European Social Science Fisheries Network

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Alternative Management Systems

Network Workshop 3
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Contents

0.0 Summary

0.1 *Introduction*

The third European Social Science Fisheries Network (ESSFiN) Workshop was held in Brest, 18-20 September 1997. It attracted a total of 26 participants from nine European countries.

0.2 *Briefing paper*

The report includes an extract from the briefing paper on *Alternative Management Systems*, circulated to participants in advance of the Workshop.

0.3 *Proceedings*

A prior decision was taken to limit the number of papers to be presented at the Workshop to 20 in order to guarantee more time for discussion. In the event 17 papers were presented in summary form over the two days, including invited papers from the chairman of the Dutch Fisheries Board and from representatives of the Joint Nature Conservation Committee and English Nature. A further two papers were tabled at the meeting. On the third and final day of the Workshop a visit was arranged to meet with representatives from the Comité des Pêches in Guilvinec. For the purposes of the report, the grouping and sequence of papers has been altered to provide a more logical account of proceedings. One organisational innovation reflected in the report is the presentation of commentaries from three rapporteurs selected from different disciplinary areas within the social sciences - law, political science and social anthropology.

0.4 *Analysis*

Starting from a premise of the need to reform existing fisheries policies and management systems, the Workshop was asked to examine what proved to be a non-radical agenda (i.e. one that sought to reform the systems from within) which focused on *institutional restructuring* rather than the content of fisheries policy. Three sub-themes emerged relating (i) to the *spatial scale of management* i.e. what is the most appropriate geographical level at which to formulate and implement policy; (ii) the kind of *organisational structures* likely to prove conducive to effective management; and (iii) how fisheries management will cope with increasing pressures to assimilate principles of *marine ecosystem management* and the precautionary approach.

(i) Two alternative models for the decentralisation and devolution of responsibility for policy formulation were examined: the first based on a *regional seas* approach which would relocate responsibility for detailed management policy in Regional Fisheries Councils comprising representatives from the appropriate coastal states and others with an established fishing presence in the area; and the second based on an interlocking system of *coastal state management* whereby

responsibility for fisheries within the national EEZ would revert to the coastal state. Below the level of nation state, there are significant roles to be played by *regional organisations* (as in the case of the 'fisheries regions' in Finland) and traditional *local institutions*, including the *cofradia* and *prud'homie* - though weaknesses were also identified in the parochial attitudes of such institutions.

(ii) The strengths and weaknesses of existing *co-management structures* and the roles of component organisations (e.g. POs) were analysed. A general conclusion was that co-management remains a rather ill-defined and possibly over-inflated concept and that its successful implementation is likely to reflect pre-existing conditions, especially in relation to the wider political culture and the history of the state : user group relations. Caution was also expressed about overstating the links between user participation, legitimation, compliance and the success of the management system. Even with high levels of compliance, there is no guarantee that the system would be able to deliver its objectives.

(iii) Fisheries management faces an imminent challenge from the growing demands for sustainable ecosystems, which can be met in one of two ways: either through the reorientation of policy objectives within a state-led 'integrated management' system or through the actions of major food corporations in by-passing the formal policy process to institute their own codes of conduct and use consumer power to ensure their observance. The concept of ecosystem management and the application of the precautionary approach are insufficiently developed to be able to predict their outcomes in terms of the impacts on fisheries.

0.5 *Implications for research*

The need for the integration of two research traditions which characterise the social sciences - general model building and empirical case studies - was stressed as a means of providing relevant information for policy makers. Three areas for further research - two of which reflect established areas of activity - were identified, together with the need to incorporate contributions from the hitherto relatively neglected disciplines: law and political science.

The three areas are:

* *decentralisation and devolution of fisheries policy*, including regionalisation of management; this requires more attention to mechanisms for policy formulation and implementation and the patterns of relationships between different levels of governance.

* *co-management*, where the task ahead is to identify in which types of fisheries and under what conditions, co-management can be expected to contribute to the solution of management problems; particular

attention should be paid to resolution of boundary problems relating to spatial, sectoral and organisational management fields.

* *integrated fisheries management*, with a prior need to develop a more comprehensive definition of the concept and to examine the compatibility of management systems and their bases in formal scientific knowledge and informal knowledge generated though practical experience.

1.0 Introduction

1.1 The following report summarises the proceedings of the Workshop on Alternative Management Systems, held in Brest, 18-20 September 1997, as part of the Concerted Action Programme for the European Social Science Fisheries Network (FAIR CT95 0070). It is the third in a series of five general workshops intended to bring together social scientists from Europe and the North Atlantic region working on fisheries, in order to present and discuss their research findings and to explore the relevance of such findings for the development of fisheries policy and management strategies.

1.2 The theme of alternative management systems has a doubly significant meaning. First, it represents a core area of interest for social scientists. A good deal of their writings, on both sides of the Atlantic, has stressed the importance of the institutional structures within which policy making takes place. A persistent thread of research has been to explore and understand the relationships between the different stakeholders involved, to identify the division of responsibilities and competence between the state and the user groups in the formulation and implementation of policy, and to analyse the strengths and weaknesses of the policy process. This focus for research is currently being revitalised by the inclusion of new dimensions within the scope of management policy - not least, the impact of marine ecosystem management on the theory and practice of fisheries management. A second reason for the significance of this latest workshop is the agenda for 2002. Although the formal, legal interpretation of that agenda is, in fact, quite narrow, it is widely acknowledged that 2002 does provide the opportunity for a much broader appraisal and reform of the Common Fisheries Policy (CFP). It is hoped that the proceedings of this Workshop may make some contribution to the debate on the future of the CFP.

