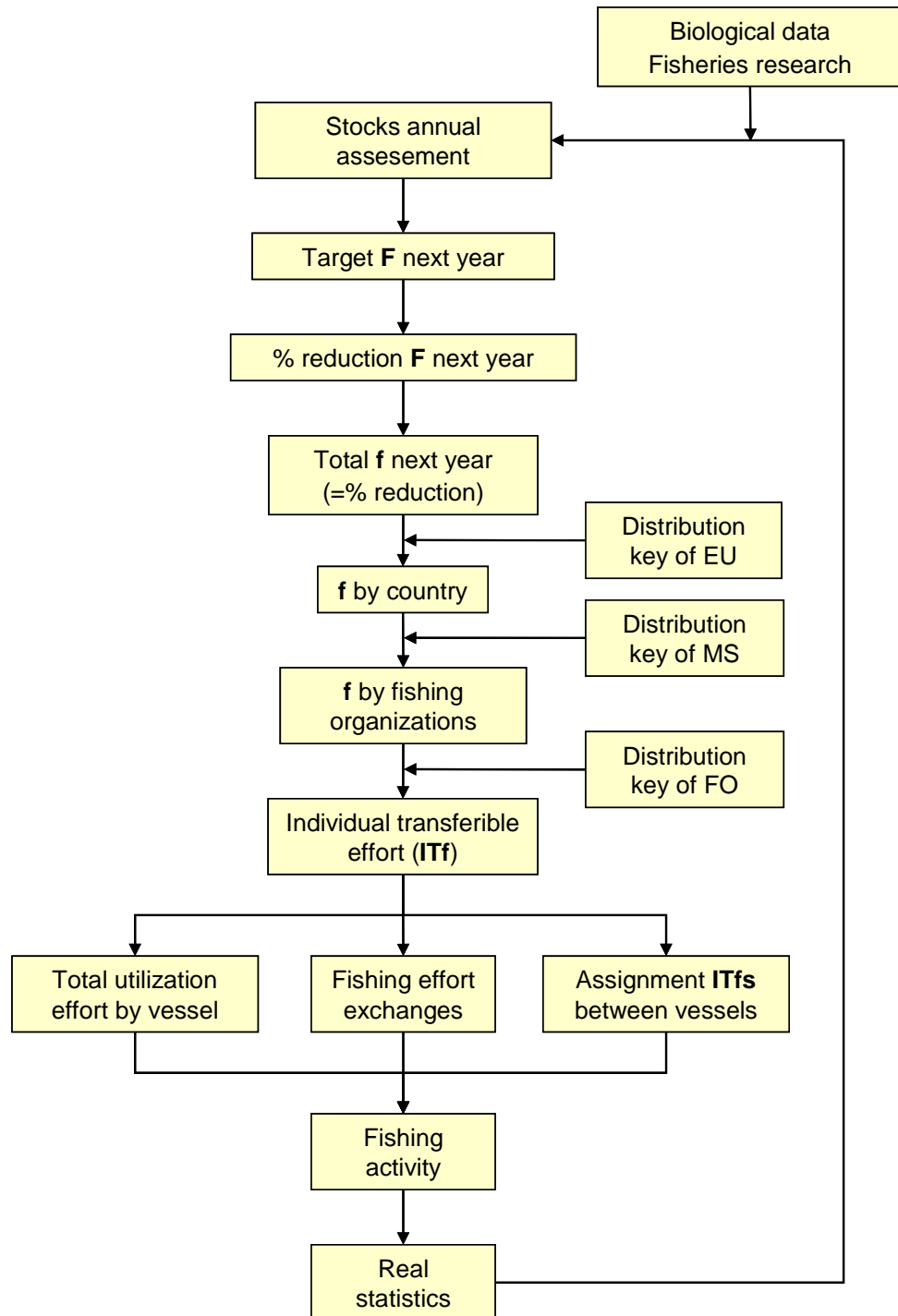


Figure 3



**F** Fishing mortality  
**f** Fishing effort  
**ITf** Individual transferible effort  
**MS** Member State  
**FO** Fishing organization

Figure 4