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联合国  
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pour  
l'alimentation  
et  
l'agriculture

Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

## FISHERY COMMITTEE FOR THE EASTERN CENTRAL ATLANTIC

### Seventeenth Session

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### USE OF SUBSIDIES AND FISCAL POLICIES IN MARINE FISHERIES

#### I. ECONOMIC INCENTIVES AND DISINCENTIVES IN FISHERIES MANAGEMENT

1. The population of Africa has grown rapidly since the middle of last century and it is likely to continue to do so. The United Nations Population Division predicts that by the year 2020 it will have reached 1188 million, a 50 % increase on the year 2000<sup>1</sup>. As most of the continent's population derive a livelihood through agriculture – including forestry and fisheries – the pressure on renewable natural resources will continue to intensify.

2. Also those rural societies that include fishermen population are likely to grow rapidly in coming decades. FAO estimates that in Africa the number of active fishermen grew by just below 200 % between 1970 and 2000<sup>2</sup>. This trend will continue in the near future. This means that the pressure on aquatic resources and on wild fish stocks in lakes and around the continent will continue to grow, perhaps because of the general lack of property rights the pressure will grow even more so than on other natural resources. But most of the wild stocks that are commercially exploited in African waters, are already exploited close to their carrying capacity and sometimes beyond. So unless fishing effort is effectively controlled the consequences could be dramatic.

3. For some time African public sector fishery managers have attempt to control fishing effort in order to protect fish stocks. During recent years it has become evident that the tools so far used have proved not to be able to protect stocks as fishing effort has expanded in what often *de facto* are open access fisheries.

4. In most fisheries the tools at the disposal of fishery managers during the last two to three decades have been 'technical' and input oriented. Through the application of technical measures fishery managers have tried to limit individual fishers' ability to fish – but not the overall number of fishers, and therefore not the combined, or total, fishing effort supported by wild fish stocks.

<sup>1</sup> <http://wws.un.org/esa/>

<sup>2</sup> "Number of Fishers" FAO Fisheries Circular no 929, Revision 2. Rome 1999

5. Generally these technical tools are designed to regulate the fishing effort by determining which gears fishers can use where and when. But, these measures are difficult to enforce, particularly on small scale fishers. In West Africa they outnumber by far those who are set to monitor/control their activities. And, small scale fishers operate from a large number of small landing centres. To be effective in enforcing technical measures staff members of fishery administrations need to be mobile both on land and at sea and they need the support of police and judicial institutions to ensure rapid and effective sanctions for those who do not adapt their fishing practices to that consistent with applicable fishery management rules. In large parts of West Africa neither the mobility nor the institutional framework exist for fishery managers to be effective in enforcing fishery management measures.

6. It has become obvious that enforcement of technical measures through monitoring and control is too costly. Unless fishers willingly co-operate fishery management measures will remain, if not 'dead' letters, at the very least, remain ineffective. It is in this context that 'co-management' has received much attention during the last decade. By actively involving fishers in management – which is expected to lead to active participation in the design of rules and regulations for their fisheries and therefore their support – it was hoped to significantly improve the fishers' adherence to technical measures. However, to date application of co-management has been scarce. Where it has been tried it has proved cumbersome to introduce and has not met with the expected success<sup>3</sup>.

7. As already stated above, technical measures also have another major draw-back. They do not – and are generally not designed to – limit overall fishing effort or fishing capacity for a particular fishery. As West Africa has experienced a steady growth in fishing effort – which now needs to be halted for most near-shore fisheries - this is a fatal draw-back.

8. Although fishery administration and associated governance are becoming more effective there is a need to complement technical measures with other policy instruments. In this context two categories of tools are of particular interest: the allocation of rights to fishing, and, economic instruments<sup>4</sup>. These categories of tools also need to be designed and implemented by the public sector. And, they can be costly. But they have the important advantage that they may be effective in controlling and blocking growth of fishing effort where this is necessary. This document discusses the use of economic instruments.