1.3 The organisation of the Alternative Management Systems Workshop shows a number of important departures from previous practice, partly in response to aspects of 'self-analysis' over the conduct of the first and second workshops. The early phases of organisation followed much the same pattern as previously, with the issue of an open invitation for papers in the Network's newsletter FiNESSE. But the intention was to limit the number of submitted papers, if necessary by selection, to a maximum of 16 and to extend invitations to four keynote speakers mainly drawn from the industry. The aim in limiting the total number of papers was to allow more time for discussion and to provide a better balance between academic and 'professional' contributions. We were successful with the first of these aims but circumstances conspired against us with the late withdrawal from the programme of three of the four invited speakers for reasons which clearly indicated the unpredictability and urgency of developments within the field of fisheries management. We were, however, able to welcome Dick Langstraat, Chairman of the Fisheries Board in the Netherlands and to benefit greatly from his practical experience in the co-management of fisheries and Mark Tasker whose work with the Joint Nature Conservation Committee in Britain puts him at the interface between fisheries and the marine environment. Another innovation was to invite a

number of rapporteurs, from different disciplinary backgrounds, to comment on the proceedings. Their commentaries are summarised in this report.

1.4 The Workshop was attended by 26 participants from nine European countries and we were delighted to include in this number Guilermo Robledo Fraga from DGXIV as an observer. A total of 17 papers were presented in six thematic sessions, together with an open discussion introduced by the three rapporteur's remarks. In addition, two papers were tabled during the meeting but not formally presented. On the final day of the programme, participants were received by the Secretary General of the Comité des Pêches in Guilvinec for a frank, lively and informative orientation on the current problems facing the fishing industry in the area.

1.5 The following report is arranged in four sections: (i) an extract from the briefing paper on the theme of the workshop; (ii) extended abstracts of all papers together with brief summaries of the sessional discussions; (iii) a report of the final discussion, including the rapporteur's comments; (iv) recommendations for future research. As on previous occasions, some of the papers have been regrouped to give a more logical structure to the proceedings. Unfortunately, some of the sessional discussions are summarised only very briefly. This is due entirely to the failure of arrangements for taping the proceedings. Sessions 4 and 5 suffer as a consequence.

1.6 Provisional agreement has been reached with Blackwell Science for the publication of papers from the Workshop, together with some additional contributions, in a book to be entitled: *Alternative Management Systems for Europe's Fisheries*.

1.7 The coordinator of ESSFiN wishes to acknowledge the sterling work of the local organisers, Katia Frangoudes and Denis Bailly, in making such excellent arrangements on our behalf; to thank Didier Le Morvan for his hospitality and for making the facilities of CEDEM available for the meeting; and to thank Jean-Luc Prat for organising the visit to Guilvinec and Concarneau. Finally, as ever, all the participants are to be commended for their stimulating contributions which ensured the success of the Workshop.

David Symes
Hull, November 1997

2.0 Alternative Management Systems: A Briefing Paper[1]

David Symes, University of Hull, UK

2.1 *Introduction*

In some respects, the workshop on Alternative Management Systems reflects the very core of concern of social scientists in the field of fisheries and thus represents the main focus for the Concerted Action establishing the European Social Science Fisheries Network (ESSFiN). Whenever social scientists are gathered together in a discussion of the state and status of Europe's fisheries, the debate seems always to turn to questions concerning the institutional frameworks for fisheries management. At present these discussions are given an added zest by the immediacy of the reform of the Common Fisheries Policy (CFP) in 2002. While the political debate over 2002 is presently preoccupied by the more overtly 'political' issue of principle, i.e. whether a future common policy should be governed solely by the principle of non-discrimination or continue to admit the more pragmatic precept of 'relative stability', our agenda should be defined in broader, yet specific, terms. The aim of this Workshop must be to explore, through theoretical constructs and actual case studies, the bases for a more effective management of the renewable resources of the European Seas. Our focus will be on the appropriate institutional frameworks for management and, to a lesser degree, on the detailed 'content' of fisheries management, in the form of the regulatory measures by which the objectives of fisheries management are to be realised.

A key objective for our discussions, therefore, should be to set out the basic prerequisites for good governance of Europe's fisheries and to determine how far these conditions are met in the different alternative models of fisheries management that we shall be examining. The nature of the papers to be presented is quite wide ranging. Some will attempt to portray an alternative system in is entirety; others will examine only parts of the whole structure. But, whatever their approach, the same fundamental question will apply: is the alternative management system capable of gaining the respect and compliance of the relevant users group?

It is important that our deliberations in Brest should take note of and, where possible, build on the findings from the previous workshops in Seville and Aarhus. From the first of these, we had begun to develop a use-rights based management system for EU waters, which distinguished been community based use rights in inshore waters, open access or group based rights in offshore waters and individual quotas for pelagic fisheries in offshore waters. Apart from an emphasis on the need for flexibility, two key themes emerged from the second workshop: the problems created by 'discordant rationalities' and the ascendancy of 'integrated fisheries management'. Discordant rationalities between central(ist) and peripheral perspectives on the essential policy agenda

[1] This is an extract from the briefing paper originally circulated to participants in advance of the Workshop; the second part of that paper is summarised at 3.2.2 below.

and between the political and bureaucratic processes in formulating management policy were seen to impair the clarity and coherence of the management system. More importantly, perhaps, it was recognised that fisheries policy must take full account of the need to integrate fisheries and environmental objectives in what has become called 'integrated fisheries management'. According to the Intermediate Ministerial Meeting on the North Sea 'the primary aim of management is to ensure sustainable, sound and healthy ecosystems, maintain biodiversity and ensure sustainable exploitation of the living resources in order to achieve economically viable fisheries' (Assessment Report, 1997).

It is also important to remind participants that we are not looking to construct a single model to be applied in unvarying fashion throughout European waters. An abiding lesson from previous workshops - as, indeed, from the growing volume of literature on fisheries management - is the underlying diversity of ecological, cultural, economic and social conditions and the need to match this diversity by carefully tailored 'bespoke' systems of management which can adapt readily to local circumstances rather than 'off the peg' remedies. Not that we are expected to find complete solutions to the problems of management; a major task for the Concerted Action is simply to identify those aspects which merit more detailed investigation - in short, to develop the agenda for further research.

