

General considerations

We perceive the central problem of fisheries management as the relation between (fisher)men and fish stocks. Two fundamental questions can be raised in this respect:

1. How to deal with the tragedy of the commons?
2. To which extent is the fisheries system manageable?

First, how can the society (or policy) deal with the problem of the '**tragedy of the commons**'? Unless this problem is resolved, all attempts for rational management are likely evaporate under the pressure of continuing competition. As long as the race for fish continues, the policy is likely to be one of continuing fleet reductions, until the fleet is reduced so far that it can do no harm to anything under any circumstances. By then it is not impossible that the size of the fishing sector will be well below any critical mass required for its long-term continuation. The consequences of such scenario are not difficult to imagine. Increasing concentration of the essential shore facilities, will lead to regional concentration of the fleets, and most probably also of the ownership. The tradition of fishing and interest in the profession will be gradually disappearing, because of the loss of the critical mass. Pro-active policy will have to develop way of dealing with the tragedy of the commons to start with.¹

Second question regards our **belief in manageability**. It is my personal view that this belief has certain religious elements. Since the renaissance, when natural sciences have determined our view of the world, we have adopted consciously or unconsciously certain convictions without questioning their validity. Indeed the question of sheer feasibility of fisheries management in concept and in practice is rarely asked. In today's political arena it would be simply a 'faut pas' and a sign of impotence to admit that our institutions cannot achieve such and such goal. However, if we call for rational fisheries management, based on scientific evidence, it would be quite justified to ask the question: 'Where is the evidence that management is possible?'. World-wide studies, like those of OECD have demonstrated that successful management is rare. In some cases, .e.g. Iceland some stocks have recovered after certain measures were introduced. However, scientifically this would be merely anecdotal evidence. It does not demonstrate to any degree of confidence that there is a cause-and-effect relation. Simply we prefer to believe in manageability rather than to admit that in the relation between nature and men, humanity may not be able to do anything it chooses. In order to adjust our expectations to what is feasible, it seems essential to ask the question: 'To which level of detail is fisheries management feasible?'

The two questions above, tragedy of the commons and the belief in manageability, may be traced back to an even deeper view held in the **tradition of our (Western?) thought**. This regards our relation to nature as such. We are by and large convinced that:

- Nature is there to be exploited and to serve our needs.
- Man is capable of improving the nature so that it serves him even better (manageability belief)².

It is clear that these two axioms in our thinking relate to a broader scope than fishing alone. They are related to all renewable and non-renewable natural resources, including the basic ones like water and air. I am convinced that it is important to be aware of this deep background of our view of nature in order to be able to take positive steps when dealing with fish resources. Management is a must (!), but the type of management and our perception and expectations of it may be different than they would be otherwise.

Fisheries management deals with men, not with fish. It only seeks to protect fish stock from 'irresponsible' human behaviour. Therefore change of attitude should stand at the centre of a future CFP. It is necessary to take a humanitarian not an instrumentalist approach. Involvement of **stakeholders** is therefore more than just 'one part' of the policy puzzle. Involvement of stakeholders is its 'alpha and omega', i.e. its most important cornerstone. However, also the stakeholders bear the tradition of our view of nature. They are most intensely caught in the dilemmas of the 'tragedy of the commons'. As of their own doing they are not capable of producing a positive contribution. This regards all stakeholders, be it fishermen, politicians, environmental NGO's,

¹ The enrolment in fishery schools is falling and the shortage of crewmen is becoming a serious bottleneck. An EU wide review of the situation of the fishing education may well reveal a trend, leading to an even greater shortage. To which extent European fleets will be able to operate with labour from other countries remains to be seen. First attempts are indeed already under way.

² The environmental NGOs also believe in manageability and encounter therefore the same conceptual problem.

consumers or any other interest groups. By disputing each other's right to the resource (in dynamically changing alliances) they present direct threat the existence of that resource as well as their own existence. The threat to economic survival leads to race for fish among fishermen. Threat to political survival leads to political polarisation, which makes dialogue increasingly difficult. Etc. Differences in perception of reality and expectations of the future make communication even more difficult.