## **II. USING GOVERNMENT REVENUE ENHANCING FISCAL POLICY INSTRUMENTS IN FISHERIES**

9. In the 1970s and the 1980s the main task confronting the public fishery administrations in West Africa was one of modernizing and expanding fisheries. This meant ensuring the introduction and growth of motorized and mechanized fishing as well as the management of the use of fish stocks up to 200 nm off-shore as they became part of the West African patrimony through UNCLOS. In these endeavours the states sometimes used subsidies to provide incentives for fisheries and entrepreneurs to invest in more and better vessels and shore-based facilities.

10. But, today the main issue is not to increase fishing effort but to control it. Subsidies can be used also to control fishing effort, by providing economic rewards for reducing and sometimes

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<sup>3</sup> "Management, co-management or no management? Major dilemmas in southern African freshwater fisheries. Synthesis report". FAO, Rome, 2003, 127pp.

<sup>4</sup> These two categories of policy instruments are not completely independent of one another. Changes in rights have economic consequences - which make them effective as policy tools - and modifications of fiscal policy may be seen as an interference with property rights.

even abandoning fisheries. Naturally taxes, tariffs and various forms of user charges<sup>5</sup> will also act to discourage the least successful fishers and can therefore be expected to lead to a decrease in both fishing capacity and fishing effort.

11. Instruments of fiscal policy, such as taxes, tariffs, levies, etc, will become of increasing interest to public sector fishery managers. As taxes, tariffs and levies bring revenue to government it is most likely that officials of the Ministry of Finance will be more than keen to collaborate in their use also in the fisheries sector. But, how to introduce such fiscal policy instruments in the face of strong opposition from fishers?

12. All governments have a fiscal policy. This policy specifies the sources and uses of government revenues. Government revenues occur as a result of taxes, tariffs and levies for public services. Revenues are spent on public administration, public services (education, health, transport infrastructure, etc) and – in most countries - to service the national debt.

13. To the extent that such fiscal policies are country-wide they naturally apply also to the fisheries sector. But, it is seldom possible to effectively use economy-wide fiscal policies as instruments for implementing fishery management strategies, or plans. On the one hand the same policy measure will have different effects in different fisheries, and, on the other the effects will vary between seasons following the fortunes of the fishery.

14. Therefore those fishery managers who believe that fiscal policies, when properly designed, can be useful for fisheries management may want to make two, linked proposals: the introduction of *fishery specific fiscal policy instruments* and, that the *control over these instruments* should be in the hands of those responsible for fishery management. In that way these instruments can be modified and applied according to the prevailing - and expected - situation in each fishery.

15. What could be “fishery specific” fiscal policy instruments? They could include: license fees for vessels; license fees for gears; charges on landing of fish (related to weight or ex-vessel value); export taxes (related to weight or value) on fish and fish products; licenses for the right to fish (may be related to volume caught/ to size of vessel); charges for use of public facilities, services, etc.

16. However, where ‘fishery-specific’ fiscal policies are not in force their introduction almost certainly will meet very strong opposition from those who are expected to pay the proposed taxes and/or fees. So the fishery manager would need public backing as well as a strategy that ensures an equitable sharing of the burdens and benefits that would be caused by the introduction and application of any and all ‘fishery-specific’ instruments of fiscal policies.

17. There are two basic reasons why fishery specific fiscal policies/instruments should be politically acceptable in capture fisheries. First, fishers exploit a patrimony that belongs to the entire nation, and, second, by reducing/limiting exploitation of wild stocks to optimum levels substantial wealth – or a resource rent – can be generated.

### *The common patrimony*

18. West African fishery managers should not have any major difficulty in winning acceptance for the argument that fishers exploit a common patrimony. After all many – if not most - fisheries in the region are in fact open to anyone who wants to fish, sometimes after obtaining from a state, or local government representative, the permit to do so. So there is a *de facto* recognition by those concerned that the wild fish stocks are a property common to the

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<sup>5</sup> These fiscal policy instruments can be considered “negative subsidies”.

society that effectively controls the access to, and use of, the water bodies containing the concerned wild fish stocks.