2.2 *What constitutes good management?*

Much of the criticism of the CFP (and other fishery policies) is directed against the ways in which the policy is developed, rather than against the deployment of specific policy instruments *per se*. The system is described as 'overcentralised', 'bureaucratic', 'inaccessible', 'lacking in transparency' and 'too dependent on top-down modes of delivery'. In other words, the burden of complaint is upon the institutional arrangements for policy formulation and implementation and the structures and procedures on which policy making depends. Although it may not be difficult to find fault with the CFP, it is a far harder task to define the essential characteristics of 'good' management, partly because of the earlier prerequisite that management systems must be designed to suit particular ecological, cultural and social conditions.

But we can make a start by trying to identify the main architectural features of a management system. The following are posited as key features.

(i) *The system of use rights*, defining which fisherman have legal or customary rights to exploit the fishery and under what conditions. This has become a key area of social science research and increasingly recognised as a prerequisite for an effective management system. The recent debate has been dominated by the issue of privatisation (ITQs) partly because of a mistaken assumption that otherwise fisheries are necessarily subject to ill defined common use rights.

(ii) *The policy scope* as indicated by the aims and objectives of the management system; in the past the aims and objectives have been too narrowly defined in terms of the sustainability of stocks of commercially important species and the maximisation of economic returns as implied in the Gordon-Schaefer model. The policy scope for fishermen has been described by Hanna (1997) as typically unstable and therefore prey to political manipulation. The most significant question concerning the future scope of fisheries policy is the integration of environmental objectives within an ecosystems approach to fisheries management.

(iii) *Geographical scale*: fisheries management may occur simultaneously on several different scales - international, national, regional and local. Where a single management system extends over too large an area it is likely to prove insensitive to the underlying ecological, cultural and social conditions. Devolving management to a more appropriate spatial level, without sacrificing the advantages of a macro-regional approach, becomes one of the more taxing issues for policy reform. Part of the problem of conventional management systems is the lack of congruence between the fixed political boundaries of EEZs and the more fluid boundaries of marine ecosystems.

(iv) *The policy community* i.e. who actually shares responsibility for formulating fisheries policy. The extent to which user groups are able to participate in the decision making processes, and the timing and form of consultations and/or negotiations with stakeholders, has been a major area of interest for social scientists as part of the co-management debate. Exclusion of user groups from the policy community has been identified as a significant contributory factor to the lack of legitimacy attributed to management systems.

(v) *The policy process* is closely linked to (iv) above but refers specifically to the procedures by which decision making occurs, including the source and nature of inputs of information and advice (stock assessments, economic data), the role of fisheries science and of independent referees. In the case of the CFP the process is seen as overly technocratic, lacking in transparency and inducing rigidities of structure which frustrate the need for flexibility.

(vi) *Policy content* refers to the range of regulatory measures used, and their specific combinations, including input restrictions (licensing, days at sea), output limitations (TACs, catch quotas), technical measures (gears, ground closures), structural measures, and fiscal measures (grants, subsidies, pricing mechanisms); at present, most regulatory systems are constructed around the hugely unpopular and largely discredited total allowable catches and quota allocations.

(vii) *Implementation*: it is important to observe the distinction between policy formulation - as described in (i)-(iv) above - and policy implementation. A major question concerning implementation is the extent to which

responsibility is devolved to appropriate fishermen's organisations at national or local level and the degree of discretion granted to such organisations in determining the detailed form of implementation e.g. in the administration of catch quotas.

(viii) *Enforcement* is now a widely recognised but under-researched requirement for effective management. Many of the regulatory measures identified at (vi) above require active surveillance and enforcement; but enforcement is seen as a weak link in many management systems and fishermen express little confidence in either its effectiveness or its even handed application.

(ix) *Monitoring*: all management systems should have adequate means of continuous monitoring of the progress of the policy in the light of its stated aims and objectives. This would include not only stock assessment data, catch and landing statistics but also information describing the economic, social and environmental impacts of the policy.

(x) *Review*: all management systems should be subject to periodic review to determine whether the policy - wholly or in part - requires revision either in the light of 'internal' weaknesses or because of changes to external circumstances. The system must also be capable of responding quickly to sudden (and, therefore, largely unforeseen) changes in circumstances. Normally, one can expect review procedures to form an integral part of the policy process outlined at (v) above, but there may be grounds for arguing that periodic reviews should take the form of an external audit.

Nor is it particularly difficult to translate these architectural features into principles of design for good management. An ideal system would surely be one:

* based on a clear, precise definition of use rights;
* with a broad, well defined and stable set of aims and objectives;
* developed at an appropriate geographical scale;
* involving all major stakeholders within the policy community;
* using relatively simple and transparent procedures;
* involving a well integrated combination of regulatory measures;
* implemented, as far as possible, through responsible user group organisations;
* with effective means of surveillance and enforcement;
* amenable to effective monitoring;
* subject to periodic review and capable of rapid response to changing circumstances.

Yet, despite the apparent simplicity of this decalogue of requirements for good management, most real systems fall palpably short of the ideal situation. A number of common design faults can be identified:

* the lack of clearly articulated, comprehensive and stable aims and objectives;

* the reluctance of the central authority to admit responsible fishermen's organisations as partners within the policy community and to devolve responsibility for the implementation of management policy to such organisations;
* divisions among user groups and the fragmentation of user group representation;
* a lack of resources, technical ability and the will on the part of fishermen's organisations to undertake responsibility for the implementation of management policy;
* a rigidity of structures and procedures which renders the management system unable to respond promptly to changing circumstances;
* over-complex, conflicting and unenforceable regulations;
* weak enforcement of regulations and inadequate sanctions;
* inadequate monitoring of management performance which in turn, implies
* insufficient information on which to base sound strategic planning of the sector.

