

SAMUDRA

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS

DOSSIER

RESOURCE MANAGEMENT EUROPEAN VIEWPOINTS

Resource management : European viewpoints

SUMMARY

- ★ **Editorial: A shared responsibility**
Une responsabilité commune 1
- ★ **Mastering resource management.**
— *L'histoire des pêcheries mondiales présentée par un des grands spécialistes des questions de gestion de la ressource halieutique*..... 3
- ★ **Europe Bleue et gestion de la ressource.**
— *For a better understanding of the European fisheries policy*..... 23
- ★ **The political ecology of fishing.**
— *Il est indispensable d'intégrer des données sociologiques et écologiques dans la conduite politique des pêches* 34
- ★ **Grote schepen rukken op in Nederland.**
— *Une femme, présidente d'une Union des pêcheurs, donne son point de vue sur la situation de la pêche artisanale en Hollande.*
— *A woman, chairperson of a fishermen's union, explains the problems faced by the small-scale fisheries sector in the Netherlands* 47

Cover photo: F.Bellec

ADDRESS	REDACTION
<p>All correspondence should be addressed to: The Editor SAMUDRA publications ICSF – Liaison Office 65, rue Grétry B-1000 BRUSSELS – BELGIUM</p> <p>Please let us know if you wish to receive our publications: SAMUDRA – Report SAMUDRA – Dossier SAMUDRA – Monograph</p> <p>Please inform us your change of address</p>	<p>Editorial Board John KURIEN – Trivandrum (India) Luis MORALES – Santiago (Chile) Jean-Philippe PLATTEAU – Namur (Belgium)</p> <p>Editor François BELLEC</p> <p>Secretariat SAMUDRA Publications ICSF Liaison Office 65, rue Grétry, B-1000 BRUSSELS BELGIUM</p>

Editorial

A SHARED RESPONSIBILITY

Environmental questions are presently an important issue in public debate around the world, whether in East or West, North or South. In many countries, the recent electoral successes of those who stand for the defence of ecology are a sure indication that the future of the planet Earth is foremost in the minds of men and women of our generation.

Unfortunately, ecological issues are all too often limited to a consideration of the damage done on land by the various sources of pollution. It is often forgotten that the oceans are not a refuse dump but an essential element of the planet's equilibrium and survival.

To speak of the marine environment's importance for the survival of mankind is to speak above all of the management of its resources. For our purposes, that means management of fish stocks, in particular. It is a fragile resource base and there is plenty of evidence to show that, if mismanaged or over-exploited, it can easily become a non-renewable resource, jeopardising thereby the future livelihood of fishworkers and of their families, as well as that of millions of other people for whom fish is part of their staple diet.

It is therefore essential to pay the greatest possible attention to resource management and the protection of the marine environment. With a view to increasing awareness and proposing solutions to the urgent problems at hand, the International Collective in Support of Fishworkers (ICSF) organised a symposium in Lisbon in June 1989. It was attended by about one hundred people from both North and South - fishermen, organisation leaders, scientists, technicians and sympathisers - who centred their discussions on *"The marine environment and the future of fishworkers"*.

Through their meeting and exchange of views, the various participants emphasized that the quality of the environment is a major condition for the survival and development of coastal populations. They also declared that the protection of the ocean and of the sea-shore must be a priority concern and the joint responsibility of fishworkers and of governments. As for the management of the resources - which must remain a common good - this should also be done jointly. The methods by which our heritage is managed should become part of an overall fisheries policy encompassing social, economic and ecological objectives.

In this dossier, we publish some of the papers presented at the symposium by scientists and representatives of European fishworkers' organisations. From somewhat different angles, these papers focus on the social and political dimensions of the symposium's central topic.

François BELLEC
Editor

Editorial

UNE RESPONSABILITE COMMUNE

Les questions de l'environnement sont aujourd'hui au cœur des débats qui traversent les sociétés, tant à l'Est qu'à l'Ouest, au Nord qu'au Sud. Il n'est que de voir les succès électoraux remportés récemment, un peu partout, par ceux qui se présentent en défenseurs de l'écologie pour se rendre compte que l'avenir de la planète préoccupe au plus haut point les femmes et les hommes de notre génération.

Malheureusement, trop souvent encore, la préoccupation écologique se borne à prendre en considération les dégâts causés sur terre par les diverses sources de pollution. On oublie que la mer n'est pas une poubelle mais qu'elle est un élément indispensable à l'équilibre et à la survie de la planète.

Parler d'environnement à propos des océans, dans une perspective de survie de l'humanité, c'est tout d'abord parler de la gestion des ressources. Et en ce qui nous concerne, de la gestion de la ressource halieutique. Or cette ressource est fragile et force est de constater - expériences à l'appui - que mal gérée ou sur-exploitée, elle peut facilement devenir une richesse non renouvelable mettant ainsi en péril l'avenir des travailleurs de la pêche et de leurs familles, ainsi que celui de millions d'autres personnes dont le poisson est l'aliment de base.

Il importe donc de considérer, avec attention, les questions de gestion des ressources et de protection de l'environnement marin. C'est pourquoi, et afin de faire progresser la prise de conscience et répondre à l'urgence des problèmes posés, le Collectif International d'Appui aux Travailleurs de la Pêche (ICSF) a organisé à Lisbonne, en juin 1989, un Symposium qui a rassemblé une centaine de personnes -pêcheurs, responsables d'organisations, scientifiques, techniciens et sympathisants -originaires de 25 pays du Nord et du Sud. Thème de la réflexion: "*Environnement marin et avenir des travailleurs de la pêche*".

La confrontation et l'échange entre les divers participants ont souligné, avec force, que la qualité de l'environnement est une condition majeure de la survie et du développement des populations côtières. La protection de la mer et du littoral est une priorité et relève de la responsabilité conjointe des travailleurs de la pêche et des Gouvernements, a-t-il été affirmé. Quant à la gestion de la ressource - qui doit demeurer propriété collective - elle doit, elle aussi, être réalisée en commun. Les méthodes de gestion de ce patrimoine doivent être intégrées dans une politique globale des pêches qui tient compte d'objectifs sociaux, économiques et écologiques.

Nous publions dans ce dossier quelques interventions descientifiques et de responsables d'organisations de pêcheurs de pays européens exprimées au Symposium. Ces contributions mettent l'accent, avec des nuances quelque peu différentes, sur la dimension sociale et politique de cette problématique.

François BELLEC
Rédacteur en chef

A matter of human survival

MASTERING RESOURCE MANAGEMENT

In the following article, Gunnar Saetersdal, one of the main authorities on the question of resource management and honorary director of the Institute for Oceanographic Research of Bergen (Norway), takes us on a voyage through the history of world fisheries. On the way he describes the many hurdles faced by scientists and fishermen in their effort to make use of an important source of human nourishment in a rational manner: *fish*.

The article (1) contains the main part of the treatise presented by Gunnar Saetersdal in course of the Symposium on Marine Environment and the Future of Fishworkers.

In our efforts to use the living resources of the sea to provide food for us, which fishing is mainly about, we encounter various types of problems.

One very basic difficulty which underlines all of man's use of living renewable resources is to ensure that in their use, we still preserve them as lasting resources for an indefinite future. This must be accomplished through proper management of the fisheries, and since the fish stocks are remote and the sea inaccessible and vast the art of biological fishery management is complex and has been developed only fairly recently.

A second important set of problems is related to the simple question : who owns the fish in the sea? After it has been caught it usually belongs to the fisherman or the vessel owner, but for the resources existing in the sea there are problems of deciding on who should be given access to them and how this access should be allocated. These problems exist on a global level, between economic classes of nations, between neighbouring states, between types of fisheries e.g. industrial versus small scale and even at the level of single fishermen. It is not possible in this brief review to deal exhaustively with these problems of allocation of the fisheries wealth of the sea, but I will try to look at

larger scale implications of the Law of the Sea (LOS) régime after its introduction about ten years ago.

Finally there is a set of problems related to which usage is being made of the fish that is taken from the sea. The availability of food is insufficient for many groups of people in the world today and the future food situation globally is uncertain. Fish is first and foremost food and we should ask how our usage of it could in the best possible way contribute to alleviate problems of nutrition, now and in the future.

When industrial fisheries migrate towards the South

Most of the statistical information for this section derive from FAOs Year-books of Fishery Statistics.

Starting with the history of world fisheries we should note that while artisanal coastal fisheries have existed since prehistoric times, industrial fisheries on a large scale are a recent almost post-war phenomenon. The growth of the global fish production from about 20 million tons in 1950 to 80 million tons in 1986 (91 million with inland fisheries included) is shown in the figure.(Figure 1) Presented on a logarithmic scale we see some clear trends. The two first decades 1950s, and 1960s of very rapid growth can be ascribed to the effects of introduction of new fishing technologies, synthetic fibres for the gears, stern trawling, ring netting and tuna long lining combined with a spread of industrial fisheries from nuclei in the North Atlantic and North Pacific to lower latitudes. This process included the creation of distant water fleets by high technology fishing nations, notably Japan, USSR, other East European nations, Spain and Korea which for their production depended on resources outside the home waters of these countries.

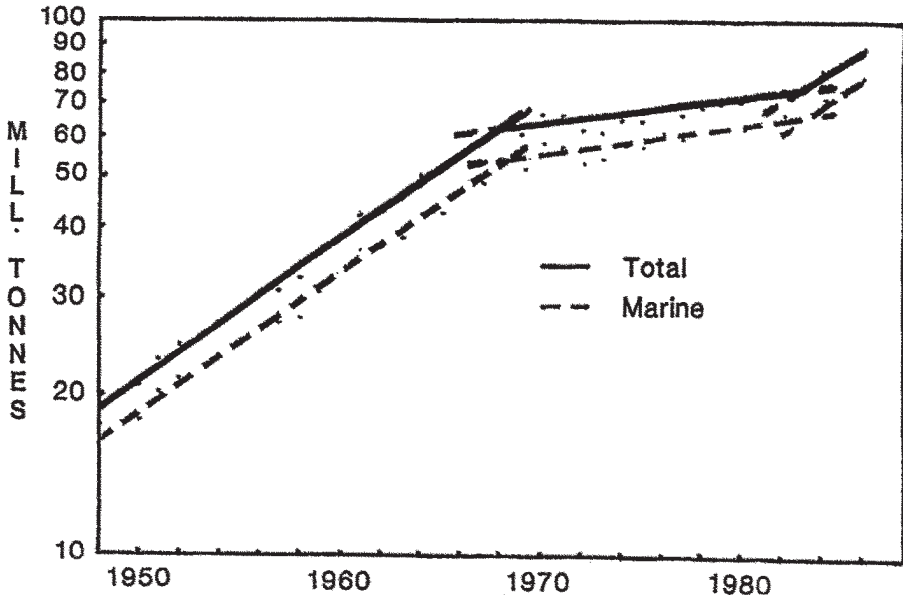


Figure 1. World fish landing, 1948-1986.

While thus in the early period by far the major part of the world catch came from the Northern parts of the Atlantic and Pacific oceans, by the 1960s there was an expansion Southwards. An example is the Eastern Pacific where, following the collapse of the Californian sardine stock in the 1950s, fish meal plants and fleets were moved Southwards to Peru and created the start of the great fishery which developed on the anchoveta stock of that country.

And as other resources in the Northern areas became fully utilised the expanding fishing industries of many nations moved on to other regions, notably the high productive coastal areas at lower latitudes such as the shelves off the Southwest and Northwest Africa. And increasing demands for tuna and shrimp created global fisheries for these high-valued resources.

Around 1970 a number of large pelagic stocks, among them the Peruvian anchovy, collapsed and the trend of the slower growth of the world catch during the 1970s is at least to some extent the result of such resource failures. The resumed higher rate of growth in recent years results partly from resource variability from natural causes, partly from a better use of known resources, perhaps as a consequence of improved conditions for management under the LOS regime. It is, however, unlikely that this recent high rate of growth of world fisheries will continue for very long. I will return later to the question of the total potential of the world fish resources, but we can already now state that further substantial growth of world catch will be restricted by resource limitations. In most of the world's important fishing areas we are approaching a full utilization of the fish stocks.

It is of interest to consider briefly the geographical distribution on a global scale of the fish resources and the fisheries. As all fishermen know there are parts of the sea where fish are plentiful and other parts where you will never make a catch. On a larger scale the distribution and abundance of fish is closely related to the level of primary production, the production of plants in the sea. The basic requirement for plant growth is as on land light and nutrient salts, and areas of high production in the sea are found where water with high nutrient content is brought up to the surface layers. At higher latitudes by convection caused by winter cooling, at lower latitudes by upwelling of subsurface water caused by prevailing wind and current systems and partly by river discharges.

The rate of plant production in the various parts of the oceans can be measured. A very significant feature of these measurements indicates the general low productivity found in the open seas, large parts of them are nearly a kind of ocean deserts. Most areas of high productivity are found over the continental shelves, but there are large variations also within the shelf regions. True tropical areas with nice blue warm water are in general low-productive.

The high productivity of the northern parts of the oceans is evident, and we can see from the table of the distribution of the world catch (Figure 2) that these areas provide the highest contributions of the catch. The central regions come next while fish production in the Southern part of the globe is low, especially in the vast Southern Ocean, mainly because few fish stocks have been able to inhabit this region where the continental shelf area is so limited.

Figure 2. WORLD MARINE FISH CATCH 1986 BY MAJOR FISHING AREAS.	
ATLANTIC OCEAN	24.3 MILL TONNES
PACIFIC OCEAN	51.0 MILL TONNES
INDIAN OCEAN	4.5 MILL TONNES
SOUTHERN OCEAN	0.5 MILL TONNES
NORTHERN REGIONS	42.5 MILL TONNES
CENTRAL REGIONS	20.9 MILL TONNES
SOUTHERN REGIONS	17.0 MILL TONNES

The enrichments of the surface waters by the upwelling process is a remarkable phenomenon, which is the basis of existence for some of the worlds largest and most well known fish stocks such as the Peruvian anchoveta and the Californian, Moroccan and Namibian Sardines as well as the other associated resources in these regions. (Figure 3) Roughly 20 million tons of the world catch of 80 million comes from the Eastern margin upwelling systems which are associated with the tradewinds, the Peru, Californian, Canary and Benguella Current systems. As most of these border developing fishing nations it is perhaps more significant to note that these 20 million tons represent about half of the total global catch landed in developing countries.

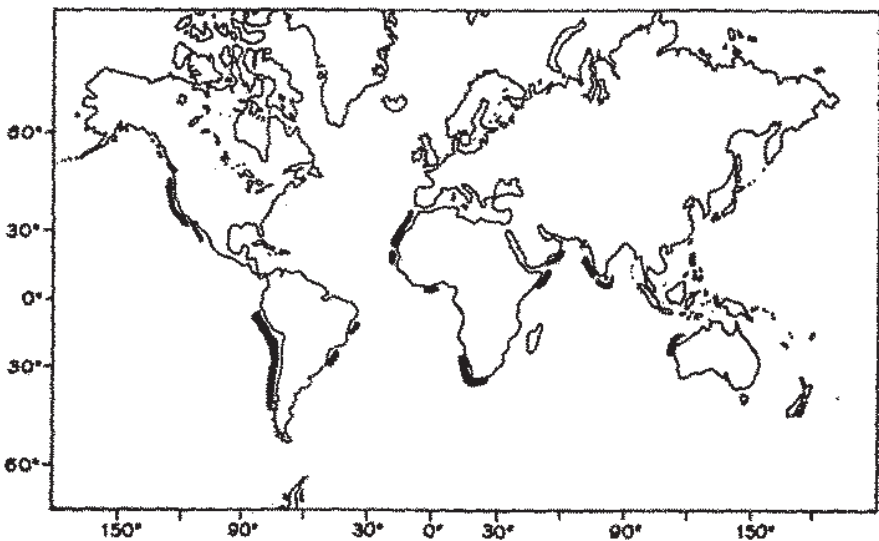


Fig. 3. Distribution of phosphatic deposits. Adapted from Tooms (1967).