Already from theory we know that 'tragedy of the commons' can be only resolved by dialogue, based on mutual trust. This is barely the situation today. It is unlikely that disregarding the fundamental mutual **mistrust** among many stakeholders would lead to progress. It is my view that one of the first tasks to be undertaken is to initiate a process of **dialogue** and negotiation, which should lead to a substantial improvement the level of mutual trust and respect among most (if not all) stakeholders. This process will have to be intensive and it will have to last for many years. It seems most unlikely that a few ad hoc meetings (like the ACF or the earlier Regional Round Tables) would produce the desired affect. Professional guidance seems a 'sine qua non'. As long as the fundamental, hard conflicts at the level of stakeholders pursue, durable fisheries management without heavy policing does not seem likely. Once (more) positive attitude has been established, more effective measures may be formulated through dialogue, particularly because there will be greater willingness to adhere to them.

Matter of success of any process depends on **perceptions and expectations**. Expectations regarding the speed of the reconciliation process, the extent of stock recovery or any other policy objective need to be tempered. It may well be that the common view that CFP was not successful is a result of exaggerated expectations (based on the manageability paradigm). In real world situation, where repetitive laboratory tests are not feasible, it is impossible to determine whether a different course of action would have produced a situation closer to what was desired. Considering the state of our knowledge about the various dimensions of the system (ecology, economics, politics, culture, etc.), the CFP may not have been such a failure after all. Rather, only our expectations were too high and the constraints to achieve even better results were not sufficiently recognised.

The **scope of the future CFP** has been increasingly broadened under the pressure of public debate. Consequently, discussions on CFP have become increasingly unfocussed by bringing in new aspects to be taken into account: regional development, environment, consumers, processing industry, etc. In order to achieve results it seems essential to re-establish **focus** of the CFP and set priorities. However, making choices is a matter of political courage and it remains to be seen whether the current institutions will be able and willing to do so. Institutional and political inertia is a major stumbling block. Despite the fact that CAP and CFP may be among the most advanced EU-wide policy areas, it needs to be recognised that marine fishing is a very small sector and in the future it will become smaller still, not larger. Decreasing role of primary industries is a natural process in 'developed economies'. For this reason, CFP can be hardly expected to make a substantial contribution to areas like environment or regional development. While CFP should be closely co-ordinated with these other policies, it should focus on the fundamental problem of **balance between activity of fishing fleets (catches) and fish stocks**.

It seems justified to expect that achieving a sustainable balance between stocks and fleets (rather fishing mortality) objectives from **other policy areas** will be well served as well:

- *Environment*: allowing the fish stocks to recover in size as well as in age structure may be quite indicative of the health of the environment at large. Although some additional measures may have to be taken to protect non-commercial organisms, those measures should come from other policy areas (other DGs). The role of CFP is than to translate them into operational instruments.
- *Consumers*: will be served best when a given level of European production of fish is secured. Still, protection of environment (fish stocks) may lead to higher prices. From economic theory we can say that fish prices are in fact too low, because they don't take into account the needs of the future generations. There is a question of market failure: price does not reflect long term scarcity. It would be counter-productive to aim at availability of fish to the consumer at low price, because than consumption³ would be stimulated, with an increasing negative effect on the stocks.
- *Regional development*: With larger stocks fluctuations of the results of the fishing fleets will diminish. The sector, although smaller in size, may than make a more stable (although still mostly very marginal) contribution to the economies of 'fisheries dependent regions'. On the other side, support to the sector represents a potential long-term threat to those regional economies, as the sector is not well adapted to the 'true economic conditions'. Apart from few rare exceptions, fishing sector is too small to be an engine for any regional development anywhere in Europe.

³ Linguistically 'to consume' means 'to use' or 'to destroy'...

The above paragraph demonstrates that focussing CFP on the balance between fleets (catches) and stocks, **short term and long term interests** of producers, consumers and environment may be reconciled. Introduction of measures specifically aiming at other issues than that balance should be evaluated in the light of that balance. Some of the above examples show that such measures may well give incorrect incentives, leading to an increase of the exploitation rate.