2.3 *Alternative approaches to the dilemmas of fisheries management*

It is clear that the issues confronting fisheries management can be approached by a number of alternative routes. Reform of the CFP, as a specific example, invites a range of options. At one extreme is the proposal for the further centralisation of authority in Brussels, implying a significant reduction in the discretionary role of the member state in the implementation of central policy decisions. This approach - not reflected in the workshop agenda - comes, not surprisingly, from the Spanish fishing industry anxious to break the stranglehold on the expansion of fishing rights imposed by the principle of relative stability. One recommendation is for the establishment of a single European fleet, operating under a common control policy within Community waters, and managed by Brussels through a unified system of effort control (Fishing News, 1997).

Approaching the issue from a wholly different direction are proposals, promulgated by the National Federation of Fishermen's Organisations, representing the industry in England and Wales, for a transfer of management responsibility and authority from Brussels to the coastal state (see paper by Crean). Within such a system, the coastal state would be empowered to design and implement an appropriate conservation regime to protect stocks within its own sovereign waters extending out to 200 miles or to a median line, applicable on a non-discriminatory basis to all fishing vessels from EU member states (NFFO, 1997).

A third approach examines the opportunities for a decentralisation and regionalisation of the CFP, based on the principles of subsidiarity and the concept of 'regional seas'. It starts from the premise that the relevance, legitimacy and effectiveness of the CFP is undermined by the sheer geographical extent of the 'common pond' and seeks to disaggregate the single monolithic

common policy into a series of common policies developed for particular regional seas.

Each of these three distinctive approaches is concerned, in the first instance, with the redefinition and relocation of authority for fisheries management within the context of the European Union. Each thus seeks to tackle the fundamental *political* issues as well as exploring opportunities for the restructuring of the institutional frameworks for fisheries management. Other approaches address particular aspects of the relationships between the central administration, regional authorities and fishermen's organisations, by revisiting the important 'co-management' debate, in varying contexts but mainly concerned with the implementation of management policy at group, district or local levels.

Co-management involves two main functions: consultation between the central administration and the user groups over the content of management policy and delegation of management functions to user group organisations. Neither is sufficient, on its own, to fulfil the essential conditions of co-management. It requires a more holistic approach and a more closely integrated relationship between the central administration and the industry in which there is a commitment to co-responsibility and cooperation throughout the policy process. Possibly the most surprising feature of co-management is that it should have gained so little ground in the real world of fisheries management. The truth is that, for all its theoretical appeal, there are practical problems in its application. Both central government and the resource users remain hesitant; there are questions as to which sectors of the industry should participate in the consultation process and how to balance the numbers; and there are lingering doubts as to the ability of fishermen's organisations to assume devolved management responsibilities. Yet without a greater engagement of the industry in the policy process, the willing compliance of the industry with the management strategy is likely to prove elusive.

The 'state' seems assured of its role as a principal partner in almost all of these alternative management systems on four main grounds: the principle of democratic accountability; its exclusive legal status in negotiations with third countries; its legislative and revenue raising powers; and its ability to broker compromise agreements between the objectives of fisheries management and other aspects of marine resource utilisation.

One radical approach, which unfortunately is missing from our agenda, is the Marine Stewardship Council pioneered in 1996 by the unlikely combination of an established conservation organisation, the World Wildlife Fund, and a major multinational corporation with interests in food processing Unilever - two organisations with significantly different agenda. Its ambitions are to establish, within two years, an international set of principles and criteria for sustainable fishing, drawing heavily upon the FAO's *Code for Responsible Fishing*. These will be 'enforced' through a system of certification (eco-labelling) involving the harnessing of market forces and consumer power, through the consumers' rights to choose certificated products. Thus the Marine Stewardship Council follows quite closely the template established by the Forestry Stewardship Council

launched in 1993. Its particular interest for our analysis of alternative management systems is the entry of non-traditional stakeholders into an established but hitherto unsuccessful, sphere of management. The MSC system will no doubt challenge accepted policy mechanisms, not least in it apparent usurpation of the role of the state as the enabling organisation for fisheries management. 'Interference' from non-governmental organisations is nothing new - and can be expected to grow while formal systems of management continue to prove their inadequacy - but the universal ambition of the project is novel.

2.4 *Conclusions*

The papers to be presented in this Workshop cover a very wide ranging critique of existing fisheries policies and an equally diverse range of 'solutions' to the problems that surround those policies. Radical approaches are, in the short term, unlikely to make much progress especially in the context of a large, slow moving and essentially cumbersome institution like the European Community. The value of radical proposals may lie more in the stimulus they give to the debate and in the clarification of key issues rather than in the way they shape the final outcomes. What this paper has attempted to do is lay down a set of clear, non-controversial principles upon which fisheries management systems should be based. The task of the Workshop is, in part, to test both existing and alternative management systems against the 'ten commandments'.

2.5 *References*

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Fishing News, 22 August 1997

Hanna, S (1997) Parallel institutional pathologies in North Atlantic fishery management: Europe and the USA. Paper presented to the ESSFiN Workshop on Northern Waters: Management Issues and Practice, Aarhus, 29-31 May, 1997

NFFO (1997) *Coastal State Management: A Strategy for Implementation*, a policy statement issued by the National Federation of Fishermen's Organisations

3.0 Proceedings

3.1 Approaches to management: past, present and future

3.1.1 *Introduction*

It was anticipated that the Workshop would range through a wide spectrum of issues concerning alternative management systems including the redefinition of policy objectives, the redesign of policy institutions and a reappraisal of regulatory systems. In the opening session, therefore, three papers were chosen to present a broadly structured introduction to some of the issues and approaches which would be elaborated in greater detail in subsequent sessions. *González Laxe* presents an analysis of the existing Common Fisheries Policy (CFP) as a set of compromises struck between different member states and user group interests and inevitably characterised by a lack of internal coherence and thus subject to a surfeit of ambiguities and inconsistencies. Starting from a not dissimilar assessment of the nature of fisheries policies in general, *Salz* advocates the use of forcefield analysis as an appropriate methodology for policy analysis which might help to find a better balance and greater coherence between the competing aims of fisheries policy. In contrast, *Collet* switches attention away from introspective analysis of the outcomes of the policy process to a consideration of some of the fundamental moral questions underlying man's approach to the exploitation of natural resources and a reassessment of the relations between man and nature which structure fisheries policy.