A relatively small number of countries stand out as the dominating fishing naons of the world.(Figure 4) Japan and the USSR top the list with the great home waters as well as global fisheries. China is known for its highly developed inland fisheries and aquaculture production and Chile and Peru for their

Catch in	Catch in 1986 (tons)	Place	Catch in 1985 (tons)	Place
Japan	11,966,819	1	11,408,883	1
USSR	11,259,955	2	10,522,831	2
China	8,000,063	3	6,778,819	3
Peru	5,609,588	4	4,135,718	6
Chile	5,571,638	5	4,804,430	4
USA	4,943,213	6	4,765,303	5
South Korea	3,102,542	7	2,650,026	8
India	2,925,347	8	2,824,347	7
Indonesia	2,521,190	9	2,339,068	11
Thailand	2,119,050	10	2,225,204	9
Phillipines	1,916,347	11	1,864,990	12
Norway	1,898,383	12	2,119,011	10
Denmark	1,871,349	13	1,752,559	14
North Korea	1,700,000	14	1,700,000	13
Iceland	1,657,068	15	1,680,405	15
Canada	1,466,635	16	1,418,455	16
Mexico	1,303,720	17	1,226,244	18
Spain	1,303,488	18	1,337,738	17
Taiwan	1,200,000	19	1,100,000	19
Ecuador	1,019,304	20	946,999	20
United Kingdom	855,891	21	898,443	22
France	850,000	22	844,318	23
Brazil	847,889	23	839,224	24
S.Africa & Namibia	829,949	24	756,374	27
Viet Nam	800,000	25	780,000	25
Bangladesh	793,982	26	773,979	26
Poland	645,220	27	683,455	28
Burma	643,750	28	643,750	29
Malaysia	616,280	29	631,685	30
Morocco	595,868	30	473,160	34
Turkey	579,844	31	578,069	31
Italy	547,606	32	574,998	32
Netherlands	454,778	33	504,181	33
Argentina	420,306	34	406,391	36
Pakistan	414,895	35	408,404	35
Portugal	389,571	36	298,648	39
Faroe Islands	353,668	37	372,889	37
New Zealand	339,563	38	304,550	38
Ghana	390,157	39	274,219	41
Venezuela	283,636	40	264,767	42
Romania	271,126	41	237,637	45
Nigeria	268,482	42	241,634	44
Senegal	255,381	43	255,300	43
Cuba	244,600	44	219,831	48
Ireland	228,910	45	229,856	46
World total	91,456,800		85,626,100	

Figure 4.

large fisheries of small pelagics. Ten countries have total catches exceeding 2 million tons and they account for some 56 million of the 91 million global catch. There are as we see a number of developing nations among the top fishing countries, they are in fact in majority. I will later examine more closely the North - South relation in world fishing.

The composition by major groups of fish of the world catch is shown in this table (Figure 5). The pelagic schooling fish dominate and represent as a whole nearly half the catch by weight. Except for tuna they are mostly of lower market value than the demersal fish, but for this reason they are in many areas important as cheap and nutritious food.

Figure 5. MAJOR GROUPS OF FISH IN WORLD CATCH, MILL. TONNES	
HERRINGS, SARDINES, ANCHOVIES	23.9
CODS, HAKES etc.	13.5
HORSE MACKERELS, JACKS, SAURIES	7.2
REDFISHES, BASSES, CONGERS	6.0
MACKERELS, SNOEKS, HAIRTAILS	4.0
TUNAS, BONITOS, BILLFISHES	3.4
SHRIMPS, PRAWNS	1.9
SQUIDS, CUTTLEFISH, OCTOPUSES	1.7
FLOUNDERS, HALIBUTS	1.3
SALMON, TROUTS, SMELTS	1.0
SHARKS, RAYS	0.6

Of special interest are the nearly 2 million tons of shrimps and prawns which are of high market value and mostly caught at lower latitudes (Figure 6). Also tuna and important parts of the cephalopods belong in the central parts of the oceans and represent resources with a high availability for developing nations, but these are to a larger extent than the shrimps exploited by the distant water fleets from industrial fishing nations.

A scientific base : the main priority now!

In its broad sense fishery management may serve a variety of purposes and have objectives of economic and social nature within the fisheries sector, but its most fundamental objectives follows from the fact that fisheries represent a utilization of biological renewable resources which must be preserved for indefinite use. This basic biological objective is often defined as highest sustainable physical yield , but it is at times modified e.g. highest economic value or highest profit. Taking account of special aims of the community in protecting certain groups of fishermen other levels of yield can be specified as long as resource conservation is ensured by not exceeding the limits set by the potential of stock. In the history of fisheries there are unfortunately many examples of excess of exploitation which has caused depletion of resources.

Figure 6. DISTRIBUTION OF WORLD SHRIMP FISHERIES AT LOW LATITUDES BY MAIN REGIONS AND FISHING COUNTRIES, 1986.

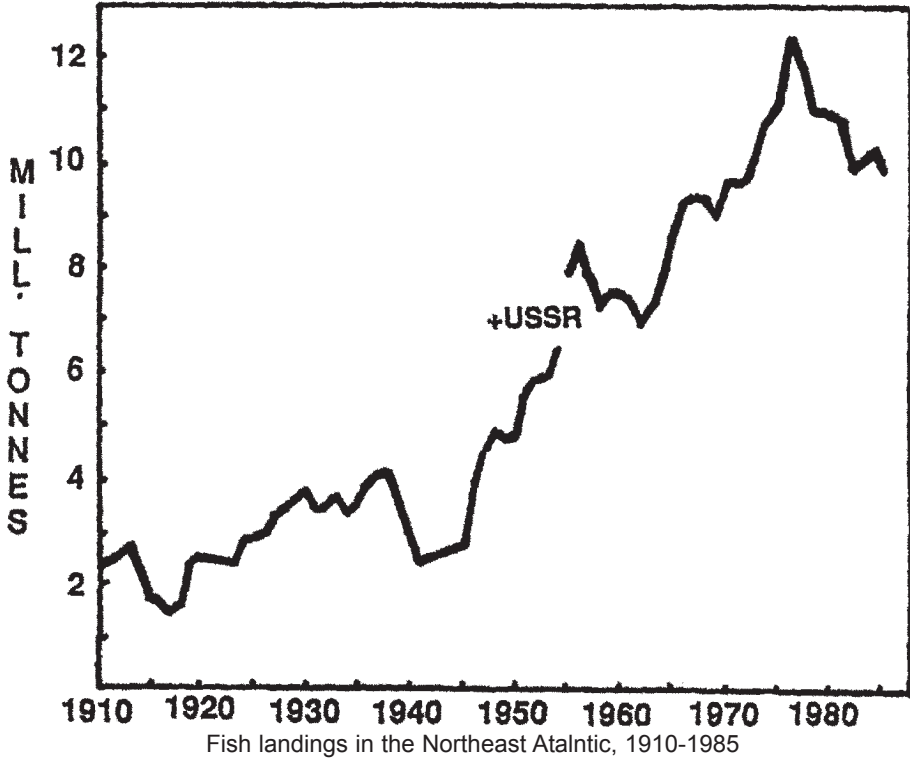
REGION	CATCH 1000 TONS	MAIN FISHING COUNTRIES
31 WESTREN CENTRAL ATLANTIC	202	USA, MEXICO
51 WESTERN INDIAN OCEAN	238	PERSIAN GULF STATES, INDIA
71 WESTERN CENTRAL PACIFIC	404	THAILAND, INDONESIA, MALAYSIA, PHILLIPINES
61 NORTH- WEST PACIFIC	411	CHINA, VIETNAM, JAPAN, KOREA
77 EASTERN CENTRAL PACIFIC	139	MEXICO
WORLD TOTAL	1954	

If we go back in time, and in some areas we need not go back very many decades we can see that as fisheries developed beyond the small scale the need for a scientific basis for the exploitation of fish stocks became urgent.

As an introduction to the subject, both technically and historically it may be useful to review briefly the development of this fishery science in the Northeast Atlantic, an area of both ancient fisheries and of early development of science. Historically both fisheries technology and principles for biological management have spread from this area to other parts of the world. The long time series of data we have from this region also makes it of special interest for studies. These series are due to the formation by the scientists of the region of an international body for cooperation, ICES (2) already at the start of this century and through its published records we can follow the events both in the fisheries and in the science.

The landings of this region (Figure 7) show an increase from about 2 million tons in 1910 to 10-12 million in recent years. This growth resulted mainly from a process of taking into exploitation an increasing number of fish stocks up to about 1970. Since then one can say that all stocks are fully utilized and some overexploited.

Figure 7.



But already at the start of this period, at the beginning of the century there was concern for some of the stocks. For some fisheries this concern was caused by great fluctuations in the yield between periods of years, and in the poor years the coastal fishermen suffered seriously. And in the rapidly developing trawl fisheries of the North Sea the often large by-catches of undersized juvenile fish gave cause for concern for the stocks. Would this cause depletion of the resources in the long run?

The period of the war years 1914-1918 and 1939-1945 provided the scientists with some important information of the effects of the fisheries on exploited stocks. We see from the landing records that the catches dropped markedly in these periods, an effect of reduced effort of fishing caused by the war. This reduced effort caused however also changes in the fishstocks themselves. Both their density as well as the proportion of large sized fish increased as shown by the records of catch per days absence of trawlers and the proportion of size categories in the catch from the North Sea before and after the first world war.

Another important finding from these early years was made through a technique which enabled the aging of fish. It was then discovered that there is

often a variation, some times very great in the results of the annual reproduction of fish stocks, and this was shown to be the main the underlying cause of good and bad years experienced by the fishermen.

These discoveries led the scientists onto a path of considering the fish stocks as populations, like human populations, whose reproduction, growth and mortality could be measured and analysed. Through this approach the fate of the stocks under various conditions of nature and different forms and levels of exploitation could be assessed and even predicted. By about 1950 great advances had been made in the creation of this special science dealing with the exploitation of fish resources. But the political international instrument for making use of the advice from the scientists lagged behind. It was also in this early period that one of the pioneers of fishery science, Michael Graham of Lowestoft in England, formulated his "Great Law of Fishing" which says that unlimited fisheries become unprofitable.

"Because of increased fishing effort resulting from improved efficiency and addition of capital, industrial fisheries will, if left to themselves move in a self defeating process towards a marginal state". This represents a version of the Tragedy of the Commons (3) and is still of considerable actuality.

Eventually a convention for the regulation of fisheries was agreed by the European fishing nations, a fishery commission was established and from the mid 1950s on various measures to safeguard stocks and ensure lasting yields were introduced in the fisheries. This commission regime lasted about 20 years until it was replaced by the present LOS regime, but its history was not to be a happy period for Northeast Atlantic fisheries. In spite of the efforts by the scientists and the Commission the period ended with most of the main resources in a state of overexploitation and for some even depletion. Although this is now history and we have left this regime of open access behind us it may still be of interest to examine the causes of failures during that time.

First we should note that this was a period of very great advances in fishing technology. One of the results was the creation of an entirely new type of fisheries: open sea ring netting for pelagic schooling fish, herring and mac-kerel. These stocks had previously been exploited mostly in the coastal areas and with far less efficient gears. The new and expanding fisheries created problems for the scientists. Their experience had mainly been built on trawl fisheries, and while the mean catch per hours trawling is a fair measure of the abundance of a stock, the mean catch per set of a ring net is of little or no value for estimating stock abundance. New methods had to be developed for the pelagic stocks and looking at this first period as a race between technology and science one can say that in the first instance this was won by fishing technology. The dramatic results of this can perhaps best be demonstrated by reviewing the fate of the Norwegian Spring Spawning stock of herring. This stock was reduced from a 10 million tonne biomass in the 1950s to virtually zero in 1970. The advice submitted in 1965 when the stock had all but collapsed was that the exploitation is still at a level where no benefit for total landings can be expected from any regulatory measure. No restrictions on fishing was advised until 1970 and the collapse of the stock only came to be fully recognized over the years 1970 - 1975 with a total ban on fishing advised in 1975.

Only towards the end of the 1960s did the scientists develop the capability to diagnose the state of these types of pelagic stocks and submit appropriate advice. It was by then too late to save the Norwegian herring, but another great herring stock, that of the North Sea on which the new fishing started somewhat later had not entirely collapsed by 1970. But in spite of a series of timely and appropriate recommendations from the scientists from 1970 onwards the Commission was not able to obtain agreements among its members to reduce the excessive rate of exploitation on this stock and also this herring was slowly depleted.

This failure of international management by NEAFC (4) and other similar bodies under the open access conditions was not caused by faulty procedures or an inadequate convention. The solution of the problem was not on the technical, but on the moral plane. The parties concerned were unable to act in unison for a common benefit against short term individual interests. This impasse is an example of "the tragedy of the commons", a state which covers a number of fundamental issues becoming of increasing importance in man's usage of the global commons of the biosphere and which eventually perhaps will be decisive for our survival on this planet.

In our fisheries world the many failures of management under the open access, "commons" regime represented an important argument in favour of the extension of coastal state jurisdiction in the preparations for the new Law of the Sea Convention. And with this we enter the present LOS regime which with its Exclusive Economic Fishing Zones has been the framework for fisheries management since about 1977. The LOS Convention dates from 1982, but most coastal states extended their fisheries jurisdiction through national legislation in the late 1970s on the basis of an agreed draft text of the Convention. Under this new regime the responsibility for management with reference to certain standards is in principle shifted onto the coastal states.

In the Northeast Atlantic a major part of the management problems are, however, still of an international nature because the distribution of a majority of the stocks, representing some 80 per cent of the resources covers more than one economic zone. The limits of the EEZs in many cases split the sea areas and thus the stocks belonging there. Similar conditions are found in many parts of the world including developing regions. In this sense open access still remains and there is a need to reach agreement on objectives and standards of management and to adjust national fisheries policies to international fisheries. And new problems are created of allocation of the shared resources among the parties concerned.

As expected the new regime brought about considerable improvements in the conditions for management, the main reason being that the responsibility for management is now clearly placed on the coastal state and much fewer parties are now involved where international agreements are needed for shared stocks. In the Northeast Atlantic this has led to improved states for some stocks, especially the pelagic fish. For most demersal stocks there is not much change, perhaps mainly because of excessive fleet capacity.

There are, however, some recent developments in science which may lead us towards new approaches to management. The stocks have under the

present system largely been regulated individually as if they existed as independent resource units although there has been an awareness of phenomena of interdependence for quite some time.

Research has, in important cases, demonstrated the nature of such interdependence with processes of predation or competition. Uncertainties and disagreements still remain of the quantitative aspects, but the consequences appear to be so important that they have to be considered even under some uncertainty. Some account is being taken in single stock assessments of known interrelationships, but the more spectacular implication is possible future manipulations of the whole System through long term management.

There could for instance be a choice between maximizing either the quantity or the value of the total yields. Very simplified one could say that the highest yield in tonnage would be obtained through a policy of high fishing pressure on predator stocks and allowing prey stocks such as herring, mackerel and capeline to expand, while a limitation of the biomass of the plankton-eaters, mackerel, herring and others may result in increased levels of recruitment for high valued demersal fish and hence a maximization of the value of the total yield.

This review of nearly a century's development of fishery research and management in the Northeast Atlantic can be concluded on this note: one can look back on great progress and many important achievements and the existence of the resources are in general safeguarded, but the System is still imperfect. The most important challenges relate to the still existing and apparently great potentials for economic gains of further improvements.