One major issue, which is not mentioned in the Green Paper regards the '**distribution of benefits**'. Larger fleets employ more people and distribute benefits of the common resource more equally. This is closely related to the question of overcapacity. In this respect there are political, economic and biological considerations to be taken into account:

- Income distribution is basically a political issue. Analysis may show that costs of various ways of distributing income are different. So that also the political decisions have efficiency consequences.
- Theoretical economics teach that distributing income through higher capacity is a waste of scarce resources. However, the theory does not consider the costs of alternative ways of income distribution. Fisheries overcapacity is related to excessive fishing mortality. However, overcapacity is an economic phenomenon (consequence of investments and costs and earnings relations). It is necessary to make a distinction between overcapacity allowed through subsidies and overcapacity allowed on the basis of free market prices. The first situation is clearly undesirable. Then the managers are creating new problems for themselves. In the second situation, however, the given capacity can be maintained, as long as illegal fishing does not occur. In this situation we should not confuse the problem of control with the problem of waste of resources. In many other industries production capacities are used much less intensively than in fishing (e.g. office buildings) and we do not seem to be so worried about it.
- Biologically, concern with overcapacity is primarily related to fishing effort and mortality and potential illegal landings. This is again a problem of control, solution to which is pursued through reduction in capacity. The experience of the past 20 years of CFP seems to indicate that resources generated from the economics of the market outweighed the resources available for effective control. In other words, in many situations the economic incentives are stronger than administrative or legal deterrents. Therefore a different, a more economic approach needs to be followed, e.g. through introduction of access fees at a level which would reduce the fleet activity to be consistent with the dynamics of the stocks.

Distribution of benefits and the ways in which it is achieved regards fishing fleets operating now, division between fleet and society at large as well as intergenerational distribution. It was mentioned above that one of the driving forces of the race for fish (or tragedy of the commons) is the **struggle for (economic) survival**. Reducing the fleet to a minimum in order to solve the control problem gives all the benefits to a small privileged group. Furthermore, such attempts will be increasingly costly, at the taxpayer's expense.

Way forward

In order to make constructive progress in addressing the main issues of fisheries management today (i.e. tragedy of the commons, involvement of stakeholders and focus on balance fleet-stocks) the following principles and approaches could be considered.

1. Dialogue among stakeholders

It would be desirable to agree on and pursue a **process** which would be likely to produce the desired results in the long run⁴ instead of pursuing constantly short term goals like strict adherence to TACs or a given size of the fleet. The process could be characterised as 'well organised' **dialogue** among the administrations, the fishing industry and other stakeholders. The term 'well organised' has several meanings and implications.

First, it is necessary to assure '**two way communication**'. In view of the fundamental mistrust among most current 'partners', it seems desirable to search for professional guidance. It should be recognised that administrators or industry representatives have certainly their qualities, but those are not necessarily in the field of communication or conflict resolution. Independent professionals in these fields, not biased or mistrusted because of their past involvement in the sector, may offer valuable services as mediators. Their task would be to steer meetings towards a balanced dialogue and to identify more precisely where differences and similarities of opinions are. Commitment to such a dialogue from all individuals involved is a must. This means also for example that biologists and administrators start considering seriously the knowledge which could be generated

⁴ This is comparable to the functioning of the democratic systems. The society has agreed on a satisfactory process of arriving at decisions through 'trias politica', without specifying a-priori where we are going.

by the fishing community instead of only explaining dogmatically that the current way of doing science is the only way.

Second, it is necessary to distinguish clearly between **political and technical dialogue** and bring both to a higher professional level. The practice in ACF or other forums today is that most dialogue is largely political. This is a result of weak structure of many **national professional organisations**. They are mostly underfunded and understaffed. They do not have the capacity to produce technical documents, reflect on long-term issues or participate in prolonged in-depth discussions. Consequently, the contributions from the industry representatives are limited to stating and repeating their political positions. Old feuds remain alive. The fishing sector is small and it is often not in the position to generate the funds necessary for good quality staff. Spending only a fraction of the 1.1 bln euro in this direction could prove a very rewarding investment. Better staff will lead to more discussion within the organisations, greater ability to analyse technical issues, explore international alliances, etc. Industry would then be in the position to make a qualitatively better contribution in its dialogue with the national government and EC. Distinction between political and technical dialogue could be easier achieved.