3.1.2 *Inconsistency and ambiguity in the Common Fisheries Policy*

Fernando González Laxe, Department of Applied Economics, University of Coruña, Spain

Although the CFP is commonly represented as the result of complex and often provisional compromises between the Community's member states, it is in effect a policy riddled with inconsistency and ambiguity. The models provided by the Policy do not meet the need for reorganisation of the fisheries sector; nor do they fulfil the expectations of the fishermen. There are two basic problems underlying this situation. In the first place, the CFP is an extension of the Common Agricultural Policy, using the same basic approaches to tackle what are fundamentally different problems. In the case of agriculture the problem is one of surplus production; in fisheries, it is the deficiency of resources. Secondly, since the initial formulation of the CFP, the conditions of the world's fisheries have profoundly altered. At the outset of the 1970s new opportunities were opening up in terms of resources, techniques, products and markets; today, more of those opportunities have been exhausted and countries which formerly exported their surplus production are now dependent upon imports. The CFP has failed to adjust to those changes. The paper examines the underlying problems as they affect five areas of the CFP; resource conservation, policy controls, structural measures, markets and external relations.

In terms of resource conservation neither the scientific basis for estimating total allowable catches nor the measures to control fishing effort are adequate. Attempts to standardise the regulatory measures take no account of the diversity of fisheries; fishermen are encouraged to increase their individual harvesting capacities in order to compete in the race to exploit the quotas. Inspection and enforcement procedures are also inadequate. This is an area of profound weakness: policy control demands both the will and determination of the public authority and a change in the attitudes of the bureaucracies of the member states. Despite the introduction of Multi-Annual Guidance Programmes the effective rationalisation of the fishing fleets has not yet occurred. Several countries have failed to reach their targets for tonnage and engine capacity reduction and the Community has done little to redress the situation through the application of sanctions on defaulting member states. Although a marketing policy was the first aspect of the CFP to be established, there is little co-ordination between this and the resource conservation elements of the policy. Little protection is given to EC fishermen against falling prices caused by imports of cheap fish often caught with the assistance of heavy subsidies. There is no link between the notion of 'responsible fishing' and responsible trade in fish products - imports of fish caught using methods which breach the rules adopted for member states are freely allowed entry to European markets. Finally, the creation of exclusive fishing zones has greatly altered the world order: today, 50% of supplies to EC markets come from third country waters. Maintaining access for EC vessels to such waters has become paramount, but there is a duality in the EC's external relations which reflects the division between those member states which have long depended upon such imports and those which have traditionally relied upon the exploitation of fishing opportunities in third countries waters.

3.1.3 *Force field analysis: towards integrated policy assessment*

Pavel Salz, Agricultural Economics Research Institute, The Hague, The Netherlands

The results of management measures applied in fisheries may be examined in terms of both the desired and undesired effects which may occur in any one of several different dimensions. Evaluation of these policy effects has proved difficult: the need for a multi-disciplinary approach has frequently been stressed but seldom realised. This failure tends to give the impression that fisheries is a chaotic system, too complex to deal with in a balanced, integrated and holistic way. The paper provides the outline of a qualitative method for evaluating management measures through a six dimensional force field, appropriate to a multi-disciplinary approach. The six dimensions are:

* *ecology*, defined as the natural processes relating to marine populations and their habitats;
* *culture*, the sum of institutions which create rules and norms for human actions and which give those actions meaning;
* *economics*, dealing with choices made under conditions of scarcity, the operation of markets and the concept of imperfect valuation;

* *policy*, the actions taken by public bodies to protect and promote the interests of society;
* *technology*, the application of scientific knowledge; and the
* *spatial and temporal dimensions* which concern issues of scale (local: global; short term: long term)

The example of minimum mesh size is used to demonstrate the range of relevant questions essential to the search for common ground and a balanced interpretation of policy needs.

The paper stresses that these six dimensions are not to be viewed as functionally separate: inter-dimensional relations may prove more significant than the influences attributable to each separate dimension. Analysis of the proposed force field indicates, first, that awareness of the complexity of the system may have important consequences for solutions to the problems identified and, second, that there exist clear limits to the utility of the contribution of science in the resolution of the problem: beyond those limits, political choices are necessary. According to Capra and Steindl-Rast (1992) "in the old paradigm it was believed that in any complex system the dynamics of the whole could be understood from the properties of the parts... in the new paradigm the relation between the parts and the whole is reversed. The properties of the parts can be understood only from the dynamics as a whole". As applied to fisheries management, a key question is whether the operation of a management system is determined by the managers, the fishermen or by the interactions within the system itself. Answers to this question may have interesting implications for policy assessment and for related research.

Reference: Capra, C. and D. Steindl-Rast (1992) *Belonging to the Universe*, London: Penguin Books

3.1.4 *From the sustainable use of marine resources to the governance of the marine ecosystem: the function and role of an 'ethic of the sea'*

Serge Collet, Hamburg, Germany

The importance of adopting an ethical approach to the management of natural resources which establishes an appropriate balance between the needs of society and the requirements for environmental sustainability (i.e. a framework which respects nature) is becoming increasingly clear. In all human societies there are modes of regulation which serve to define man's relationship to nature and to prescribe acceptable patterns of behaviour. Modern society is, however, increasingly governed by economic rules - the authority of the market: how far can we maintain our respect for nature in a world governed by markets which attempt to override a whole series of non-economic values?