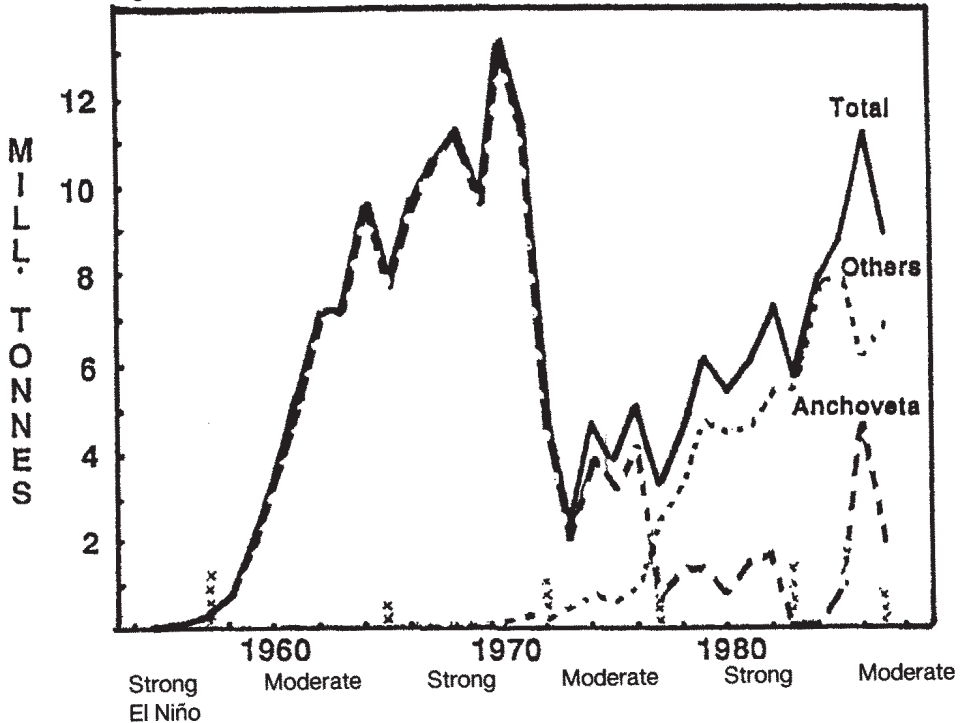
With this history and present state of the art the Northeast Atlantic must be classed as one of the world centres of fishery research and management, a condition explained by the many highly developed fishing nations here and what must surely be the worlds highest concentration of fishery research institutions. This state of fishery research and management is at least for the recent period fairly representative of all fishing regions adjacent to the industrial nations. But there are important resources and fisheries also in the seas off the less developed nations.

What are the extent and nature of management problems in these fisheries and how have the countries been able to deal with that responsibility in terms of scientific advice and management Systems? To give a comprehensive answer to this question would take us beyond the limits of this lecture as the fisheries of the developing world are numerous and highly versatile. But we can, I think, assume that biological management needs would be most important where fisheries are industrialized and concentrated. This is the case in the upwelling regions and I will attempt to give some very brief insights into the situations in the Peru Current system in the Pacific and the Canary and Benguela current Systems in the Atlantic.

Prior to the 1950s the high production of the Peru Current System was exploited by man nearly only through harvesting of the guano from the 20 million plus birds of the area. The Peruvian Guano Company tried hard to prevent the growth of the anchoveta fishery and internationally renown ornithologists issued predictions of disasters for the birds. Events certainly proved

them right, the fishery eventually reduced the birds to roughly 1 /10 of their previous abundance.(Figure 8) But this could of course not stop the growth of the industry which as we see increased at a rate of nearly a million tonne per year during the 1960s and brought the fishery to the top of the world scale by early 1970 with a total yield of about 12 million tons. Fisheries thus where an industry on which Peru became highly dependent, a situation which soon proved to be precarious. In 1972, after about five years of annual catches of 10 million tons or more, the Peru current upwelling system was seriously disturbed by an environmental disruption caused by the El Niño phenomenon, a climatic short term change which with intervais of 5 - 10 years affects smaller or larger parts of the Eastern Pacific. One of the effects is a reduction and redistribution of the upwelling process and thereby the productivity of the system. Its occurrence prior to the history of the fishery can be traced through variation in the guano production.

Figure 8.



Catch of small pelagic fish in the Peru Current System 1956-1986 and El Niño years.

The 1972 El Niño was followed by a collapse of the anchovy stock and the fishery, and subsequently by the arguments between the two schools which usually develop to explain the causes of such collapses, whether they are fishery induced or caused by nature. In this case it seems a compromise was

reached fairly soon. The fishery had not been allowed to develop entirely freely, there was concern for the maintenance of the resource and some regulations had been introduced to restrict the fishing effort. But even in this huge fishery a very large overcapacity of fleets and processing capacity had been allowed to develop during the boom years and regulations took the form of catch quotas and closed season resulting in competition and high fishing pressure also on juvenile fish. With fishing continuing well into 1972 and failing reproduction caused by the El Niño the collapse is fully explained. There was some recovery of the stock after 1972, but the pressure to keep the huge industry which was nationalised after the collapse alive was enormous and the rate of exploitation on the recovering stock was high. With a new although more moderate El Niño in 1976 the anchoveta was further depleted.

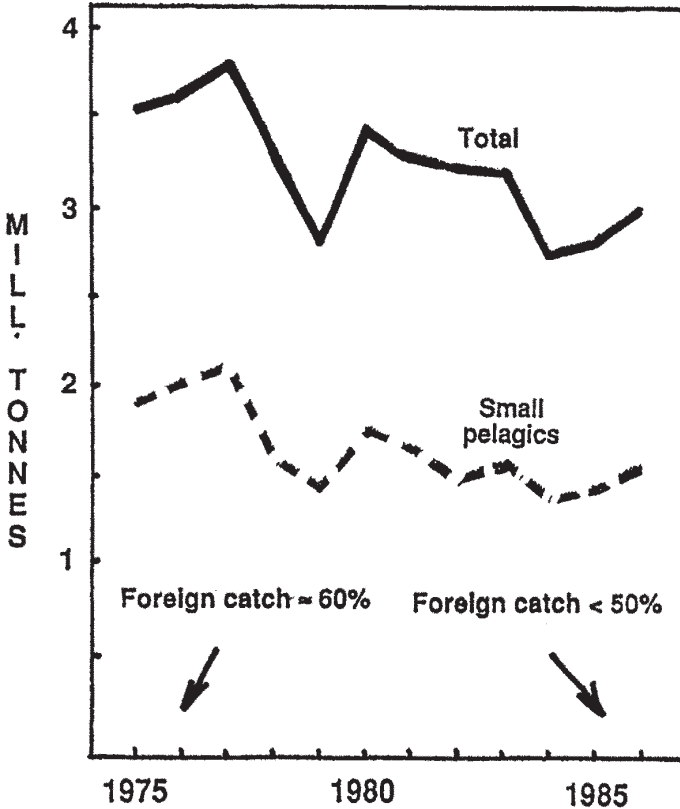
The great reduction of the major component of the System, the anchoveta, allowed the other pelagic species belonging there: sardine, horse mackerel and mackerel to expand and in the 1970s a fishery on these stocks was started with refitted fleets. The species change was accompanied by a South-ward shift of the distribution of the resources causing the Chilean part of the catch to increase greatly.

But there were more environmental distribution in store, the strongest El Niño in this century with effects over the whole Eastern Pacific and even wider occurred in 1982-83 and caused a further decline of the anchoveta. The other stocks seem less susceptible to the environmental effects and fishing could continue on these. This perhaps saved the anchoveta which recovered markedly in 1985-86, but with some setback in 1987 following a moderate El Niño in that year.

This brief account of the events in the Peru Current system demonstrate the challenges to the managers of these fisheries. The dimensions and nature of the stock changes and of the environmental disruption have attracted great international interest and there has been a considerable foreign scientific input to the region in addition to multilateral efforts for research developments. The national research institutions on which the managers must rely for advice struggle, however, with inadequate logistic support for their important tasks.

The fisheries off the Northwest African Coast indicate that more stable and less dramatic stock situations prevail in the region of the Canary Current upwelling system. (Figure 9). The total landings shown in the diagram refer to the Eastern Central Atlantic area which also covers the Gulf of Guinea, but by far the major part of the catch comes from the high productive shelf area from Morocco to Liberia. By the mid 1970s the total catch approached 4 million tons as a result of increased fishing from foreign long distance fleets, but the extension of coastal state jurisdiction cause some reduction of foreign access, and catches declined particularly of the small pelagics. There is no record of stock collapses from this region, but variability has been observed particularly in the largest resource, the Moroccan sardine. When comparing this situation with the collapse of similar sardine stocks in the Benguela and California Current systems and with the drastic stock changes in Peru and Chile the higher stability off Northwest Africa can perhaps be ascribed to a more moderate fishing pressure here.

Figure 9.



Eastern Central Atlantic region (Canary Current System). Total catch and catch of small pelagic fish.

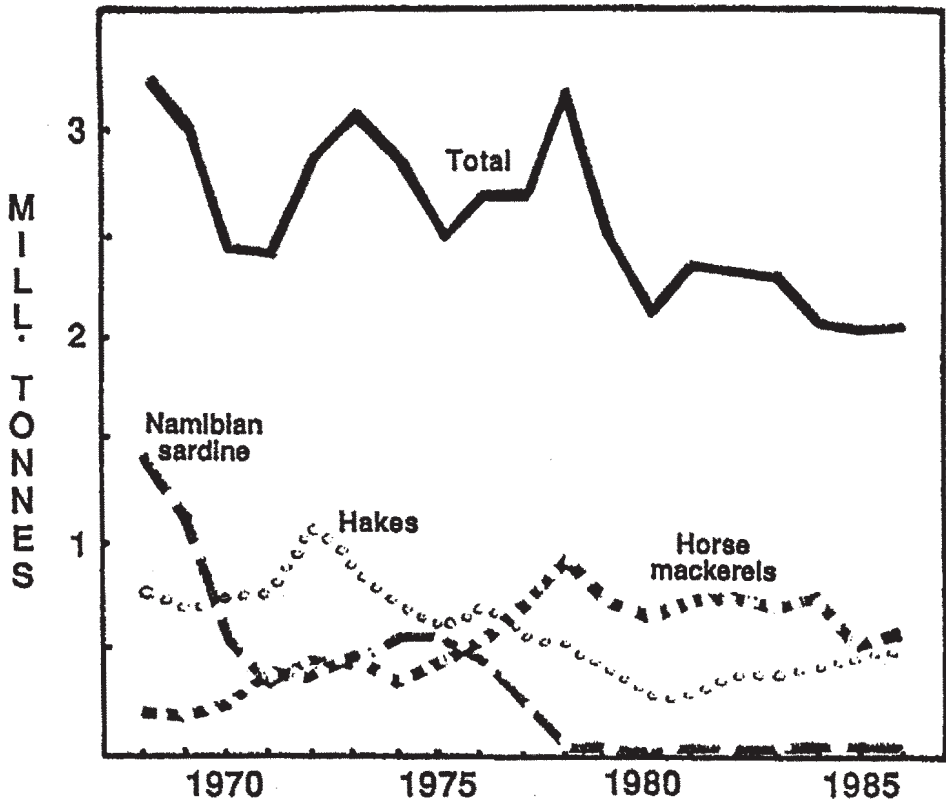
Resources research and fishery development in this region has been promoted and supported by an FAO regional commission, but activities at the national level are inadequate in most of the coastal countries. The main problems of management which have been confronted up till now are those related to the access of fleets from non-coastal nations. The share of these fleets of the total catch has declined under the new regime, but is still between 45 and 50 per cent. The jurisdiction over an important part of the region, the high productive shelf off the former Spanish Sahara remains in dispute and this adds to the problems of control and surveillance by the coastal states.

The development of shore-based fisheries which results in a true transfer of resource wealth to the developing countries is in progress and this process will require much more comprehensive, reliable and timely information on the resources than is being made available to the decision makers at present. A number of the important stocks in the region are trans-boundary and shared

between neighbouring states, but the related complex of management problems have not yet been addressed. In total this region can be described as one in need of major improvements in the field of fisheries research and management.

Finally, the Benguela Current upwelling system again shows us some quite spectacular histories of fisheries and stocks (Figure 10). Politically, conditions are special with the shelf off Namibia still under open access, the only important shelf in the world to remain in this state. With the independence of Namibia now in progress this condition is not likely to last for very long. The open access has resulted in the maintenance of an international fishery with the participation of a number of long distance fleets in addition to the coastal states, the Republic of South Africa and Angola, and a management System of the "commission type" of the old fishery regime. In addition to reviewing the state of research and management in this region it is of interest to assess the performance of this otherwise obsolete management System in a world of extended fisheries jurisdiction.

Figure 10.



Southeast Atlantic region (Benguela Current System)
Total catch and catch of selected species.

The commission is ICSEAF, the International Commission for the South East Atlantic Fisheries, created in the early 1970s. It functions as an advisory body submitting management recommendations including catch quotas, while allocation of quotas and other action is decided by the contracting parties outside the Commissions framework. The main focus has been on the stocks and fisheries of the Namibian shelf where there is no national effort in research or management.

The total catches in the Southeast Atlantic declined from a level of 3 million tons in the late 1960s and early 1970s to about 2 million tons in the later years. There was a rapid decline and finally a collapse of the Namibian sardine stock, from a bio-mass level of 6 million tons in the 1960s to about 100.000 tons over the last ten years. The large and valuable hake stocks were also greatly reduced in the 1970s by a combination of excessive fishing and too small trawl mesh sizes. Some recovery resulted from good recruitment in the early 1980s, but their state of overfishing continue with an unfavorable fishing pattern and too high fishing mortality. The horse mackerel increased towards 1980 possibly an ecological effect of the depletion of the sardine, but has declined in the later years probably as a result of the fishery.

The resource information provided by ICSEAF is of commendable cover-age and standard, but one is left with the impression that the scientific advice and its application is affected by the open access conditions of the fisheries. For demersal stocks the management performance is still perhaps not very different from that in our own region, but there is a serious mismanagement of the sardine stock, where a substantial part of a recruitment-overfished stock is being removed by the fishery each year.

Here we have again then a major fishing region where the tasks of rebuilding and maintaining the fish resources are complex and demanding. For the time being these are being dealt with, although not adequately, by a regional commission, but the responsibility will soon fall on the coastal states Namibia and Angola, at present fishing nations with a very limited capacity for this work.

These brief insights into some selected fishing regions of the developing part of our world show us that the challenges and demands to fishery research and management are not unexpectedly at least as great and complex as those we have been confronted with in our own region. The industrial fishing nations have played a key role in the creation of exploitation problems by fishing with long distance fleets and through the transfer of modern fishing technologies. There has also been a process, but on a less impressive scale of transfer of the art of fishery science and management through services and advice, education and training and support of institution building, but in general one must conclude that the majority of developing fishing nations are in need of further support for the development of adequate systems for fishery science, advice and management, and for surveillance and control of their fisheries. And we should note that in this development as well as in the functioning of the systems the representatives of all who work in the countries fishing sector should play an important role.

The new Law of the Sea : and the Southern countries ?

The extension of fisheries jurisdiction to 200 NM resulting from the adoption at least in practice of the Law of the Sea Convention raised great expectations for improved resource management and a more equitable sharing of the ocean's wealth between developed and developing nations. As discussed under the section of fishery management the new regime has created better conditions for resource conservation, and there are some examples of improved state of resources which it may seem reasonable to ascribe to the effects of these improvements. But to what extent has the new regime met the expectations to a more equitable sharing in a North/South context of the worlds fish resources?

The FAO Fisheries Statistical Yearbooks give the world landings by economic classes of countries (Figure 11). The records show that during the period 1975 - 77 to 1984 - 86, before and some time after the introduction of the EEZ regime, the total world catch increased from about 68 million tons to about 87 million tons. The share of the developing countries over the same period increased from about 43 to more than 50 per cent. Part of this increased share is attributable to increased catches in inland waters, almost all from developing countries. But even with full allowance for this, it is clear that there has been a proportional increase in marine fish production in developing countries. It seems reasonable to relate this at least in part to the extension of fisheries jurisdiction. But considered on a per capita basis we see that the share of the developing world is only 1/3 of that of the developed world.