To expect that the professional organisations should generate the required funding themselves is to choose for 'status quo'. It will delay any desired changes in this context. It is necessary to recognise the problem, discuss it with the involved professional organisations and determine the level of required **funding** and its potential sources. In the end there must be financial commitment for 5-10 years so that the value of constructive dialogue can be demonstrated.

Third, on EU level the fishing industry is equally poorly organised with little capacity to produce constructive contribution to the on-going discussions. Creation of a strong **EU secretariat for the fishing industry** would certainly prove useful. The effectiveness could be tested in a temporary set-up for several years.

Four, the **dialogue** should be organised in **different levels**, according to the priority given to the stakeholders keeping in mind the focus of the fisheries policy – balance between stocks and fleets. First level would then be technical dialogue between administrations and the catching sector. Other stakeholders (environmental NGOs, consumers, banks, processors, etc.) would come in only on a second (political) level.

2. *Economic instruments*

The Green Paper recognises correctly that fishing is just another **economic activity** and that it should be treated as such. The main difference from other economic sectors is the above mentioned tragedy of the commons and the fact that the fish stocks migrate and therefore are not attached to any specific Member State. The latter problem has been temporarily resolved by the introduction of the 'relative stability'.

In the current situation, where excess capacity threatens the stocks and intensifies the problem of control, management by economic tools may offer possibilities, which are difficult to realise through conventional CFP instruments like TACs and quotas, structural policy or technical or market measures. The **economic measures** to be considered are:

- Introduction of access fees
- Creation of European property entitlements, which should also be tradable.

It was stated earlier that scarcity of fish products is in reality greater than the current level of market prices would imply. Introduction of **access fees** will lead to higher production costs. Therefore only the relatively more efficient producers will be able to remain in operation. If this leads to lower landings, scarcity of fish on the market will become greater and the prices will increase. Evidently, this may not be necessarily the case in the short run. Through increase of access fees the fleet will be gradually reduced. This policy would generate funds, which can be used to pay some indemnities to those who decide to stop fishing. These funds may be also used to pay for other services provided to the fishing industry free of charge today, like research, control and administration. **Cost recovery** schemes are being introduced in various countries in the world. The past policy of subsidising decommissioning (and modernisation) has not produced the desired results because it did not follow the logic of the economic operation of any industry. It competed with the market forces rather than to make use of them.

Introducing **property rights** and facilitating their European wide transferability will further stimulate the average efficiency of the sector. Those wishing to stop, for whatever reason, will be able to obtain the highest possible price for their fishing rights. This would be particularly attractive for the first generation of vessel owners who may receive their property entitlements free of charge. Evidently, it would be also conceivable to

sell those property entitlements from the very beginning. Auctioning fishing rights can be combined with the above mentioned access fees⁵. Later on the intergenerational transfer of the firms may present some new problems, but those have been resolved in other areas through specific fiscal arrangements. Privatisation of the resources will furthermore lead to a sense of responsibility for management among fishermen. They will not be fishing in a truly common pond anymore, where anyone has the right of access.

The proposed economic measures have neither been used nor discussed widely until present because of their political sensitivities. However, they are in the line of the principles set out in Agenda 2000 regarding agriculture and the economic integration of the Union in general

3. *Managing details?*

Economic management proposed above implies that it may be necessary to move **away from the detailed approach** which has been followed until present in terms of individual stocks and fleet segments. The more details to be met, the more management problems there are. At the same time there is growing awareness that the stock by stock single species management is not well compatible with the multi species relations and the more general ecosystem approach. The main difference between economic management and current practice is that economics is primarily concerned with human behaviour, and the ecological consequences (although monitored) are accepted, at least for the time being. TAC policy takes the biology as a starting point and from there it attempts to impose rules and regulations. However, the object of the fishery policy are men and their behaviour not fish.