19. Also, the fishery manager could expect acceptance of the argument that the state should not favour any one group over any other group in the use of natural resources, and in particular, in the use of wild fish stocks. If so, it follows that the costs of management should be recovered by the state. The costs of management are those that governments incur to ensure that the overall fishing effort on any particular stock of fish in the long run does not exceed that which the fish stock can withstand. The cost recovery will need the introduction of some kind of charge – a fishery specific fiscal policy instrument.

20. Although these two arguments are likely to be accepted, those who are expected to pay for the right to fish will argue – quite rightly – that the immediate result will be increased costs of fishing without any commensurate increase in income from fish caught. At this point the fishery manager needs to be persuasive. He needs to demonstrate that in the not too distant future, an overall decrease in fishing effort in the concerned fishery – spurred by the introduction of fees/taxes – will lead to significantly better economic results for those who remain in the fishery, and, that also those who have reduced their fishing or stopped altogether their participation in the particular fishery will not suffer a decline in their livelihood. His/her calculations should show that those who remain in the fishery will indeed be able to pay the proposed levies/taxes at least up to the level of recovery of management costs. That is, the fishery manager will need to convince both administration colleagues and fishers that, indeed, a resource rent can be generated in the concerned fisheries.

### *The resource rent*

21. However, there will be those who dispute that a resource rent<sup>6</sup> can be generated. This argument must be taken seriously. In fact, although most mature commercial fisheries are capable of generating a resource rent, there are exceptions<sup>7</sup>. And, for those fisheries that can generate resource rents a general concern will be whether the resource rents will appear soon enough, or be large enough, to compensate the initial costs caused by the effort reduction and suffered by those who can no longer participate in the fishery.

22. Sizable resource rents will not re-appear until stocks have recovered. This may take more or less time. For heavily exploited, long-lived demersal stocks of fin-fish recovery may take as long as 10 to 15 years in high latitudes. Small pelagics and invertebrates recover faster, particularly in tropical latitudes<sup>8</sup>.

23. The size of the resource rent, created as wild stocks are recovered, will depend on several factors. Once the stock has recovered to the desired (spawning) biomass the resource rent is determined by the ratio between the sales price of fish and the unit harvesting costs. However, the reappearance of the resource rent does not imply that it is permanent. The future size will depend on (i) the share of the fishery on the recovered stocks in the overall market for the concerned species and/or close substitutes, and, (ii) technological progress. The more sensitive the boat-side

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<sup>6</sup> Resource rents are a form of “economic rent”. Economic rent exists when a factor of production (labour, capital, land) receives a payment higher than that needed to keep the factor so employed; that is the reward received is higher than what would be the case if it had been employed in its second-best use. Under conditions of perfect competition economic rents do not occur. In capture fisheries economic rents appear (and are referred to as resource rents) when fisheries develop (and the size of the resource is not known and the market is unsaturated) and disappear as exploitation stabilizes or reaches levels that are beyond the sustainability of the stocks. The economic rent can reappear if fishers are constrained to limit their fishing effort to a level below the level at which they would exploit the resource if left to do as they choose.

<sup>7</sup> Those fisheries in which the price-cost relationship even at optimal management would produce zero resource rents.

<sup>8</sup> “A short global review of stock recovery plans”, SOFIA 2004 (forthcoming).

price of fish is to changes in volumes of fish landed by the fishery on the recovered stocks, the more likely a decline in the size of the resource rent; the larger the increase in volumes of fish landed, when stocks have recovered, the larger the resource rents; and, the faster the technological progress the faster the growth in resources rents<sup>9</sup>.

24. So resource rents are fishery and time specific. They depend not only on the state of the stocks but also on the state of the markets (both for factors of production and for fish produced). So the fishery manager must be able to monitor their development. Bio-economic models can help in the estimation of resource rent potential of a fishery<sup>10</sup>. These models are easier to build and use for single-specie fisheries than for multi-species fisheries and for stocks that are exploited by dedicated fleets than for stocks that are exploited by several different fleets that different gears, on different stocks, in the course of a season. The basic data needs for simple bio-economic analyses are no greater than those needed to monitor the fishery and decide about the most basic fishery management measures.