Figure 11. NOMINAL WORLD CATCHES BY ECONOMIC CLASSES OF COUNTRIES AND CATCH FROM INLAND WATERS. MILL TONS

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1986 POPULA- TION (BILL)
DEVELOPED COUNTRIES	37.0	38.5	37.8	37.3	37.1	38.2	38.9	39.3	40.0	42.4	42.0	43.3	1.2
DEVELOPING COUNTRIES	28.4	30.4	30.1	32.8	33.9	33.8	36.0	37.3	36.9	40.4	43.6	48.1	3.7
WORLD TOTAL	66.4	69.8	68.9	70.1	71.0	72.0	74.9	76.6	76.8	82.8	85.6	91.5	4.9
INLAND WATERS	7.0	6.9	7.1	7.0	7.2	7.6	8.1	8.5	9.1	9.7	10.5	11.1	
DEVELOPING COUNTR.%	42.8	43.6	43.7	46.8	47.7	46.9	48.1	48.7	48.0	48.8	50.9	52.7	

A study of the fishing by industrialised nations off the coasts of developing countries shows on the other hand that during the period 1977 to 1983 the global level of catches of these distant water fleets remained remarkably

stable at a figure of around 5 million tons per year. This suggests that quantitatively there was not any major "take-over" of the resources off the coasts of the developing countries up till then fished by foreign fleets. Indeed the foreign fishing effort remained at more or less the same level as under the open access regime. Although detailed data are not available for the most recent years it is likely this situation still prevails. This stability is in marked contrast to the dramatic decline in the catches by foreign fleets in the Northern fishing regions over the same period. These dropped from about 2.2 million tons to 0.2 million in the Northwest Atlantic and from 1.9 million to 1.3 million tons in the Northeast Pacific. The industrial fishing nations have thus to a large extent stopped the foreign fishing within their EEZs.

This stable long distance catch of about 5 million tons masks however significant variations in regional trends. In the Eastern Central Atlantic for example the foreign catch declined from 2.5 million tons in 1977 to 1.6 million in 1983 and since the total catch remained fairly stable at about 3.2 million tons this demonstrates an increase in the share of the catch taken locally.

In the Southwest Atlantic foreign fishing operations increased substantially in the period. In the Southeast Atlantic there is a slight decline of foreign catch from a mean 1.7 million tons in 1977 to 1.3 million tons in 1983, but this is probably due to resource variability.

In the Western Central Pacific there has been a modest increase in the catches by foreign countries, but this has been offset by an even higher trend of increase of total tuna catches in the region, tuna being the main target species there in the Eastern Central Pacific another important tuna region, foreign fishing has remained at a stable level.

But although foreign fishing has been maintained at about the same level in developing regions some positive effects of the new regime in favour of the developing nations can still be established. For certain countries which have already attained a significant degree of national capacity in the fisheries sector and have adequate economic infrastructure to sustain development there are examples of rapid growth of fisheries. Thus Mexico has built out the domestic tuna fleet from 19 vessels in 1970 to 70 vessels in 1982, and the sardine fleet has doubled in the same period. Rapid development of national effort has also taken place in some West African countries such as Morocco and Senegal. That such developments are not a more general phenomenon reflects only the fact that developing a fisheries industry from scratch without existing capacity, trained manpower and infrastructure is a very costly and time consuming enterprise. Thus it has been estimated that the total capital investment required to finance full development of a national Namibian fishing industry based on a 1.5 million ton catch would be of the order of US\$ 450 million.

Where a coastal state is not yet in a position to take over itself the harvesting of the resources, it may condition the access granted to foreign fleets on payment of access fees, the formation of joint venture operations, or other benefits such as landing of catch for local consumption or processing, employment of local crews and training of personnel. The benefits from licensing operations will obviously be less than the potential contribution to the economy that could be obtained from a full national use of the resources. A truly national fishing industry can contribute to solving nutritional needs, create

employment opportunities in the production and the supporting services, contribute to national income through wages and surpluses and earn foreign exchange. The goal of most developing countries will therefore tend towards the development of a full national utilisation. Licensing and joint venture arrangements are usually viewed as intermediate steps towards this goal and can provide much needed information on the fisheries and a means of transferring technology and management skills and experience as well as purely financial benefits.

In recent years one can note various examples of advances for the developing countries in the financial benefits and the degree of control derived from access licensing arrangements. In the Southwest Pacific for example licence fees as percentage of landed catch value have risen from 2-3 percent under the first licensing agreements at the outset of extended jurisdiction through 5 percent under the arrangements of the early 1980s to over 10 percent under the new multilateral fisheries treaty with the USA. This latter figure is not yet representative for all foreign fishing in the waters, but it is likely to be a future threshold for such arrangements. The progress in this area has come from a regional solidarity expressed and implemented through a regional body, the South Pacific Fisheries Agency and its program of harmonisation of fishery regimes.

Also off West Africa access fees have increased substantially in later years, but full benefits are in this area partly restricted by inadequate systems for surveillance and control of the fisheries. Attempts to improve these situations are being made through the formation of a regional body for cooperation in this field.

The South-West Indian Ocean has been the scene of considerably increased foreign fishing activity over the last years, targeted mainly on tuna resources. Here a study has shown that the Seychelles in addition to the license fees, obtained considerable other benefits to the economy from the foreign fishing derived from the basing of operations and transhipment of fish.

In summary, then, after well over a decade of extended fisheries jurisdiction, one cannot say that there has yet been a substantial "take over" of resources by developing coastal states in the same way as developed fishing nations have appropriated the resource wealth off their coasts. It is assumed that most developing coastal states still see a fully developed national fishing industry as their main goal, but in most situations this will have to be realised in the long term. In the meantime one can place on record examples that developing countries are receiving greater benefits in terms of access fees and other benefits and that in some regions the degree of control by coastal states over the present and potential use of the resources has increased. This is important among other reasons because it helps preserve for the coastal state the option of national development.

Gunnar SAETERSDAL

(1) The actual title of the paper reads: "WORLD MARINE FISHERIES UNDER THE EXCLUSIVE ECONOMIC ZONE: RESOURCE, MANAGEMENT AND UTILIZATION." Titles and sub-titles are introduced by the editor.

(2) International Council for Exploration of the Sea.

(3) See Hardin Garett 1968

(4) North East Atlantic Fisheries Commission.

A fisherman in the harbour of Peniche (Portugal), repairing nets (photo: F. Bellec)

EUROPE BLEUE ET GESTION DE LA RESSOURCE

“En fait, les problèmes de ressources recouvrent des réalités complètement différentes suivant que l’on se trouve aux Philippines risquant sa vie pour pêcher quelques kilos de poisson ou en Europe négociant autour d’une table une rallonge de quotas.” René-Pierre Chever, secrétaire général du Comité des pêches du Guilvinec (Finistère- France) rappelle ici que la problématique de la gestion de la ressource ne doit pas être appréhendée seulement sous l’angle économique mais qu’il y a aussi les pêcheurs. Leur avenir est lié à la conservation des espèces et ils revendiquent un rôle dans la sauvegarde des ressources halieutiques et de l’environnement.

Son intervention contribue aussi, de manière critique, à une meilleure compréhension de la politique européenne en matière de pêche, appelée encore “Europe bleue”. En même temps qu’elle permet de cerner l’originalité de l’action d’une organisation de pêcheurs face à cette politique.

Pour mieux éclairer la problématique de la gestion de la ressource dans les différentes régions du monde, il me paraît important de mieux définir au préalable quelques points forts de l’organisation à laquelle j’appartiens.

C’est une organisation démocratique interprofessionnelle, à base syndicale, dotée de moyens financiers importants et de compétences très larges en matière de développement et d’organisation de la filière pêche.

Nous sommes dans une région périphérique de l’Europe, à l’écart des grands axes de développement industriel et financier du centre de la Communauté. Nous ne pouvons compter que sur nous-mêmes, sur notre capacité d’organisation, d’innovation, d’adaptation aux nouvelles contraintes et de proposition pour les atténuer. Notre structure nous permet de rassembler les énergies et de créer.

Le point central de notre action est de contribuer à l’amélioration du niveau de vie du pêcheur et à mieux rentabiliser les navires. Quand ces deux objectifs sont atteints le moteur de l’économie locale est en route.

Les responsables de notre organisation, estiment que pour mettre cette machine en marche dans notre secteur, il faut quelques conditions favorables préexistantes.

Les intérêts objectifs des pêcheurs de la planète convergent

Proscrire le monopole institutionnel et structurel est indispensable. Il est source de sclérose, de manque d'initiative, de difficultés accrues pour les plus faibles, en définitive de menace pour l'ensemble de la communauté. Nous préférons que plusieurs structures même antagonistes travaillent sur le même secteur. Cela peut être source de conflit, de perte de temps, mais cela oblige les structures à faire le maximum, à ne pas dormir sur leur réussite passée, à écouter et à prendre en compte toutes les solutions face à une difficulté. Lorsqu'un problème plus vaste se pose, ces structures qui peuvent s'affronter en temps ordinaire se réunissent dans tous les cas pour faire face à une contrainte disproportionnée ou qui porte atteinte aux intérêts généraux des "fishworkers" (travailleurs de la pêche).

Un outil d'analyse socio-économique indépendant est aussi nécessaire. Pertinent par ses travaux, voire impertinent avec les administrations françaises ou européennes, il permet aux professionnels de notre communauté d'analyser les situations et d'y répondre au mieux de nos intérêts. La dépendance en cette matière ne peut que nuire aux intérêts de la communauté des "fishworkers" dont la politique quant au développement ou au maintien des activités dans certains cas, peut être différente de celle de l'Etat ou de la Communauté. L'observatoire socio-économique permet de préparer les dossiers, des propositions fortes et argumentées, difficilement contournables par les administrations. L'occupation de ce terrain habituellement réservé aux "technocrates" est indispensable en fonction des moyens dont chaque communauté dispose.

La pêche artisanale est une notion qui doit être définie avec beaucoup de précautions, surtout si on veut faire des comparaisons au niveau planétaire. Certaines pêches artisanales sont très proches des pêches industrielles, et inversement. Certaines pêches artisanales détruisent plus de ressources que certaines pêches industrielles. Certaines pêches industrielles sont pratiquées près des côtes, alors que certaines pêches artisanales sont lointaines. Certains types de pêche artisanale bien que pouvant se pratiquer en famille se sont dotés de statuts d'entreprise, (ce qui est d'ailleurs souhaitable pour séparer le patrimoine "outil de travail" du patrimoine familial) et certaines coopératives de pêcheurs font de l'armement à la pêche industrielle. On pourrait multiplier ces exemples paradoxaux à l'infini. Il est donc difficile de proposer une définition universelle du concept de "pêche artisanale". En ce qui nous concerne, nous préférons le concept d'une communauté voulant vivre et travailler sur un littoral. Cela veut dire, que tous les "fishworkers" qui investissent, travaillent dignes et responsables, vivant avec leur famille, dans une communauté de fait, font partie de "notre pêche artisanale". Par opposition n'en font pas partie les investisseurs qui peuvent à tout moment, pour des raisons de logiques financières qu'ils sont seuls à estimer, quitter le littoral ou investir

dans une autre activité plus rentable, laissant la communauté désemparée, sans ressource et sans solution de rechange.

L'ouverture sur le monde est un devoir et une nécessité. Non seulement un devoir moral car il est inadmissible que les 3/4 de la planète souffrent de problèmes vitaux pendant que l'autre partie continue à s'enrichir dans sa tour d'ivoire, mais également une nécessité en particulier sur le plan des marchés. Les pêcheurs des pays développés ont intérêt à appuyer les pêcheurs des pays en voie de développement pour qu'ils vendent leur production dans leur région où c'est souvent cruellement nécessaire. Sinon cela se transforme en importation à bas prix concurrençant les producteurs européens. Cette concurrence soutenue par des transformateurs peu soucieux de la provenance des produits et des consommateurs peu informés de la réalité des enjeux, conduit certains "penseurs" européens à se demander s'il est vraiment indispensable de maintenir une pêche européenne et ses 200.000 pêcheurs. Les intérêts objectifs des producteurs de la planète convergent. Ils faut d'abord en prendre conscience et ensuite trouver une forme d'action réaliste et concrète.

La culture, la formation, l'information et la communication sont les valeurs fondamentales du développement dans notre secteur. C'est l'investissement essentiel pour les travailleurs du poisson, pêcheurs et transformateurs. Cette action en profondeur permet déjà et permettra encore plus dans l'avenir à notre secteur de s'affirmer sans passer par des intermédiaires dont la motivation n'est pas toujours claire. Elle permettra aussi, de faire face aux défis sans cesse lancés par la gestion de la ressource, par les nouvelles données d'un marché européen et mondial. Cette volonté de développer la culture, la formation, l'information et la communication permettra aux communautés de "fishworkers" de prendre toute leur place dans une société européenne en perpétuelle évolution qui marginalise très vite ceux qui sont différents, qui plus est dans une région périphérique.

L'Europe: la pire et la meilleure des choses

La Communauté Economique Européenne créée par le Traité de Rome du 25 mars 1957 a donc un peu plus de 30 ans. Depuis, de nombreuses avancées successives ont été faites, en particulier en ce qui concerne la pêche, pour arriver après l'entrée du Portugal et de l'Espagne dans l'Europe des douze, à une politique des pêches qui s'impose de plus en plus par de multiples règlements.

Depuis le premier traité, l'instauration d'une ZEE (Zone Economique Exclusive) commune, le Traité de Rome, l'Europe Bleue, la Politique Commune des Pêches, l'Elargissement, l'Acte Unique, les pêches européennes ont vécu un bouleversement total.

Ceci explique que les avis des pêcheurs au sujet de l'Europe sont controversés, souvent émotionnels, car l'Europe parfois la pire, est aussi dans d'autres circonstances la meilleure des choses.

L'Europe est parfois la pire des choses. C'est souvent le point de vue du pêcheur de base pour lequel l'Europe apporte un maximum de contraintes et un minimum de satisfactions. C'est aussi le point de vue de nombreux respon-

sables professionnels qui subissent presque toujours les règlements mis en œuvre par la Commission des pêches, sans pouvoir anticiper ni les orienter. Celle-ci produit, depuis les années 80 un nombre véritablement impressionnant de réglementations sur tout et dans tous les domaines.

Certaines sont tellement technocratiques qu'elles ne sont pas applicables, en particulier dans les zones où la pêche est mixte. Par exemple, les pêcheurs de langoustines dans le golfe de Gascogne doivent capturer au moins 30% de langoustines, mais pas plus de 60% d'espèces protégées par une taille marchande, et moins de 30% de merlu. Comment fait-on pour mesurer cela en mer et prévoir ce qui va rentrer dans le chalut?

A ce moment on touche du doigt le problème clef de l'Europe: il n'y a pas de contact entre les décideurs, c'est-à-dire les technocrates de la Commission et ceux qui doivent mettre en œuvre les règlements, les pêcheurs. Les membres de la Commission, souvent des gens extrêmement compétents, ont mis l'Europe bleue sur pied de leur bureau à Bruxelles, en fonction d'avis scientifiques plus ou moins autorisés. Comment s'étonner ensuite qu'il y ait des problèmes d'application sur le terrain! Pire, il semble anormal de demander une large concertation avant la rédaction de réglementations déterminantes !

Ce manque de contact avec les décideurs est encore amplifié par l'absence de réels pouvoirs du parlement Européen. Il donne un avis, mais ne décide pas. La Commission est finalement juge et partie. Tant qu'il n'y aura pas de contrôle démocratique réel sur l'exécutif de l'Europe la situation ne changera pas. Il faudrait pour commencer cette évolution que la Commission soit élue par le parlement, qui aurait de ce fait un véritable pouvoir de contrôle.

Le pêcheur de base ressent l'Europe comme la pire des choses dans tous les domaines de son travail et de sa vie de tous les jours.

L'accès à la ressource, réglé sur le papier, ne l'est pas toujours dans la réalité. Les palangriers espagnols occupent des zones immenses (des dizaines de milles carres) et en interdisent l'accès aux pêcheurs langoustiniers dont ce sont les zones traditionnelles. Les quotas mis en place par Bruxelles sont une méthode de gestion de la ressource qui ne l'est pas vraiment surtout pour les zones mixtes. Faut-il rejeter le poisson mort, pêché avec l'espèce recherchée principalement, en cas d'atteinte du quota? Le résultat est le même pour le stock. Les contrôles depuis la mise en place de la CEE sont devenus extrêmement nombreux et sont lourds de conséquences pour les infractions même mineures. Les règlements sont tous compliqués et parfois inapplicables. Les patrons pêcheurs sont obligés de remplir de nombreux documents y compris en mer, sur leur prises.