By cutting the direct link between fish stocks, landings and policy measures, there will be less incentive for the fishing fleets to obscure their true production. **Unbiased information** on catches and landings could greatly enhance the quality of biologic assessments. Our institute LEI, together with RIVO, is now exploring the possibility of utilisation of catch per unit of effort data for fisheries management. Marine scientists have stated repeatedly that stocks should be managed through restrictions on effort and not through limitations by TACs. We consider cpue as an integrative concept between economics of fleets and biology of stocks.

Moving away from TACs will ultimately jeopardise the **relative stability**. TACs and relative stability are instruments for political compromise, not for rational fisheries management. Past 20 years of experience show that this compromise is not effective to manage fleet behaviour or save stocks.

It was indicated above that imposition of sufficiently high access fees and / or tradable fishing rights will lead to a reduction of the fleet size. How quickly such reduction will occur cannot be foreseen as that depends on various other factors like prices of fuel and fish. However, it is clear that the fisheries problem cannot be resolved in the short run. **Long term approach** is required. Reduction of the fleet size will ultimately lead to lower fishing effort and consequently to a lower total impact on the ecosystem. Only we cannot say whether 'all' commercial stocks and marine organisms will be proportionately protected. The question is than what is the likelihood that a situation of 'shifting fleet' will occur, i.e. the fleets will move to one profitable fishery reduce stocks to a minimum and move on to another. In view of the fact that successful fishing is still largely a matter of experience with certain gears and in certain areas, unrestrained shift of fleets is not likely. Furthermore, access fees and fishing rights may be defined at least in terms of large regions (North Sea, Baltic, etc.) so that the shift could be contained to a certain level.

We need to accept that the ecosystem cannot be managed in detail (stock by stock, year by year) and that the purpose of fisheries management is to promote responsible behaviour of the fleets in terms of fishing effort (ecosystem impact). The process of exploitation of fish resources should meet certain long term sustainability conditions, expressed in effort, fishing mortality, catch per unit of effort, or other process indicators related more directly to human behaviour. Policy may be capable of **steering a process** in a certain direction, but not of creating situations with specific structural characteristics, because the short term structure depends on phenomena way beyond the reach of any fishery policy (recruitment of fish of macro-economic development).

4. *Rights and obligations, responsibilities and powers*

The above analysis pleads for involvement of the fishing industry and management through economic instruments. Both these principles call for review of 'rights and obligations, responsibilities and powers' of the

⁵ In other words a fixed payment for access combined with a variable payment for the use of the resource.

various stakeholders in relation to fishery management. This is a complex issue requiring detailed institutional analysis. However, few examples may be given already:

- Administration of fishing rights, collection of fees and organisation of trade in those rights may be delegated to a semi-public institution.
- As industry pays through fees for part of the research it may be efficient to look for ways in which fishing fleets also collect biological and ecological data, saving costs and improving quality and quantity of available information.
- Strengthening the principle of 'extension de regime', groups of fishermen holding major interest in certain fisheries could agree on management measures and impose them on the entire fleet involved.

5. *Further measures*

Evidently, specific situations may call for specific measures to be taken, which cannot be foreseen. However, one or two further actions could be considered.

First, it seems certain that transferable fishing rights will be introduced in the future, because they would be compatible with the European principles of free movement. This will take some time. In any case, it may be relevant to explore now already how a **transparent market for fishing rights** could be set up and organised. The operation of such market will be indicative for its feasibility.

A second additional measure to be explored is the introduction of the '**futures market**' for fish. In case of agricultural commodities, futures market stabilises the income of primary produces, improves their ability to plan and assures the subsequent links in the chain (processors, retailers) of availability of raw materials. The risks of crop failure are better distributed and partly assumed by speculators. In other sectors, futures market is an accepted way of dealing with future economic risks. A study of this topic could open interesting options for fishery policy, because it would involve the whole fisheries chain.