Concern for the environmental ethic was expressed in the 27 principles of the Rio Summit and ratified by 172 of the world's governments. Significant among these was the 'precautionary principle' which attempted to take account of the increasing scientific uncertainty over the behaviour of the environment

and man's impact upon it. This principle was to be applied in all spheres of man: environment relations to prevent the development of further irreversible damage to the global ecosystem. The principle has since been adopted as a basis for the management of the North Sea at the recent IMM in Bergen, and the development of a precautionary approach is now seen as a priority. Underlying the precautionary approach is a presumption that, where the burden of scientific proof to the contrary is missing, development is potentially damaging and the even more dangerous presumption of need for 'zero level damage'. This kind of thinking has led to the banning of drift nets in the Mediterranean and to the very categorical statement of objectives at the Second North Sea Conference in 1990. Are there other ways of developing more cautious approaches to the exploitation of natural resources?

More than any other area of activity, fisheries have become a focus for the precautionary approach. The marine ecosystem is complex. There is little certainty as to the relationships between stocks and recruitment, although management practice is based on the assumption that linear relationships do exist. In the absence of our ability to predict the course of nature, how do we calculate the basis for the precautionary approach?

Spinoza's views on nature are in accord with the precautionary approach for, according to him, nature is not subject to the laws of human reasoning concerned solely with the conservation of man. Man, however, is a part of nature. We know little about natural order and we demand that things are done in conformity with ways we think are correct. This implies an anthropocentric structural model of cause and effect and the impact of the whole on its parts. Yet how do we determine the abstraction of the parts? How can we define an ecocentric approach to fisheries management so that we can regulate fisheries in a manner which is appropriate not only to an ethical view of the marine ecosystem but is also consonant with economic laws, i.e. where the value of the resource has to be optimised according to a rationale very different from that based on the functioning of the ecosystem? Both perspectives represent the two sides of the same coin.

3.1.5 *Discussion*

As was both anticipated and intended, the discussion opened around a number of questions linking the themes of morality, sustainability, policy objectives and policy process and the different social science disciplinary perspectives. If ethical considerations are to be given prominence, they must be applied universally. Policies are developed essentially to satisfy human needs but can often end up in moral contradictions. In Europe, for example, the scarcity of resources in relation to market demand has encouraged the export of fishing effort, under licence, to third country waters often to the detriment of local resources. Thus, the underlying goal of sustainability is prejudiced by the lack of a strong and universal basis to resource management policy. It was also questioned whether a discriminatory application of regulatory policy on social grounds - as in the exemption of certain groups of fishermen (e.g. under 10m vessels) from licensing, logbook or quota restrictions - could be justified when

it is widely acknowledged that these privileged groups can contribute a significant level of fishing effort. Similarly, it was important not to download all the blame for the state of the fisheries and the marine environment on the behaviour of the fishing industry - there are many other factors to be taken into account.

A more comprehensive conceptualisation of the objectives for natural resource management was required. Without the enunciation of clear, precisely defined and universally agreed objectives, it will be difficult to know how to incorporate new dimensions into fisheries policy and difficult also to avoid the inevitable abandonment of the high moral ground of sustainable development in the search for politically acceptable compromises which allow the regulatory system to remain intact but without fulfilling the goal of sustainability. Although the problems of contrasting disciplinary perspectives were acknowledged, it was deemed wrong to characterise these in terms of trench warfare or a siege mentality: the common elements of the different disciplines are rarely stressed in open discussion. An interdisciplinary approach to the meaning and operationalisation of 'integrated fisheries management' was essential.

3.2 Scales of management: regional, national and local

3.2.1 *Introduction*

The second group of papers addressed the issues of alternative management systems more directly from an institutional perspective examining different scales for the formulation and implementation of management policy. *Symes'* paper argues for a major organisational reform of the CFP through the regionalisation of policy around the concept of 'regional seas' and a widening of the basis of the policy community. Equally controversial - though somewhat removed from the claim for the 'repatriation of fish stocks' - is the case currently being put forward by fishermen's organisations in Britain for a return to coastal state management and reviewed in *Crean's* contribution. Moving down the spatial hierarchy and into the realms of actual - as opposed to idealised - management systems, *Sipponen* traces the development, structure and operation of 'fisheries regions' responsible for the management of inland and coastal fisheries in Finland. Finally, in this section, *Bailly* presents the case for systems based on territorial use rights, pointing to the strengths of such systems in the context of inshore fisheries management in Mediterranean waters.

3.2.2 *Regionalisation of the Common Fisheries Policy*

David Symes, Department of Geography, University of Hull, UK

Among the many possible 'solutions' for the reform of the CFP is the concept of 'regionalisation'. Historically the Policy was developed largely with reference to the North Sea but now extends over a much larger geographical area and ecological range. The inclusion of new member states has also altered

the politics of the CFP from a preoccupation with securing the sustainability of commercial fish stocks within a framework of 'relative stability' to a fundamental challenge to this approach from some of the new entrants. The notion of a 'regional seas' approach addresses the problem of scale and the contention that the 'common pond' has grown too large to be managed through a single common policy.

The paper outlines a regionalised approach to fisheries policy intended to bring decision making closer to those most likely to be affected by its outcomes (the subsidiarity principle) and indicates something of the internal architecture of the system and the relations between the regional organisations and the central European institutions. The ideal situation would be for the regional management unit to envelop a particular marine ecosystem. The eight regional seas are a best approximation, correlating well with the ecosystem approach in the North, Baltic and Irish Seas but only very approximately in other subdivisions of the North East Atlantic.

Whereas Brussels would retain certain key functions (policy aims and objectives; ensuring overall coherence of the regional approach; policy monitoring and evaluation), the Regional Fisheries Councils (RFCs) would undertake all detailed aspects of management (licensing, quotas, gear regulations, structural policies etc), subject to ratification by the Council of Ministers. Regionalisation also provides an opportunity for a radical restructuring of the policy community. Membership of the RFCs would be restricted to the relevant coastal states and other member states with established fishing interests - non-member coastal states would be given observer status. The restructuring of the policy community also implies the extension of representation to user groups and, in the light of the increasing emphasis on the ecosystem approach, to conservation organisations. Several alternative formulations of the policy community are outlined.

The regional approach can also be adapted to allow greater coordination between EU fisheries policy and the work of the macro-regional organisations (NEAFC), as well as providing an appropriate framework for fisheries management within the individual member state.