Dans le domaine social les pêcheurs français n'ont rien à attendre de bon de l'Europe. Ils disposent du meilleur régime social, d'une retraite à 55 ans, d'organisations sociales qui fonctionnent bien. L'article 117 du Traité de Rome qui prévoit l'harmonisation par le haut des régimes sociaux en Europe n'est pas appliqué. On peut craindre que s'il y a harmonisation elle se fasse surtout par le bas.

L'investissement à la pêche, libre il y a encore un an, ne l'est plus. Les plans pluri-annuels pour l'investissement mis au point par Bruxelles ont stoppé net les constructions de navire, au point que de nombreux chantiers navals

sont obligés de fermer. L'instauration d'un permis de mise en exploitation (PME), qui n'est en fait qu'une licence déguisée, a modifié beaucoup de données. L'installation des jeunes est très difficile. La transmission du bateau n'est possible qu'avec un PME, le coût des bateaux d'occasion a augmenté de 40% en trois mois.

Le Marché Européen est avant tout un marché très ouvert et très demandeur. Les pêcheurs voient avec une certaine amertume les prix de leurs produits stagner à un bas niveau en raison des importations que la CEE admet, voire encourage.

L'administration de ce secteur d'activité est devenu encore plus compliquée que par le passé. Les pêcheurs bénéficient des joies de l'administration verticale: Bruxelles, Paris, la région, le département et enfin le quartier maritime.

La formation dont on pouvait espérer quelle soit la pierre angulaire de la politique de la CEE n'est que le parent pauvre de cette politique. Alors quelle est indispensable pour que l'intégration se fasse au mieux, surtout dans le domaine des langues et de la communication.

En conclusion de ce point, il faut reconnaître que les pêcheurs subissent une formidable évolution et que si on les interroge sur l'Europe ils ont de bonnes raisons de considérer que c'est la pire des choses.

L'Europe dans d'autres circonstances est la meilleure des choses. Il y a 45 ans l'Europe était à feu et à sang. Depuis, nous avons connu une période de calme et de prospérité unique dans les annales de notre histoire. Cette évidence mérite d'être rappelée car c'est aussi dans ce contexte qu'il faut analyser la politique Européenne des pêches, en relativisant les problèmes administratifs. La construction de l'Europe nous a apporté le libre accès des eaux, une organisation des marchés, des structures, une gestion de la ressource, une organisation et le sentiment commun de construire quelque chose d'important.

Le libre accès aux eaux de la ZEE européenne est la base de l'Europe bleue. Cette ZEE commune n'était pas une notion simple pour des gouvernements surtout attentifs jusqu'à présent à conserver leur souveraineté dans leurs eaux territoriales. Le principe du libre accès souffre des exceptions puisque, d'une part il laisse hors des eaux communes une bande de mer territoriale de 6 milles au moins et de 12 milles au plus en fonction des droits historiques de chaque Etat membre, et que d'autre part le libre accès est limité dans les "box" qui ont été installés dans plusieurs secteurs (Shetland, Irlande, par exemple), enfin les Espagnols ne pourront pêcher en Mer du Nord avant 2002. Malgré ces restrictions au libre accès, qui disparaîtront selon un échéancier prévu par la CEE, on voit bien les énormes avantages de cette ZEE commune. En ce qui nous concerne, nous pêchons 70% de notre production hors de notre ZEE. Les pêcheurs ont la capacité d'évoluer dans cet espace sans passer préalablement des accords avec chaque pays de la Communauté. Les organisations de pêcheurs des différents pays de la Communauté auraient passé leur temps à négocier ces contrats toujours remis en question, alors que ce problème réglé, les structures peuvent se préoccuper de tous les autres aspects de l'activité de la pêche, en particulier des marchés et du domaine social.

Le Marché Commun est d'abord une union douanière basée sur la circulation des marchandises, des hommes, des capitaux et sur une gestion commune des relations commerciales avec le reste du monde. C'est aussi un grand marché composé de 340 millions d'habitants. Le marché des produits de la pêche s'inscrit dans ce nouvel espace. Là encore, on peut facilement voir que ce grand espace facilite les échanges commerciaux entre les différents pays de la Communauté. L'Acte Unique du 29 juin 1987 modifie le Traité de Rome en y incluant des dispositions permettant un véritable grand marché en 1993. L'importance de ce grand marché est inestimable pour notre communauté de pêcheurs car nous exportons près de la moitié de notre production dans les pays de la CEE, en particulier en Espagne. Avant l'entrée de l'Espagne dans la CEE nous avons des problèmes permanents aux frontières, maintenant ils ont quasiment disparu. L'organisation des marchés en Europe est une réalité. Presque tous les poissons ont un prix de retrait commun dans toute l'Europe, discuté chaque année par les organisations de producteurs mises en place dans chaque pays par port ou groupe de ports. Dans quelques mois l'ensemble des normes sanitaires pour la pêche sera homogénéisé accélérant encore l'intégration de cet espace commercial. Ce grand marché européen même s'il est ouvert aux importations a été, pour une grande part, dans le maintien du revenu des pêcheurs de la Communauté.

La politique des structures, mise en place par Bruxelles, produit des effets importants à la fois dans le financement des bateaux et des structures à terre. Depuis la mise en place du volet structure, des centaines de bateaux français ont été aidés à 25% de leur coût total. Si on peut se demander sur quels critères les subventions sont distribuées, provoquant ici ou là des injustices flagrantes, on ne peut nier l'impact de ces aides sur le financement des entreprises de pêche. Les aides européennes ont été déterminantes dans la réalisation de restructurations lourdes dans les ports, en particulier en participant d'une façon importante à la modernisation des criées. Ces aides ont modifié le paysage de la pêche française.

La gestion de la ressource est sans doute le secteur où l'action de la CEE à été la plus volontariste, même si cela est diversement apprécié par les pêcheurs. Le règlement n° 171/83, abondamment complété depuis, définit, pour l'ensemble de la ZEE européenne et pour tous les pêcheurs, l'ensemble des mesures techniques d'utilisation des engins de pêche. Aussi contraignant qu'il soit, on peut être certain que la situation, sans l'existence de la Communauté, aurait été pire. Chaque pays aurait du prendre pour sa propre ZEE des mesures de sauvegarde de sa ressource. On peut être convaincu que ces réglementations n'auraient pas été les mêmes et que les problèmes d'application auraient été bien pires, les contrôles bien plus sévères, l'incompréhension totale. Cela aurait conduit, à la longue, à désertir certains lieux de pêche traditionnels.

L'organisation professionnelle des pêcheurs européens existe. La CEE a mis sur pied les organisations de producteurs par port ou par région. Celles-ci se sont regroupées sur le plan français, puis sur le plan européen pour constituer l'AEOP(1). Cette structure est consultée par la Commission et le Parlement Européen. La CEE n'a pas pour autant supprimé les structures déjà existantes.

Etripage de poissons à bord d'un chalutier de pêche artisanale au large des côtes bretonnes.
(*Photo F. Bellec*)

L'Europe peut être la meilleure des choses pour les pêcheurs si elle arrive à prendre en compte les aspects humains et sociaux qui restent toujours en arrière. Pour le reste on peut se féliciter de sa mise en place, en étant conscient que le secteur de la pêche détient une responsabilité particulière dans la construction européenne. Les pêcheurs qui naviguent dans la ZEE commune sont européens par nature. La politique de l'Europe bleue est en fait en avance sur la future intégration des autres secteurs de l'Europe, les pêcheurs ont, à ce titre, un rôle important à jouer, ce dont ils sont conscients.

La ressource: mythes et aspects concrets

La ressource est un mot qui reviendra souvent au cours de ce Symposium. Il suscite autant d'inquiétude que de passion. Tout serait simple s'il s'agissait de banales opérations arithmétiques. Ce n'est pas le cas, notre expérience démontre que lorsque nous abordons ce problème nous mélangeons à la fois des mythes et des réalités.

Ressource, mais aussi coopération, coopérative, petit pêcheur, pêche artisanale ou industrielle, etc... sont des mots tabous. A chacun de nous ils évoquent quelque chose d'assez clair, malheureusement la plupart du temps, ce n'est pas le même concept que nous mettons derrière le même mot. Ceci est évident pour la "ressource". En fait, les problèmes de ressources recouvrent des réalités complètement différentes suivant que l'on se trouve aux Philippines risquant sa vie pour pêcher quelques kilos de poisson, ou en Europe négociant autour d'une table une rallonge de quotas. Deux points nous paraissent mériter un éclairage particulier: la notion de conservation des ressources et celle de la ressource "bien collectif".

La conservation de la ressource n'est pas pour nous une fin en soi. Bien souvent les scientifiques et les administrations nous ont présenté le problème de cette façon, oubliant qu'il y a aussi des pêcheurs, une filière, des problèmes économiques et sociaux. L'exemple du hareng en mer du Nord est particulièrement significatif. Il y avait effectivement un gros problème de stock, mais la fermeture draconienne pendant 5 ans a eu comme résultat de modifier les habitudes alimentaires des consommateurs traditionnels du hareng qui se sont détournés vers des produits de substitution. Lorsque la pêche a été ré-ouverte, il y avait beaucoup de harengs dans la mer mais plus de marché. Résultat final pour le pêcheur et les travailleurs de la filière: moins de revenu, alors que le stock est en bonne santé. Sans doute aurait-il fallu agir plus tôt, en imaginant un système de réduction des captures qui n'aurait peut-être pas permis au stock de se reconstituer aussi vite, mais qui aurait permis de conserver un marché. Nous souhaitons, à chaque fois que les problèmes de conservation de la ressource sont abordés, qu'une approche bio-économique soit la règle du jeu. C'est souvent plus complexe, plus long à mettre en œuvre, mais il ne sert à rien de conserver une ressource en étranglant les pêcheurs.

La ressource est un bien collectif de la population du globe, mais dans les faits elle appartient surtout à celui qui la prend. La plupart du temps, les problèmes de ressources sont des problèmes de compétition entre différents types de pêche, surtout entre la pêche industrielle et la pêche artisanale locale. Le problème n'est donc pas directement une question de ressource mais de savoir quel est l'objectif de la capture de la ressource. S'agit-il de rentabiliser

au mieux un capital industriel investi momentanément dans la pêche, ou s'agit-il de fournir à une communauté vivant sur le littoral un travail durable, utile à une communauté plus large sur le plan de l'alimentation? La réponse à cette question montre que le problème doit être posé en amont de la ressource. Ce bien collectif, convoité, doit être mis à la disposition de ceux qui en ont besoin pour vivre avant tout. Il faut, en fait, que les petits pêcheurs exigent et obtiennent, non pas l'appropriation de ce bien collectif, mais sa mise à disposition, son usage. Cela est possible par une organisation forte et reconnue.

Le danger de disparition d'un stock donné n'existe pratiquement plus en Europe, en raison des mécanismes de gestion mis en place par la CEE, du fait que la pêche s'exerce souvent sur des zones mixtes et que nous avons sans doute exporté une partie de nos problèmes vers les pays en voie de développement, en multipliant les accords de pêche avec eux. Cependant la gestion de cette ressource nous pose de difficiles problèmes. Ils se rencontrent à plusieurs niveaux: l'accès réel à certaines zones, la gestion des quotas, la gestion de zones mixtes, la gestion des zones côtières.

L'accès à toutes les zones de pêche est théoriquement libre, cependant de graves conflits locaux peuvent surgir, en raison essentiellement de l'utilisation d'engins de pêche incompatibles dans la même zone. Les Espagnols ont développé une pêche palangrière dans le golfe de Gascogne, très efficace, pratiquée essentiellement sur le merlu par des bateaux en acier de 30 à 45 m de long, avec 15 à 25 hommes à bord. Ces bateaux pêchent souvent en groupe et mouillent 20 à 50 KM de palangre à merlu par jour. Des zones entières sont, de ce fait, barrées et les navires espagnols en assurent avec une extrême vigilance la surveillance, interdisant l'accès de ces zones aux autres navires de la Communauté, en particulier les chalutiers français (12 à 15 m), dont ce sont les zones traditionnelles langoustinières. Cette "protection" est assurée "manu militari" en intimidant d'abord les petits chalutiers français, ensuite en les abordant si nécessaire. Pendant deux ans nous n'avons dû notre salut qu'à la fuite en cas de conflit direct car le rapport des forces était en notre défaveur. Cela jusqu'au mois de Mai 89 où 15 palangriers espagnols se sont retrouvés bloqués pendant une journée par 200 petits chalutiers bretons. Les palangriers ont quitté la zone, mais ce conflit aurait pu dégénérer en un drame de la mer. Les chalutiers sont ensuite allés bloquer le départ d'une course transatlantique Lorient - Saint Bartélémi (Bermudes) -Lorient. Tous les média français et internationaux se trouvaient là, le ministre de la mer également venu donner le départ de la course. Les pêcheurs ont négocié avec le ministre toute la journée et ont réussi à obtenir l'accord suivant:

"A l'occasion de la réunion approfondie qu'il a eue avec les pêcheurs artisans du Morbihan et du Finistère, le Ministre délégué, chargé de la mer, M. Jacques Mellick, s'engage:

A la présence sur zone, d'un bâtiment de la Marine Nationale, des Douanes ou des Affaires Maritimes, aussi longtemps que la situation le justifiera et d'un avion pour localiser la présence de la flotte espagnole.

A faire reprendre les négociations entre professionnels français et espagnols sur la cohabitation des métiers dans la zone 8 exclusivement et sur la

base du projet de code de bonne conduite établi à Ciboure, le 2 décembre 1988. Le Ministre espagnol de la pêche avait donné son accord sur ce point lors du séminaire gouvernemental franco-espagnol de Leone.

A intervenir auprès du Ministre espagnol de la pêche pour favoriser la représentation des patrons pêcheurs dans la négociation.

A tenir une réunion de travail au Ministère de la Mer, avec les professionnels artisans pour rechercher des propositions d'aménagement du plan d'orientation pluri-annuel, dans le cadre de la réouverture du dossier qui interviendra pendant la présidence française de la CEE."

Ce problème que nous venons de vivre montre bien la complexité de la notion d'accès théoriquement réglée par la CEE, mais montre aussi qu'il y a en définitive toujours une solution négociée possible.

La gestion des quotas, simple sur le papier, pose de graves problèmes concrets. Nous avons plusieurs espèces à quota sensible dans certaines zones CIEM(2) en Europe, en particulier sur la sole en Zone VIII, c'est-à-dire dans le golfe de Gascogne. Ces quotas sont déterminés à partir des TAC(3) évalués par les scientifiques européens, et sont basés sur les déclarations des captures effectuées par les navires. Notre quota est de 4.400 tonnes pour 1989. Mais plusieurs facteurs convergent pour que nous ayons des problèmes sur ce quota. D'abord les déclarations de capture ne sont pas nécessaires pour les petits bateaux (5 à 10 m), or il y en a des milliers dans cette zone, de gros bateaux viennent d'armer pour cette pêche surtout aux filets, le temps a été exceptionnellement beau depuis le début de l'année. Pour éviter le dépassement du quota en milieu d'année nous avons procédé à une répartition port par port en fonction des antériorités des trois années passées. Chaque port ou groupe de ports est ainsi responsable de la gestion de son quota avec ses pêcheurs. Cela n'empêchera vraisemblablement pas les problèmes dans certains secteurs mais au moins les choses sont claires et entre les mains des professionnels.