25. Bio-economic analyses should be undertaken to help the fishery manager to solve the practical issues that must be resolved when introducing fishery specific fiscal policy instruments. The major issues are: (i) in the event that the fishing effort is appropriately reduced, how long time will it take for the wild stocks to recover to the level at which a fishery will generate a rent and how long until the rent has reached its peak? (ii) when will the resource rent first be available to assist funding retraining, income support, for those who agree to leave the fishery? (iii) how large will the income support need to be?

26. There are several additional issues that need to be addressed, but for which the bio-economic analyses will not be able to provide full answers. Amongst these are: (i) what is an equitable process for deciding who remains and who leaves the fisheries; (ii) as levies, and taxes, will not have reached their final level until stocks have recovered, and only then will have a deterring effect on effort commensurate with the ideal level of effort, how will the public administration ensure protection of stocks prior to this moment? And what resources are needed?

27. These are difficult questions to answer. It appears evident that fishery specific fiscal policy instruments should be introduced only gradually. But, experience shows that they can be introduced. In Africa fishery specific fiscal policy instruments have been introduced a few countries, including in Madagascar, Mauritania and Tanzania.

28. How much of the rent can be recovered by government? If all the rent was systematically recovered it would mean that fishers and entrepreneurs would have little incentive to improve their profits and therefore no incentive for technical and managerial innovations. The result could be stagnation and a fishery sector that would tend to fall behind the rest of the economy. But, as it is difficult to estimate the size of the resource rent it would be a very difficult task to design a system for its complete recovery.

29. So it would seem prudent only to recover a share of the rent. However, even a modest share of the rents may result in large amounts of revenue. A recent FAO study of the fishery sector fiscal policies applied by the Government of Tanzania (GOT)<sup>11</sup> show that the total revenues collected by the GOT from the sector early in this decade amounted yearly to 9 % of the landed value of the catch, and contributed about 1 % of total government revenue. This was more than

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<sup>9</sup> Economists have tried to establish the size of the rents. For heavily exploited commercial resources – such as the cod in the North Atlantic – figures such as 50 % of the total boat-side revenue have been estimated. A recent study on Finnish pikeperch fisheries in the Baltic Sea concluded that it would take eight years before the a net economic gain would be realized from a reduction of fishing effort aiming to bring that effort to long-term sustainability.

<sup>10</sup> For an example see:

<sup>11</sup> “Fiscal arrangements in the Tanzanian Fisheries Sector”; FAO Fisheries Circular 1000 (in press)

sufficient to cover the expenditures incurred by the Fisheries Department in the Ministry of Natural Resources and Tourism.

30. In the case of Tanzania more than 90 % originates from tax on fish exports. The revenues from licensing of foreign fishing vessels are growing rapidly. In Mauritania, where fisheries are also a source of public sector revenue, the major portion is generated through a *de facto* tax on exports.

### III. USING SUBSIDIES AS ECONOMIC POLICY INSTRUMENTS IN FISHERIES

31. Given that a state of over-exploitation of wild fish stocks now characterize most commercial capture fisheries in Africa subsidies are not favoured instruments of fisheries management, at least not in the form they took during the last decades of last century. At that time most subsidies were cost reducing and consisted of exonerations vis-à-vis the payment of government imposed levies; inter alia, custom duties and fuel taxes.

32. This does not mean that fishery managers should forget subsidies. There are at least two reasons for keeping them in mind. First, subsidies can be used to assist fishers to cease fishing, and/or to shift from over- to underexploited resources, or to make the fishing friendlier to the eco-system. Second, ongoing international discussions about fishery subsidies may result in an internationally binding agreement on the subject.