3.2.3 *Creating a UK coastal state fisheries management regime within the European Union*

Kevin Crean, Hull International Fisheries Institute, University of Hull, UK.

Against the background of crisis and reform confronting the CFP, the paper explores alternative forms of management, paying particular attention to the principle of subsidiarity and the concept of coastal state management as developed in the UK by the National Federation of Fishermen's Organisations (NFFO). Schaefer's (1991) analysis of the subsidiarity principle is reviewed, noting the alleged problems of 'capacity deficit' (inability of institutions to act effectively and in time), 'policy deficit' (disparate and ineffective distribution of power within decision making) and 'implementation deficit' (reliance upon

member states with their unequal political, legal and administrative capacities for applying European Law). These problems are, to a degree, compounded by the UK government's disinterested stance and the fragmented structure and, at times, undisciplined behaviour of UK fishermen. Together they may form a dispiriting basis for arguing the case for coastal state management, involving greater management responsibility for the UK government and UK fishermen's organisations in respect of the 200 mile EEZ. Closer analysis does, however, suggest that there is some evidence of both the capacity and inclination of certain fishermen's organisations to press the case for 'entrepreneurial governance' and to wrest some key areas of management responsibility from the existing bureaucracy.

The coastal state management project could provide such a thrust. The paper analyses the role of NFFO in developing proposals for greater coastal state responsibility, within the framework of the EC, through the articulation of a 'network of interlocking coastal states'. The proposals would break with the existing system of centralised control based in Brussels and establish a management regime designed to secure sustainable fishing opportunities by the application of additional conservation measures, over and above those currently enshrined in the CFP, to all vessels operating within the national 200 mile limits. In addressing questions of equity and 'relative stability', the NFFO suggests that 'the only fair, rational and consistent basis for national allocations, in the long run, is to align national quota availability with that country's contribution to resources. Fish are therefore considered a national resource to be principally exploited by, or employed for, the benefit of the coastal fishermen'. The NFFO's policy proposals, however, also recognise the complexity of allocating the national contributions to fish stocks in areas like the North Sea and the need for joint management of such areas through bilateral agreements. While not acceding to the demands of some factions within the UK industry for a withdrawal of the UK from the CFP, these proposals are a clear call for decentralising responsibility for a modified CFP.

Reference: Schaefer, G.F. (1991) Institutional choices: the rise and fall of subsidiarity. *Futures* 23(7), 681-94.

3.2.4 *Fisheries regions - an improvement in coastal and inland waters fisheries management in Finland*

Matti Sipponen, Employment and Economic Development Centre, Jvväskylä, Finland

The Fisheries Act 1982 was a turning point for fisheries management in Finland, switching the emphasis from the conservation of fish stocks to the utilisation of resources through maximum sustainable yield. Hitherto, the institutional structures of the supply market had led to an underutilisation of resources. To overcome these problems the 1982 Act provided for the division of Finnish inland and coastal waters into fisheries regions, irrespective of private property rights and regardless of municipal boundaries: its purpose was

to promote the development of resources and the efficiency of fisheries management.

In Finland both land and water are subject to private ownership; fishing rights are tied to the ownership of land and many privately owned waters belong to groups of private real estate holders. The proprietor is commonly a shareholders' association or fisheries cooperative. Between 70 and 80 per cent of the surface area of Finnish lakes is owned by fisheries cooperatives, of which there are some 7,600. The number of shareholders per association may vary from two to several thousands. Many cooperatives are limited in size and lack the incentives for active management.

Following the 1982 Act, each of Finland's eleven provinces was subdivided into fisheries regions, intended to form a coherent management unit. Of the 222 such regions, the majority (177) comprise only inland waters. Delineation of the regions was made on the basis of natural boundaries, biological features, the distribution and intensity of commercial and recreational fishing and administrative features. Centrally placed in the administrative structure, the region represents an intermediate level of public administration. Membership of the regional body comprises fishery cooperatives, individual proprietors, associations of professional and recreational fishermen and, in some cases, the state. The regional body has the responsibility for preparing management plants, formulating regulations through the use of byelaw powers, and data collection. In coastal waters, the boundaries of the region enclose a narrow coastal zone usually no more than 10km in width. Beyond that limit lie the public waters and the government's responsibility.

The final part of the paper assesses the success of fisheries regions as examples of co-management. Overall, the system has proved a worthwhile development enhancing the effectiveness of fisheries management in inland waters, though it has so far proved less successful in coastal regions where the attitudes of the private property owners have been less conducive. Finally, the fishing region has been significant in developing a participatory system for decision making - though, as yet, without achieving consensus over the future direction of commercial fishing.

3.2.5 *Management of coastal fisheries and territorial use rights*

Denis Bailly, CEDEM, Brest, France

As part of the agenda for the reform of the CFP in 2002 is the issue of access to resources within the 12 mile territorial seas. There is a widely held view that changes to the existing derogation will not take place. In Brussels and among national administrations and fishermen's organisations alike, it is considered 'politically unfeasible'. The purpose of this paper is not so much to address this specific policy issue as to point out the gap between the present approach based on stock use rights in fisheries (SURF) and a territorial use rights (TURF) view of fisheries management deeply rooted in existing practices.

TURFs refer to the definition of access rights to fisheries based on exclusive or preferential access to all resources occurring within defined spatial limits. Many such examples can be found around the world; most have a long lineage. Some are strictly codified in law, such as the exclusive right to use and manage coastal resources allocated to fisheries cooperatives in Japan. Others have legal recognition as with the *cofradias* in Spain or, to a less extent, *prud'homies* in Mediterranean France. Even where such formal recognition does not exist, collective action for the management of coastal fisheries often allows for territorial preference.

In the development of offshore fishing, TURFs have been ignored. There are now only a few instances, as in some Mediterranean lagoons, where the range of operation from one community defines a marine territory not claimed by another group. However, the analysis of events shows that conflicts based on such territorial claims are still quite common. On the Atlantic coast, the gap between the public approach to management based on SURFs and the actual practice of decision making is clearly illustrated in the biologists' claim that user groups in coastal areas simply ignore their management recommendations.