La gestion des zones mixtes, c'est à dire des zones où l'on pêche une espèce principale comme la langoustine mais aussi de nombreuses espèces protégées, en particulier le merlu, est très compliquée. Que fait-on de ce qui rentre en trop dans le chalut? On le rejette! Mais n'est-il pas mort? Bien évidemment! N'a-t-il pas un marché important? Bien évidemment! Mais on le rejette quand même aux mouettes et aux goélands ! Cela n'est pas acceptable pour un patron pêcheur qui est avant tout un chef d'entreprise, préoccupé par la rentabilité de son bateau et pour des matelots attentifs à leur salaire. C'est d'autant plus difficile à subir que les marins sont d'accord de mettre en œuvre d'autres méthodes pour préserver réellement le stock. Ils ont mis au point avec les scientifiques d'IFREMER(4) un chalut sélectif qui permet de protéger les petits merlus, sans rejeter à l'eau du poisson mort et commercialisable. La gestion des zones côtières, c'est-à-dire la bande de 0 à 12 milles, nous pose d'énormes problèmes. Autant la ZEE (12 à 200 milles) est super-réglémentée et finalement pas trop mal gérée, autant la bande côtière est laissée à l'abandon. Ceci s'explique par le fait que depuis 12 ans toute l'énergie a été mise au service de l'Europe bleue et que la gestion de la bande côtière est restée de côté. Il y a de très nombreux bateaux et marins individuels (12.000 sur 18.000 en France) qui pratiquent toutes sortes de métiers. Cette zone est extrême-

ment importante pour de nombreuses raisons. Presque tous les poissons de haute mer y passent une partie de leur cycle biologique, il faut donc les protéger. Les pêcheurs de cette zone ont un rôle irremplaçable à jouer en matière de défense de l'environnement, dès qu'il y a un problème de qualité des eaux ou de pollution ils interviennent très vite. Enfin ils sont les gardiens d'un lieu convoité par de nombreuses autres industries, tourisme, nucléaire, chimie etc... Notre travail devra porter dans les années qui viennent sur cette bande côtière et ces pêcheurs, en organisant au mieux, en mettant en place des schémas de mise en valeur de la mer côtière, en faisant des études stock par stock, zone par zone.

En conclusion de ce dernier point, il nous paraît important de souligner qu'en matière de ressources la modestie est de rigueur, les évidences sont souvent trompeuses. Il paraît cependant évident que les pays du Tiers Monde doivent obtenir immédiatement l'usage maximum de leurs ressources, en ayant les moyens d'en contrôler l'accès et dans un second temps la responsabilité de la gestion de cette ressource.

René-Pierre CHEVER
Comité des Pêches
Quartier de Guilvinec
France

(Titres et intertitres de la rédaction).

(1) AEOP : Association Européenne des Organisations de Producteurs.

(2) CIEM : Comité International pour l'Exploitation des Mers.

(3) TAC : Total Allowed Catches.

(4) IFREMER : Institut Français de Recherche pour l'Exploitation de la Mer.

The Grass Roots and the State

THE POLITICAL ECOLOGY OF FISHING

Gisli Pálsson is professor at the Faculty of Social Science of the University of Reykjavik (Iceland). In the following article, which was prepared specially for the Lisbon Symposium (Portugal – June 1989), he pleads for the eminent social and political character of ecology, more particularly within the sector of marine resource management. He does not hesitate to take a dissident position on the thesis of the 'Tragedy of the Commons'. He argues that the protection of marine resources has always been and still is part and parcel of indigenous or 'traditional' management schemes within the artisanal fisheries sector.

This article represents an important contribution to the research on marine resource management and the ecology of fishing.

This paper emphasises the importance, for management purposes, of considering the larger social context of resource use and the need for cooperation between the grass roots and the state. I argue that the popular thesis which hold that all resources owned in common must inevitably become over-exploited – the thesis of the 'Tragedy of the Commons'(Hardin 1968) – fails to account for the social aspect of production and resource management. Human ecology, the study of how humans use nature and what they do to themselves, nature, and society in the process (see Bennett 1976:3), I suggest, is necessarily *political* or social ecology, since humans appropriate nature as social beings in an institutional context of their own design. As Marx argued, "nature.... taken abstractly for itself and fixed in isolation from man – is nothing for man".

I will illustrate my argument with detailed reference to Icelandic fishing. The national economy of Iceland is heavily dependent on fishing. This means

that government policy must be responsive to 'grass roots politics' and the 'needs' of the fishing industry. Also, since Iceland is a small country, with a population of 240.000 people, the distance between management and fishing, between bureaucrats and workers, is relatively short. For these reasons, the Icelandic fishing industry is an interesting example.

Stated objectives and unstated objectives

The implications of management are visible at different levels of society; the political ecology of fishing is more or less the same as the political economy of the country. I argue, Icelandic fisheries management incorporates local demands and initiative to a very high degree. However, in the case of the new quota System in cod fishing, introduced in 1983, a structural transformation seems to be taking place with grave consequences for small-scale production. I conclude that an efficient and responsible fisheries policy must seriously consider the social context of the fishing industry.

In recent years, the thesis of the 'Tragedy of the Commons' has increasingly come under attack. In particular, it has been argued, it wrongly assumes that the users of commons are necessarily selfish, autonomous individuals trying to maximise short-term gains, and that solutions to the commons dilemma can only be solved through the intervention of an external authority, the state or some multinational body (see McCay and Acheson 1987). In some indigenous or 'traditional' management schemes, local groups of users successfully control the reproduction of renewable resources without external intervention (see Durrenberger and Pálsson 1987, Ruddle and Akimichi 1984). In some cases, too, groups of users act together with a national authority, effectively 'co-managing' local resources (Jentoft 1989).

But while co-management is an attractive approach to environmental problems, it is not without difficulties, if only for the fact that important change is not always anticipated. A distinction can be made between the stated objectives of management schemes, unstated objectives, and unintended side effects (see Young 1983). Usually the stated objectives of management proposals are to bring the industry under control, to promote conservation and sustained yield, and to ensure reasonable returns to the average fisherman. Often there are also important *unstated* objectives which tend to reflect the special interests of particular groups. Those responsible for fisheries management are often faced with serious value judgments concerning the 'fair' distribution of resources and income. The formation of policies therefore tends to involve politically sensitive issues.

The stated objectives of entry restrictions, for instance, may be to make participation more lucrative for those who get the permission to fish, while the unstated objectives may be simply to restrict competition, to secure the position of a class of users, to maintain a particular balance of power, and to provide a guarantee against radical changes in the organisation of the industry. Innovation often also involves some unintended side effects. Research into some of the effects of limited-entry schemes is revealing in this respect. In some cases, in Alaska for instance, the operation of a market in fishing permits has resulted in windfall profits associated with entry permits and significant

changes in the composition of the group of permit holders. Increasingly, fishing has become monopolised by well-organised business firms, while individuals who identify themselves as fishermen and regard fishing as a way of life are put aside (Young 1983). This has of course far-reaching consequences for the social structure of local communities.

A number of case studies of the social aspects of fisheries management are already available (see, for instance, Pollnac and Littlefield 1983, Sinclair 1983, Young 1983, Lamson and Hanson 1984). Together they show that even though biological and economic aspects of fisheries often pose major problems for management, its social aspects are no less important. To manage only fishing itself is to manage a fraction of the industry. In fact, some of the barriers for the success of management schemes may lie in the management organisations themselves, in the organisational context of fisheries research and policy making. Knowledge about the functioning of innovating organisations and the construction of knowledge in bureaucratic institutions, may be just as important as knowledge about fishing stocks and the people who exploit them (Parades 1985:177).

The "rowing time"

In Iceland governmental decisions influence all sectors of fishing industry, and consequently those involved organise to affect government policy in their favour. Some of these organisations are formal and permanent associations, such as associations of fishermen and boat owners, the various groups of processors, and the various departments of the semi-governmental Fisheries Association (Fiskifélag Islands), which embraces many of the interested groups involved. All of these groups and associations take part in a complicated political process, the results of which change from one season to another. Administrative regulations are made within the framework of a general body of legislation, passed by Parliament in 1976 to regulate fishing within Icelandic waters. These regulations are changed in response to the condition of the stocks, as evaluated by the biologists of the Marine Research Institute, and the demands of various contending groups. Some of these regulations respond only to the demands of local fishermen, whereas others meet the recommendations of the biologists. These regulations are the results of a series of compromises among local branches of the Fisheries Association and different interest groups.

Cod (*Gadus morhua*) has always been the most important species exploited by Icelandic fishermen. The size of the stock is subject to periodic fluctuations which are largely independent of humans, but human exploitation has its effect too. During the first decades of the twentieth century the fishing effort multiplied as trawlers and motorboats replaced open rowing boats. The new vessels extended the range of exploitation of the fisheries resources. At the same time a dynamic market economy replaced the stagnant household economy of earlier centuries. In 1944 Iceland gained full independence from Denmark. The first independent government of Iceland was committed to a policy of economic development and concentrated on the fishing industry as a means to that end. Full-time fishing was rapidly becoming the livelihood of Icelanders and the focus of government development policy.

Not surprisingly, increased fishing effort has resulted in periodic declines in catches. The cod catch on Icelandic fishing grounds decreased from 1933 to World War II, but during the war the stock recovered. After that the Icelandic fleet expanded and foreign fleets resumed fishing. From 1955 to 1975 the fishing effort doubled, but despite this increase in effort Icelandic catches fell from 306.000 to 266.000 tons. This process led to a classic open-access, common-property tragedy. The opportunistic exploitation of fishing stocks by freely competing skippers who tried to get what they could from the sea while stocks lasted, led to sharply diminished returns. The 'natural' limit to over-exploitation, the 'maximum sustainable yield', had been exceeded.

Responding to recognition of this tragedy and the pressures of fishermen, the Icelandic government took the international move of trying to expand its jurisdiction and exclude foreign fishing vessels from waters around Iceland. It drew Great Britain into 'cod wars' that resulted in the exclusion of British trawlers from Icelandic fishing grounds in December 1976. The task of restoring depleted stocks and preventing future tragedies remained. It resulted in increased use of scientific models and policies for fisheries management within Iceland's domain. Iceland's fishermen had to accept constraints on their activities.

The history of Icelandic fishing provides several examples of co-management and democratic solutions. The co-ordination of the 'rowing time' in line fishing is a case in point. As more and more boats entered line fishing during the first decades of this century there was increased competition for fishing space both within and between fishing communities. The lines of each boat could stretch several miles, and when different boats left the harbour at different times, competing for similar locations, lines got chopped and intermingled, especially in strong currents. No one benefited. Fishermen agreed that a collective response was necessary.

Regulations concerning the timing of departure ('rowing time') were laid down by common agreement in 1930s. The fishermen agreed to fix a certain time for departure for each month. The precise times were debated for years, but most fishermen favoured some regulations. Because the lines were taken ashore for baiting after each trip, it was impossible for anyone to control a particular path. The fisherman's regulations were rectified by law in 1945, but the details have been changed several times. In this episode, we see recognition of a common problem and a collective but informal solution that later attained the status of law. It shows the ability of fishermen to translate common interest into common rules sanctioned and enforced by the state.

Even though government policy in Iceland is generally responsive to local demands, as the case of the 'rowing time' illustrates, it is not necessarily equally responsive to the demands of different kinds of production units. In the case of the new quota system in cod fishing, an apparently neutral and technical solution to the problem of management has resulted in a massive transfer of power and capital. The threat of overfishing has usually been met with measures that do not discriminate between groups of fishermen. Thus, for some years the government tried to put a ceiling on the total catch of cod by deciding upon the length of the winter season and by closing particular popular

fishing areas. Such measures affected most fishermen in a similar way. In-deed, there seems to have been general agreement among fishermen that no one should be denied access to the fish. The solutions tended to be ones that guaranteed that the benefits and the costs were spread among all the fishermen rather than concentrated among a few, even though the latter choice might be simpler to design, administer, and enforce and might ensure a more coherent management policy. Generally, fishermen saw the policy of licensing as a threat that would undermine the previously held assumptions about equal access. With the introduction of the quota System in cod fishing, this context has been radically changed. As a result, a new differentiation is taking place.

Bound to favour the wealthy speculators

While capitalist production has been subject to an intricate institutionalised machinery since the last 'Cod War', the present system of management was introduced late in 1983, when it became clear that the prevailing fishing policy needed to be changed. By then the total annual cod catch was even less than the amount recommended by fisheries biologists, and the forecast for 1984 was bleak. The government decided to reduce the cod quota for 1984 to 220.000 tons, from an estimated catch of around 290.000 tons. At the annual conference of the Fisheries Association, most interest groups were rather unexpectedly in favour of a boat-quota System that would divide this reduce catch within the industry itself. The precise allocation of quotas was debated, but each boat was to be allocated an annual quota on the basis of its average catch over the past three years.

This meant that some ships would get higher quotas than the rest of the fleet, a fundamental departure from traditional policy. The individual quota system was recommended by the fishing industry and administered by the Ministry of Fisheries. The maximum catch of each boat is decided upon in advance, largely on the basis of its catch in the past. This policy has been re-evaluated every year, but the system remains more or less the same. By now, there is emerging a rather clear picture of the long-term effects of the quota system on the structure of the industry. The political debate is not so much concerned with the technical details of quota allocation, but rather with the large-scale social and political consequences of the system. The most serious criticism of the present system is that it transfers immense resources into the hands of a relatively small group of people, the boat owners (Helgason 1987).

During the cod wars Iceland claimed national ownership of the fishing stocks in coastal waters, a highly valuable resource. The quota system divides access to this resource among those who happened to be boat owners when the system was introduced, and this privileged access is free of charge. Increasingly, this 'gift' from the state is being transferred into capital. On the one hand, boat owners may sell their *boats* and thereby their share of the catch. On the other hand, they may sell their quota for any one year, or part of it, that is rent out the catch they are entitled to. In both cases an independent market has developed whereby boat owners are able to turn their free licenses into profits in accordance with the laws of supply and demand. There are reports

Trawlers in the harbour of Peniche (Portugal) (*photo: F. Bellec*)

of vessels being sold at a price which is two or even three times that of their 'real' value.

Permanent access to the resource, therefore, is no less valuable in monetary terms than the vessel itself. The temporary transfer of quotas, that is between vessels, is subject to some restrictions and it is difficult to estimate the amount of capital involved in such transactions, but a sizable part of the annual quota, possibly one quarter, is already changing hands. In 1984, 11.6% of the total vessel quota changed hands, and 13.5% in 1985 (see Arnason 1986). Given the price of a permanent license, embodied in the excessive value of fishing vessels on the free market, one can assume that temporary tenure is generally being sold at very high prices. The estimated total value of outstanding quotas in 1984 was 24 million US \$ and 35 million in 1985 (Arnason 1986). These figures indicate, Arnason argues, the economic rents produced by the quota System.

These transactions are likely to have profound implications for the distribution of power and income, and indeed the whole structure of Icelandic society. In Iceland there is a fundamental difference between two groups of producers: independent skipper-owners and capitalistic firms (Pálsson 1982, Durrenberger and Pálsson 1985). Independent boat owners typically own the smaller vessels. They tend to have permanent crews from one season to another. Their production is usually an integral part of their domestic economy, the household, and they make no clear distinction between work and leisure. Fishing is a way of life and not simply a source of income. The capitalistic vertically integrated firms, on the other hand, combine trawling on larger vessels and the freezing of the catch. On these vessels there is a high turnover of crew men from one time to another. The business has to conform to the strict laws of the market for capital and labour. When fishing becomes unproductive, the owners have two choices : to transfer their capital to more profitable endeavour, or to lobby for protection from the state (for an other context see, for instance, Barrett 1984, and Davis 1904).

With the quota System, a permanent right to fish has not only been given to an exclusive group, but this right is increasingly being turned into marketable commodity. As access has to be bought and prices of boats and quotas are subject to the mechanism of the market, it becomes increasingly difficult for newcomers to enter the industry. In the past, successful skippers were often able to become boat owners and a relatively large proportion of the fleet is still the property of share-holding companies of crew men and their families. In a few years it will be extremely difficult for skippers to start their own business, since the present system is bound to favour the wealthy speculators. The independent skipper-owner is likely to become obsolete.

Alternative management schemes are now being discussed. There are demands for a return to the System prior to the introduction of quotas, but this is unlikely, given the inadequacies, in economic and ecological terms, of the previous system. Also, there are demands for communal quotas where local authorities would be given a certain amount of autonomy as regards the allocation of quotas, a limited revival of the grass roots politics of earlier decades. Furthermore, some critics of the present system favour public auctions of quotas, whereby the state would receive incomes in return for the

selling of the right to fish. The demands for alternative policies are partly a response to recent developments in marketing and processing.