33. It seems likely that there will be situations when the introduction of revenue generating fiscal instruments as part of the public regulations for particular fisheries will need to be accompanied by subsidies to those fishers and enterprises that must leave the sector, or, who need to reduce their involvement in the sector. In fact well prepared fishery effort reduction plans that contain realistic strategies for introducing revenue generating measures are more likely to receive, from Ministries of Finance, the public funds needed to pay income enhancing subsidies to those who leave, than will subsidy proposals that do not contain such provisions. Naturally, such subsidies – as virtually all subsidies – should be transient in nature.

34. The other reason for paying attention to subsidies – international agreements concerning their use – is simple but is worthy of some explanation.

35. Any new international agreement that concerns subsidies and fisheries most likely will be designed to limit the use of subsidies and to do so more severely than what is already the case through the World Trade Organization (WTO) Agreement on Subsidies and Countervailing Measures (SCM). So it is worth while to pay attention to the ongoing international discussion in order to analyze if the proposed rules are consistent with any ongoing or proposed policy in respect of fishery specific subsidy policies.

36. Another reason is that there is no common understanding of which government policies result in subsidies and which policies do not result in subsidies. At present a common view is that a subsidy occurs when funds are channelled to an industry, or when governments intervene to reduce costs (by reducing tariffs, taxes or other government imposed feeds) or to increase prices of fish sold (through retention schemes triggered by minimum ex-vessel prices). Most of those involved in the debate on subsidies and fisheries will agree that indeed these policies result in subsidies for the sector. But some maintain that subsidies are broader than these direct or indirect transfers to the industry.

37. Un-recovered expenditures on fisheries management is one example of a practice that some observers suggest constitute a subsidy to the fishing industry and that many now classify in the category of environmentally “good” subsidies.

38. Another potential source of government revenue that some observers suggest should be considered in this context is that of ‘user-fees’ or ‘fishing-fees’. Some observers maintain that when countries do not charge those who fish an access fee a subsidy is granted. Those who advance these propositions then consider that in fact it should be standard practice to charge access fees, and, therefore, where this is not the practice subsidies are provided. If a general rule prohibiting subsidies of this kind was included in an international agreement then almost all African countries would find that they at present are subsidising their fisheries and be exposed to whatever disciplines that an international agreement could contain.

39. Another category of public support under discussion in this context is the practice of governments paying, on behalf of vessels flying their flags, countries<sup>12</sup> for the right of these vessels to fish stocks within the EEZ of the country receiving the payment. It seems plausible that any future international agreement of subsidies and fisheries would aim to discipline this practice. Those in favour of such payments will of course attempt to reduce the concept as narrowly as possible – while those who argue against such payments will try to include as a subsidy any payment that even remotely can be considered to be a payment for access to fish. This is a matter of utmost concern to countries in Africa. Large sums of money are involved not only for access but also in the form of technical and financial assistance. If technical assistance were to be classified as a subsidy to a West African fishing industry, the product of which enters international trade, then the host country of that industry could appear to be providing subsidies just by accepting the technical assistance.

#### IV. SUGGESTED ACTION

40. During the coming decade economic policy measures – in association with those concerning rights to fish – will have an increasing role in management of West African capture fisheries.

41. Within the “tool box” of economic policy a shift will occur. The use of fishery specific fiscal policy instruments will have a much larger role than will subsidies. But, and this is important, the two tools should not be separated. During the coming decade they are as important as are the two cutting edges of a pair of scissor. Fishery specific fiscal policy instruments will need the support of subsidies to become established. Therefore it is suggested that West African fishery administrators consider them jointly.

42. Members may wish to discuss how best to involve stakeholders and Finance Ministries, or their equivalents, in the identification and application of fishery specific fiscal policy instruments.

43. Members may also want to consider whether or not to develop a CECAF strategy to be pursued during the “Technical Consultation on the Use of Subsidies in the Fisheries Sector”, to be held at FAO Headquarters 30 June to 2 July 2004.

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<sup>12</sup> A practice common in Africa, Asia and Latin America.