Over the last years boat owners have sold part of their cod catch directly to foreign markets, approximately 8% in 1985 and 12% in 1986. As the marketing and processing of a significant part of the catch takes place abroad, employment is being reduced domestically. Some people have therefore questioned the privileged access of the 'lords of the sea' to the most valuable national resource, arguing that fishing could become like third world mining where raw materials are exported with little returns to the domestic economy. While this is unlikely, the sheer possibility of such a development has called for a redefinition of the notion of 'interest group'. No longer is it seen to be restricted to boat owners and fishermen. Already workers in fish processing plants are demanding their share of the cake.

The main stated objective of the quota System was to control the total annual catch and to make fishing more economical. The cost side of the economic equation has been significantly reduced (see Helgason and Olafsson 1987). However there has been less success as regards the ecological objective. Generally, the total annual catch of cod is higher than that recommended by the marine biologists and the proportion of immature cod in the catch has been increasing. It is rather surprising, then, that politicians have been willing to institutionalise a system so costly in social terms, given its limited success in securing the reproductive potential of the stock. As we have seen, the quota system has favoured some groups of producers over others. Apparently neutral management decisions have had important effects on the balance of power and the structure of the fishing industry by changing the possibilities and alternatives with respect to access to fish. This transformation was, perhaps, unforeseen. However, a policy of fisheries research and management which ignores the social context of the industry is bound to generate much unforeseen change. A narrowly technical approach to the problems of management always invites the kind of morality epitomised in the words the songwriter Tom Lehrer credits to the nuclear technicians : "Once the rockets are up, who cares where they come down?"

Social construction of ecological knowledge

In Iceland, the understanding of fish and fishing activities has undergone a series of transformations with the development of economic and social relations (see Pálsson 1989). Fishermen and the general public regarded the first marine biologists as strange and eccentric men who operated on fish and "spent hours fiddling with all kinds of disgusting little things" (Hagalin 1964:321). The disrespect seems to have been mutual. One of the pioneers in marine biology was said to "have quickly realised that various kinds of super-stitious beliefs prevented the natural development of this important industry" (Bergsson 1940:240). With the threat of over-exploitation of fishing stocks, and the institutionalisation of fisheries that followed, the 'scientific' notion of homeostatic fisheries began to replace earlier rationalities of fishing. As the state became increasingly involved in the making of the industry, the balance of power shifted in favour of the biologists. This, of course, is not peculiar to

Iceland. While some marine biological research occurred in Iceland already at the beginning of the twentieth century, full-time research started later, in the 1940s. The present Marine Research Institute was established in 1965.

Since the introduction of the quota System politicians and biologists have cooperated closely. The politicians need the scientific arguments and therefore encourage research. However, they have often regarded the biologists' measurements and analyses with suspicion. Former Ministers of Fisheries have argued that if the scientists had been right in their estimates and predictions, the fisheries would have collapsed. Contrary to the 'Black Report' predictions of 1975, a report of the Marine Research Institute that was influential in the cod wars, the cod stock remained fairly stable until a sharp decline in catches in 1982. One former Minister has referred to the 'regional of the biologists'. Another former Minister of Fisheries points out that 'in the biologists' own calculations, the size of the 1976 year class of cod keeps increasing' (see Sjúvarfréttir 1980:17).

Fishermen frequently complain that "nowadays everything is being ban-ned". The biologists are usually the target of fishermen's criticism since all major decisions are based on their models and forecasts. Some have complained that all initiative is being taken from fishermen. Others question the basic assumptions of biologists and managers. One skipper has argued, for instance, that "knowledge of fish migrations and the size of different stocks is still infinitely small" and that "those who have come to know the fishing grounds around Iceland, during a lifelong career in fishing, must become mute when the wise men (*spekingar*) announce their precise measurements of the stocks, to the ton" (Hermannsson 1984). It is understandable that skippers, aware of the discrepancy between reality and the 'pessimistic' forecasts of the past, fail to be impressed with the rhetoric of the scientists. As one skipper commented, "They always knew about all this fish. They only used the 'Black Report' to scare the British away".

The proposals put forward by the marine biologists have been met with distrust and emotional reaction among fishermen. During the last cod wars, the fishermen tended to regard internal limitations to access with some scepticism, arguing that if they didn't catch the fish, the British and Germans would anyway. Once the common enemy disappeared, conflict between fishermen and biologists increased. Fishermen have become increasingly dominated by techno-scientific knowledge and the agencies of the state. Confronted with the details of scientific research, fishermen have become powerless, in their words 'mute'. Management becomes increasingly the business of wise men who speak a strange language. Their language and wisdom is not, as is often assumed, unaffected by the social context in which it is produced and used. Research is subject to immense political pressures. Knowledge, it may be argued, the knowledge of scientists no less than that of fishermen, is socially constructed.

In the modern world, reality is increasingly defined by full-time scientific experts, who monopolise 'universe-maintenance', to borrow the jargon of Berger and Luckman (1966). Their knowledge is often conceived as an 'objective' representation of the physical world. Such a view of the scientific enterprise needs to be re-evaluated. It is important to recognise that ecological

facts do not speak for themselves and that ecological realities are inevitably socially constructed. Worster has shown, for instance, that ecological ideas are rooted in their times and that scientists cannot isolate their perception of nature from the rest of their mental life. "The history of ecology", he says, "shows how impossible it has been, even when men have most desired it, to screen out... biases. Any attempt to so divorce nature from the rest of human condition leads to a doctrine of alienation, where the science must occupy one realm and the social and historical consciousness another"(Worster 1977:345).

The need for a sociological analysis

The thesis which suggests that access to the ocean is open for anyone in most fishing societies, and that this is the root of all environmental problems, is contrary to the facts. Anthropological studies have shown that in many fishing societies people have developed indigenous means of regulating access to fishing grounds – sometimes for the purpose of preventing over-exploitation. In industrial societies, indigenous management methods are often combined with or replaced by public policies – regional, national or even international ones. People opt for public solutions because of the complexity of industrial fishing systems and the need for striking a balance between different political factions and interest groups.

Some of the major problems of fisheries policy concern the relationship between the local level and the national level – between the grass roots and the state. Public policies, by definition, remove decision making from the local community, but to be effectively constructed and implemented policy must somehow ensure feedback between the two levels of government. Even though major decisions are taken by regional or national agencies, it is possible to incorporate indigenous management techniques in the planning process. As we have seen the history of Icelandic fishing provides several examples of democratic solutions to management problems.

While the extraction of food from the sea seems to present somewhat similar problems in most societies and people seem to deal with them in similar ways (Acheson 1981), one should not overemphasise the common characteristics of fishing societies. After all there are substantial differences between fisheries, even within the same society. The process of extraction may be the same, but social relations are often very different since people organise their production in various ways. Indeed, one of the significant differences in fishing systems concerns the nature of production units. While in industrial societies production is usually geared for the market, the units of production may differ widely in terms of organisation, ideologies and motives. It is important, not the least for practical purposes, to pay attention to such differences. Organisations have systematic properties, and any management scheme is consequently likely to have repercussions beyond the narrow context of implementation. Also, the perception of environmental problems is likely to vary from one type of organisation to another. One type of organisation may encourage fishermen to define environmental conditions as problematic and to take direct action to redress the balance. Another type of organisation may do just the opposite.

The history of the quota system in the Icelandic cod fishery shows the limits and potential political implications of a narrowly technical or 'scientific' approach to the problem of management, even in a relatively democratic system. In the absence of a holistic, contextual analysis of the fishing industry, a discriminatory but seemingly fair and neutral policy was adopted. The fear of environmental disaster has not so much resulted in successful attempts to redress the ecological balance; rather it has instituted a policy which radically alters the balance between social groups. This example shows that it is necessary to incorporate sociological analysis into fisheries research and decision making in order to ensure a sound and responsible fisheries policy. Management must seek an understanding of the organisation of fishing systems and how the parts relate to one another. To translate this in practical terms, one may ask for example: To what extent should management address individual operators and to what extent the holistic nature of fleets, fisheries and fishing communities? To properly access such considerations, we need comparative knowledge of the systemic properties of fisheries activities and their place in fishing communities.

Gísli PALSSON
Lisbon, June 1989

(Titles and sub-titles by the editor).

Acknowledgements

I thank E.Paul Durrenberger and Arnór Guðmundsson for their comments upon some of the arguments presented. The concept of 'political ecology' is not a new one. Befu (1980) has applied it in relation to Japanese fishing, in a rather different sense though, emphasising 'techno-ecological' circumstances more than the social context of exploitation, management, and research.

REFERENCES

Acheson, James M. 1981

Anthropology of fishing, *Annual Reviews in Anthropology*, 10: 275-316

Árnason, Ragnar 1986

Management of the Icelandic demersal fisheries, p. 83-101 in N. Mollett (ed.): *Fisheries Access Control Programs Worldwide*.

Proceedings of the Workshop on Management Options for the North Pacific Longline Fisheries. Fairbanks.

Barrett, L.G. 1984

Capital and the state in Atlantic Canada: The structural context of fishery policy between 1939 and 1977, p. 77-104 in C. Lamson and A.J. Hanson (eds.): *Atlantic Fisheries and Coastal Communities: Fisheries Decision-Making Case Studies*. Halifax: Dalhousie Ocean Studies Programme.

- Befu, H. 1980
Political ecology of fishing in Japan: Techno-environmental impact of industrialization in the inland sea, *Research in Economic Anthropology*, 3:323-347.
- Bennet, John W. 1976
The Ecological Transition: Cultural Anthropology and Human Adaptation. New York: Pergamon Press.
- Berger, P. and T. Luckman 1966
The Social Construction of Reality : *A Treatise in the Sociology of Knowledge*. Middlesex: Penguin.
- Bergsson, Kr. 1940
Dr. Bjarni Saemundsson og fiskimennir, *AEgir*, 11: 239-241.
- Davis, Anthony 1984
Property rights and access management in the small boat fishery: A case study from southwest Nova Scotia, p. 133-64 in C. Lamson and A.J. Hanson (eds.): *Atlantic Fisheries and Coastal Communities: Fisheries Decision-Making Case Studies*. Halifax: Dalhousie Ocean Studies Programme.
- Durrenberger, E. Paul and Gísli Pálsson 1985
Peasants, entrepreneurs and companies: The evolution of Icelandic fishing, *Ethnos*, 1-2 :103-122.
1987 Ownership at sea: Fishing territories and access to sea resources, *American Ethnologist*, 14(3) : 508-22.
1987 The grass roots and the state; Resource management in Icelandic fishing, pp. 370-92 in B. J. McCay and J. M. Acheson (eds.) 1987: *Question of the Commons: The Culture and Ecology of Communal Resources*. Tucson: University of Arizona Press.
- Hagelín, Guðmundur G. 1964-5
I fararbroddi: AEvisaga Haralds Böovarssonar, I. Hafnarfjörour : Skuggsjá.
- Hardin, Garet 1968
The tragedy of the commons, *Science* 162 : 1243-48.
- Helgason, Porkell 1987
Opinber kvótasala tryggir hagkvaema og sanngjarna stjórn fiskeveioa, *Morgunblaio*, 4 November.
- Helgason, P. and S. Olafsson 1987
Ahrif kvótakerfisins árin 1984-1986 á sóknarafköst botnfiskveioiflotans og nytingu fiskstofnanna. A report submitted to the 110 session of the Icelandic parliament.
- Hermannsson, Halldór 1984
Svipull er sjávarafli, *Morgunblaio*, 17 March.
- Jentoft, Svein 1989
Fisheries co-management: Delegating government responsibility to fishermen's organizations, *Marine Policy* April, pp. 137-154.
- Lamson, Cynthia and Arthur J. Hanson (eds.) 1984
Atlantic Fisheries and Local Communities: Fisheries Decision Making Case Studies. Halifax: Dalhousie Ocean Studies Programme.

Marx, Karl 1961(1844)

Economic and Philosophical Manuscripts of 1844. Moscow: Foreign Language Publishing House.

McCay, Bonnie J. and James M. Acheson (eds.) 1987

Questions of the Commons: The Culture and Ecology of Communal Resources. Tucson; University of Arizona Press.

Pálsson, Gísli 1982

Representations and Reality: Cognitive Models and Social Relations among the Fishermen of Sandgeroi, Iceland. Ph.D. dissertation. University of Manchester.

1989 The idea of fish: Land and sea in Icelandic world-view, in R. Willis (ed.): *Signifying Animals: Human Meaning in the Natural World*. London : Unwin Hyman Ltd. In Press.

Parades, J. Anthony 1985

'Any Comments on the Sociology Section, Tony?': Committee Work as Applied Anthropology, *Human Organization*, 44(2):177 – 82.

Pollnac, Richard B. and Susan J. Littlefield 1983 Sociocultural aspects of fisheries management, *Ocean Development and International Law Journal*, 12(3-4) : 209-246.

Ruddle, Kenneth and Tomya Akimichi (eds.) 1984

Maritime Institutions in the Western Pacific. Osaka: National Museum of Ethnology.

Sinclair, Peter R. 1983

Fishermen divided: The impact of limited entry licensing in Northwest Newfoundland, *Human Organization*, 42(4): 307 – 313.

Sjávarfréttir 1980(12)

'Stjórnun fiskveioa'. Reykjavík.

Worster, Donald 1977

Nature's Economy : A History of Ecological Ideas. Cambridge : Cambridge University Press.

Young, Oran R. 1983

Fishing by permit : *Restricted common property in practice*, *Ocean Development and International Law Journal*, 13(2) : 121 – 170.

Kleine vissers dupe van laks overheidsbeleid

GROTE SCHEPEN RUKKEN OP IN NEDERLAND

Een vrouw als voorzitter van een vissersbond, dat is nogal ongewoon. Zeker als die vrouw niet uit een vissersfamilie komt. Toch is Marjet Witkamp al vijf jaar tot ieders tevredenheid voorzitter van 'Hulp in nood', een vereniging van kleine vissers rond de Waddenzee, een ondiepe zee in het noorden van Nederland. Ze werd gekozen tot voorzitter omdat ze als lid van de gemeenteraad van Ulrum, een gemeente met 3750 inwoners aan de kust van de Waddenzee, altijd opkomt voor de belangen van de vissers. Momenteel behartigt ze de belangen van de kleine vissers ook als bestuurslid van de landelijke Vissersbond en als wethouder van Ulrum. Aan haar grote inzet dankt zij haar erenaam 'koningin van de Waddenzee'.

Een gesprek met Marjet Witkamp over de kleine visserij in Nederland betekent vooral een gesprek over het lakse beleid van de Nederlandse regering. Op een onverantwoorde wijze heeft de-zie regering toegelaten dat de vissersschepen groter en groter werden.

”In Nederland is de overcapaciteit van de vissersvloot het grootste probleem”, vertelt Marjet Witkamp. “De Nederlandse regering heeft geen actief visserijbeleid willen voeren. Men heeft alles overgelaten aan het vrije spel van de economische krachten.” Ongerust voegt ze eraan toe: “Ik ben bang dat op den duur grote vissers zullen overleven en de kleintjes worden weggedrukt.”

De Nederlandse vissersvloot is de grootste en modemste van Europa. De vloot bestaat momenteel uit ongeveer 600 schepen, grofweg onder te verdelen in drie groepen: 50 zeer grote schepen met een motorvermogen van

meer dan 2000 pk ; 350 middelgrote schepen tussen 800 en 1500 pk ; en 200 kleine schepen van minder dan 300 pk. In totaal telt de vloot 550.000 pk.

De problemen rond de overcapaciteit zijn terug te voeren op overbevissing van de Noordzee. Biologen waarschuwen al tientallen jaren dat de Noord-zee leeggevist dreigt te worden. In reactie daarop stelde de Westeuropese regering in de jaren zeventig vangstbeperkingen in. Zo verbood de Nederlandse regering in 1977 de vangst van haring voor korte tijd totaal. Om de overbevissing effectiever te kunnen aanpakken, sloten de landen van de Europese Gemeenschap (EG) in 1983 een gemeenschappelijk visserijakkoord. Ieder EG-land kreeg toen een bepaald quotum voor vangst van verschillende vissoorten toegewezen. Nederland kreeg vrij kleine quota. De Nederlandse quota waren voldoende voor een vloot van 390.000 pk ; de Nederlandse vis-sersvloot was toen al beduidend groter. Het gevolg was dat vloot moest inkrimpen.

Het tegendeel gebeurde echter: tussen 1983 en 1985 kwamen er 111 nieuwe schepen bij met in totaal 50.000 pk. Kapitaalkrachtige vissers bleven voortdurend het vermogen van hun kotters vergroten. Dankzij investerings-subsidies en belastingsvoordelen was dit voor hen erg aantrekkelijk. Kleine vissers hadden die mogelijkheid nauwelijks.

Weinig controle

Marjet Witkamp steunt de vangstbeperkingen uit het Europese visserijakkoord, omdat anders de Noordzee over enige jaren leeggevist zou zijn en de vissers hun inkomen zouden verliezen. Maar ze is kwaad dat de Nederlandse regering geen hait heeft toegeroepen aan de ongeremde groei van het motor-vermogen van de schepen.

Zo oefende de Nederlandse regering tot voor kort weinig controle uit op de vangsthoeveelheden. Dit werkte in de hand dat de vissers de toegestane quota massaal gingen overschrijden. Grote vissers konden daardoor de steeds grotere capaciteit van hun schepen ten voile benutten, legt Marjet Witkamp uit. Bovendien konden de grote vissers de boete die de overheid oplegde bij overschrijding van het quota gemakkelijk betalen: de waarde van de extra gevangen vis was tien maal zo groot als de boete.

De grote vissers vingen zelfs zoveel, dat in november 1985 het nationale jaarquotum van schol al vol was. De regering verbood daarop de scholvangst voor de rest van het jaar, hoewel de vissers van de Nederlandse Vissersbond (met schepen van maximaal 2000 pk) nog 1200 ton van het hun toebedeelde quotum over hadden. Ze werden de dupe van de overtredingen van de grote vissers. Voor andere vissoorten gebeurde hetzelfde. Om nog een voorbeeld te noemen: grote boomkorvissers die op platvis vissen, vingen in 1987 als bij-vangst meer kabeljauw dan het nationale jaarquotum voor kabeljauw.

Marjet Witkamp vertelt, dat de Nederlandse Vissersbond jarenlang tever-geefs gepleit heeft voor het instellen van een wettelijk maximum aan het motorvermogen. De hoogste van het gewenste maximum volgde de feitelijke groei van het aantal pk's: in 1971 pleitte de bond voor een maximum van 800 pk, in 1978 voor 1250 pk en in 1984 voor 2000 pk. De regering wilde lange tijd

van geen pk-stop weten. Men was bang dat Nederland door een dergelijke stop haar positie als vooraanstaand visserijland zou kwijtraken. Ook bena-drukte de overheid dat grotere schepen economisch meer rendabel zijn (een grotere vangst betekent immers een grotere financiële opbrengst). Pas toen in 1987 de overschrijding van de vangstquota uit de hand liep ging de regering over tot een wettelijke pk-stop. Uitbreiding boven 2000 pk is nu verboden. "Bij tijdig ingrijpen had er een stop kunnen zijn op bijvoorbeeld 1200 pk", stelt Marjet Witkamp bitter vast. "Dan hadden we niet die enorme groei gehad en niet die enorme overcapaciteit."

De verhouding tussen de grote en kleine vissers is door deze ontwikkeling erg slecht. "Ze kijken niet naar elkaar, groeten elkaar ook niet. De grote vissers minachten de kleine. Ze redeneren: 'Die veredelde roeiboten rekenen we niet mee. 'Ze varen met volle kracht en net interesseert ze niet of ergens een kleine visser vaart.'" De kleine vissers zijn op hun beurt erg kwaad dat de grote vissers hun quota drastisch overschrijden endaarvoor hen het vissen af en toe onmogelijk maakt.

Heel arm

Het gesprek voert naar de aparte positie van de kleine vissers van 'Hulp in nood'. Bij 'Hulp in nood' zijn 45 schepen aangesloten, met elk een schipper en één of twee bemanningsleden. Het gaat om kotters met een motorvermogen van nog geen 300 pk. De vissers varen dicht bij de noordkust van Nederland, op de Noordzee en de Waddenzee, een kleine, zeer ondiepe randzee met een uniek dieren en plantenleven. Hun thuishaven is de haven van Lauwersoog. De vissers varen doorgaans twee maal per week uit en blijven dan twee dagen op zee. Een dag per week besteden ze aan onderhoud van het schip en de netten.

'Hulp in nood' is de oudste vissersvereniging van Nederland. In 1884 werd de vereniging opgericht ter ondersteuning van de weduwen en wezen van vissers die op zee verdronken. Tientallen jaren hield 'Hulp in nood' zich alleen met dit soort hulp bezig. Na de Tweede Wereldoorlog ging de vereniging zich vooral bezighouden met het behartigen van de belangen van de Wadden-zeevissers.

Marjet Wikamp vertelt, dat de vissers voor de Tweede Wereldoorlog heel arm waren. "Er was geen watervoorziening en de huisjes waren erg klein. Soms leefden drie gezinnen op een paar vierkante meter. Het hele gezin moest helpen de gevangen garnalen te pellen, ook de kleine kinderen, soms tot s'avonds laat. Er stond dan een bakje water op tafel om de ogen van de kinderen nat te maken, zodat ze niet in slaap zouden vallen." 's Winters kon er toen nauwelijks gevisst worden, vanwege ijsgang en storm. "Ze hadden toen schepen met zeil. Die schepen waren heel weergevoelig."

Na de Tweede Wereldoorlog werd de situatie een stuk beter. Doordat vissen tijdens de oorlog vrijwel onmogelijk was, zat er na de oorlog veel vis in de zee en waren de vangsten groot. Bovendien was er veel vraag naar vis. "Vissers hebben toen een glorietijd meegemaakt. Niet dat ze rijk werden, maar het ging veel beter. Ze kregen een eigen huis en betere schepen met goede

Sorting shrimps, Lauwersoog harbour (The Netherlands). (*Photo by Conelie Quist*)

motoren.” De omvang van de schepen groeide geleidelijk: van 40 pk voor de oorlog, via 150 pk tien jaar geleden, tot maximaal 300 pk nu. Nog steeds kunnen ze door slechte weersomstandigheden vaak niet uitvaren. De schepen zijn weliswaar minder weergevoelig dan vroeger, maar toch kan er bij ijsgang in de Waddenzee of een windkracht van meer dan vijf niet gevist worden. De vissers zijn al heel blij als ze per jaar 36 weken kunnen vissen.

Garnalen

De laatste jaren is het karakter van de visserij op de Waddenzee nogal veranderd, constateert Marjet Witkamp met spijt. “Vroeger was er op de Waddenzee gemengde visserij. Zomers viste men op tong, in het najaar op kabeljauw en de rest van het jaar op garnalen. De vissers haalden toen 1 à 2 procent van het nationale quotum voor kabeljauw uit het water. Maar de Nederlandse regering had bij de verdeling van de quota onder de vissers weinig aandacht voor de kleine visserij. Doordat de vangst zo kleinschalig is, krijgen ze sinds twee jaar geenvergunning meer om op kabeljauw te vissen.”

Bovendien raakten de Waddenzeevissers hun mini-quota voor de bij-vangst grotendeels kwijt aan grote vissers. Quota werden namelijk, in tegen-spraak met de voorschriften, handelswaar. Grote vissers hadden hun eigen quota al snel volgevist en hadden er veel geld voor over om hun quota uit te breiden. “Hadden kleine vissers financiële problemen vanwege een aantal slechte jaren of extra reparaties aan de boot, dan verkochten ze hun miniquota de voor bijvangst. Daar werden grote bedragen voor geboden.”

Het gevolg is dat de Waddenzeevissers veel meer dan vroeger op garnalen vissen, zeker nu sinds 1987 de controle op overschrijding van de vangstquota verscherpt is. Het gemengde karakter van de visserij is verleden tijd. Marjet Witkamp is bang dat er nu een overbevissing op garnalen ontstaat. “De vangsten zijn nu al minder groot dan vijftwintig jaar geleden.” De vervuiling van de zee speelt daarbij overigens ook een rol. Voor de garnalenvangst is tot nu toe geen quotum ingesteld. Wel bestaat er een vergunningstelsel, waar-door het aantal garnalenvissers niet kan groeien.

Ecologische voordelen

Eén ding benadrukt Marjet Witkamp keer op keer: doordat de Nederlandse regering de beperking van de vangstcapaciteit veel te laat serieus heeft aangepakt, komen de kleine vissers nu in grote problemen. Marjet Witkamp: “Er moet nu een harde sanering komen om als bedrijfstak te kunnen overleven en iedere visser een normale boterham te bezorgen. Er moeten schepen afvallen. In de praktijk zullen vooral de ‘midden vissers’, met kotters tussen 800 en 1500 pk, weggesaneerd worden. Maar ook in de kleine visserij is een sanering onontkoombaar.”

‘Hulp in nood’ vindt dat de Nederlandse regering moet voorkomen dat bedrijven simpelweg failliet gaan. Men moet meer geld uittrekken om het voor vissers aantrekkelijk te maken om hun bedrijf te beëindigen. “Met een grotere saneringspremie wordt het voor oudere vissers aantrekkelijk om tien jaar eerder op te houden met vissen.”

Marjet Witkamp zou het liefst zien dat de grote vissersschepen afvallen. "Ik heb liever tien kleine in de vaart dan één grote." Een reden is dat kleine schepen beter zijn voor de werkgelegenheid : tien schepen van 300 pk leveren ongeveer vijftig arbeidsplaatsen op; één schip van 3000 pk slechts ongeveer zeven. Ook in sociaal opzicht heeft de kleine visserij voordelen. Marjet Witkamp: "Kleine vissers zijn eerder tevreden met een redelijke boterham. Men hoeft geen miljoenen te verdienen, men wil ook nog gezond leven en een gezinsleven hebben. Grote schepen blijven veel langer op zee, soms wel veertien dagen. Ze zijn bovendien minder afhankelijk van het weer en varen dus vaak. Die vissers hebben daardoor geen gezinsleven."

Heel belangrijk zijn de ecologische voordelen van de kleine visserij. Marjet Witkamp: "De grote schepen hebben een grote trekkracht en zware netten. Daardoor woelen ze de bovenste tien centimeter van de zeebodem om. Ze maken kleine plantjes en visjes kapot en er ontstaan kale vlakten onder water. De trekkracht van de kleine schepen is lager en hun netten ploegen de bodem niet om, ze slepen slechts over de grond. Een voordeel van kleine schepen is bovendien dat ze met slecht weer niet kunnen uitvaren; het gebied krijgt daardoor tijd om zich te herstellen."

Krachtig weerwoord

Verontwaardigd constateert Marjet Witkamp dat de Nederlandse regering probeert de overcapaciteit af te wentelen op ontwikkelingslanden. "De Nederlandse regering is bezig alternatieven te zoeken in Afrika en Zuid-Amerika. Ze wil de grote vissers daar laten vissen. Maar dat is geen structurele oplossing voor de overcapaciteit. Bovendien zit je ook daar de kleine vissers dwars. Er is een proef geweest om bij Marokko te vissen, maar dat is mislukt vanwege moeilijkheden met de plaatselijke bevolking. De vissers kwamen terug met verhalen over bedreigingen, berovingen en drugsmokkel. Er komt binnenkort een nieuwe proef bij Algerije. De Nederlandse regering heeft daarover een contract gesloten met de Algerijnse regering. Die krijgt daarvoor een aantrekkelijk bedrag betaald. Dat is voor zo'n arm land natuurlijk zeer welkom, maar er wordt niet gedacht aan de kleine vissers in Algerije."

Voordurend moet Marjet Witkamp bij de Nederlandse regering en binnen de Nederlandse Vissersbond optornen tegen de invloed van de grote visserij. Zonder een krachtig weerwoord zouden de belangen van de kleine vissers in Nederland volledig over het hoofd worden gezien. Soms lijkt het vechten tegen de bierkaai. "Wat kun je tegen de grote vissers doen," vraagt ze zich wel eens vertwijfeld af, "er is niet tegen te vechten. Ze hebben meer kapitaal, meer mogelijkheden om het beleid té beïnvloeden." Toch gaat ze vol energie door. "We vechten niet tegen de groten," benadrukt ze, "maar vóór de kleinen. We moeten zorgen dat de kleine visserij overeind blijft."

Drs. Udo J. SPRANG
Journalist/Redacteur
Amsterdam

<p style="text-align: center;">LISBON SYMPOSIUM DOCUMENTS</p>	<p style="text-align: center;">DOCUMENTS SUR LE SYMPOSIUM DE LISBONNE</p>
<p>Various documents relating to the Lisbon Symposium (June 1989) are available at the ICSF Liaison Office, Rue Grétry 65, B-1000 Brussels, Belgium (Ph. (2)218-15-38). Please let us know if you are interested to receive any of the following documents:</p> <ul style="list-style-type: none"> * Report of the Lisbon Symposium * SAMUDRA Report N° 2 * A video recording of 35 minutes with the title: "Images and voices". <p>We wish to inform you that the French and Dutch articles in this dossier are available in English, the English and Dutch articles are also available in French.</p> <p><i>We also wish to emphasise that the view expressed ar those of the authors only and do not necessarily reflect the position of the ICSF.</i></p>	<p>Différents documents relatifs au Symposium de Lisbonne (juin 1989) sont disponibles au Bureau de Liaison d'ICFSF, Rue Grétry 65, B-1000 Bruxelles, Belgique (tél. (2)218-15-38). Si vous êtes intéressés, veuillez les commander:</p> <ul style="list-style-type: none"> *Rapport du Symposium International * SAMUDRA Revue n°2 *Une video de 35 minutes intitulée: "Images et voix". (en anglais) <p>D'autre part nous vous informons que les articles anglais et néerlandais de ce dossier sont également disponibles en français et les articles français et néerlandais en anglais</p> <p><i>Nous rappelolns que les vues exprimées dans ces articles n'engagent que leurs auteurs et qu'elles ne représentent pas nécessairement La position d'ICFSF.</i></p>
<p style="text-align: center;">Acknowledgements</p>	<p style="text-align: center;">Remerciements</p>
<p>The publication of the SAMUDRA-Dossier N°2 and the initial research work for the Symposium on "Marine Environment and the Future of Fishworkers' was made possible thanks to the financial assistance from the Calouste Gulbenkian Foundation (Portugal).</p>	<p>Ce SAMUDRA – Dossier N°2 a été édité avec l'appui finacier de la Fondation Calouste Gulbenkian de Lisbonne (Portugal) qui a bien voulu s'associer ainsi à la recherche qui s'est relaiée au Symposium sur le thème: "Environnement marin et avenir des travailleurs de la pêche".</p>

THE MARINE ENVIRONMENT AND RESOURCE MANAGEMENT

Should careful and rational management of fish stocks be considered a myth or a realistic prospect?

Recent history has shown how, because of over-exploitation of certain fish-stocks – among which herring, anchovy and cod are prime examples – the survival of some species has become an acute problem. Today all fishing zones are threatened, and no stock is safe from potential collapse.

The situation is so serious that some scientists and fish-workers' organisations have acted to sound the alarm and to demand from governments that measures to protect the resource be implemented.

However, looking beyond the indispensable need for legislation, it is the search for maximum profit which, unfortunately, so often governs fish production and marketing that must be challenged. Moreover, the question of resource management must integrate the need to safeguard the ecology of the marine environment, which requires profound changes of mentality.

In Lisbon, Portugal, in June 1989, about one hundred scientists, fishermen and organisation representatives from 25 different countries met at a symposium to develop their thinking on these questions. In this dossier, we publish some papers by European speakers at this international meeting organised by ICSF