TURFs and local fishermen's organisations seem inseparable concepts. It is difficult to determine whether access rights or associational structures contribute more to social recognition and the legitimation of fisheries management decisions. Both probably reinforce each other. But we can probably learn from this observation if we recognise that a more participative management is one condition of success and certainly a contributive factor in quicker decisions, reduced conflict and lower implementation costs. Exercise of TURFs usually accompanies the more powerful fishermen's organisations - those which, in the Atlantic fisheries, are accused of acting against scientific evidence and the will of the administration.

The limitations of Japanese, Mediterranean and Scandinavian examples of TURFs are well documented. But this should not inhibit the creativity of those responsible for designing the management systems of the CFP, particularly in respect of the coastal fisheries. The monolithic SURFs based approach has to date borne less fruit, especially when measured against the investment of public funds in the system. The two approaches are not mutually exclusive but one key objective for the reform of the CFP might be to create the constitutional basis for a management system that would allow a multi-dimensional approach to collective action. This would include a diversity of approaches to access rights, practical management tools within appropriate access structures and to organisations.

3.2.6 *Discussion*

Although a considerable level of interest was shown in the concept of regionalisation, a number of specific questions was raised, each inferring doubts about the practicality of a regional seas approach. The presentation had failed to convince participants on the key question as to whether decision

making would be improved through regionalisation; the proposal appeared to rest on an untested assumption that the parts could be more effectively managed than the whole. The specific issue of the disequilibrium between catching capacity and resource availability was raised: how does a regionalised approach address what is a general problem for the CFP? Questions were also asked about the potential for greater frequency of 'boundary disputes' arising from the regionalisation of policy: these would include territorial disputes, organisational overlaps (who does what) and the risks of incompatibility between the regulatory systems developed for contiguous regions. Perhaps the most radical assumption was the capacity of untried regional administrations to avoid the tensions and conflicts apparent in a Community-wide policy process. There may also be legal impediments to the realisation of the principle of subsidiarity envisaged in the regionalisation agenda, both at the levels of Community law and national juridical codes.

In responding to these questions, it was stressed that the proposal was no more than an outline design for institutional reform which rested on the need for greater regional and ecological sensitivity. It was not a blueprint for a new fisheries policy. There is no geographical logic to the boundaries of the 'common pond': they arise as the incidental outcomes of membership of an organisation which is justified on entirely different grounds. The regional approach seeks to create a spatial logic in terms of ecological unity, shared interests and a similarity of structures. In terms of the rationalisation of the fishing fleet, it may be more effective to define a maximum fleet capacity for an area like the North Sea, taking account of the different sectoral requirements, than one which appears to be targeted against individual member states and to show relatively little concern for the areas fished.

The coastal state approach appeared to contain a fundamental contradiction, appealing on the one hand for the retention of the principle of relative stability as a key policy determinant while, on the other hand, calling for a complete reform of the CFP which is the only available means for achieving relative stability. Again, the question was raised as to how coastal state management could improve the current state of fish stocks, when the majority of these are transboundary stocks and where EEZs, in areas like the North Sea, are severely constrained by median lines.

The territorial use rights approach to fisheries management would appear to have a limited application in Europe's fisheries, except in the context of inshore fisheries which currently remain the prerogative of the individual member state. An extended concept of territorial use rights may have a useful application in enhancing coastal zone ecosystem management, but the image of success for Japan's sophisticated application of territorial use rights within inshore waters had to be set against the serious overfishing of stocks beyond the 12 mile limits.

3.3 The co-management agenda

3.3.1 *Introduction*

The largest collection of papers dealt with aspects of co-management, potentially a key feature in the architectural design of alternative management systems and regarded as something of a jewel in the social scientist's crown. Yet despite its theoretical appeal, it remains elusive in practice. Individual papers tended to deal with particular aspects of co-management in specific countries. By contrast, *Jentoft et al.'s* paper revisits the general concept suggesting that a useful approach to the analysis of both negative and positive responses is through an understanding of how institutions are embedded in human community. *Langstraat* provides an insider view of the fisheries management system recently developed in the Netherlands with its emphasis on the group management of individual transferable quotas - a notable example of successful co-management in Europe. The role of producers' organisations in the system of sectoral quota management in the UK is the focus for *Phillipson's* analysis which aims to assess their potential for enhanced responsibilities in a more developed co-management system. In the case of the Finnish vendace and salmon fisheries, *Varjopuro and Salmi* contrast management systems based on local use rights and on universal common use rights respectively and examine the differing relations between fishermen and the relevant authorities and opportunities for developing a co-management approach. *Thom*, however, warns that too much emphasis may be placed upon the notion of 'legitimation' through user participation as a basis for greater compliance with the regulatory system. She identifies a range of preconditions for effective policy implementation, highlighting weaknesses in enforcement procedures as a key problem. *Dreano's* paper provides some insight into the ways in which the different world views of fishermen and administrators create a serious gap in approaches to management issues.

3.3.2 *Social theory and fisheries co-management**

Svein Jentoft (Institute of Social Science, University of Tromsø, Norway), Bonnie McCay and Douglas Wilson (Department of Human Ecology, Rutgers University, US)

Co-management as a tool of fisheries management has received much attention in recent years. Although there are great hopes about what may be accomplished, there are also doubts concerning its applicability. Many of these concerns are valid but excessive pessimism often reflects an overly narrow perspective on the nature and role of institutions. Other no less valid presuppositions lead to more optimistic hypotheses concerning the outcomes of co-management arrangements.

It is likely that the success or failure of co-management hinges upon the links that bind one level of jurisdiction to another - as between a state agency, user organisation and local community. Co-management is about forging these links. It has less to do with the rules governing fishing activities *per se* than

with the communicative and collaborative processes through which these rules are formed. Key questions are concerned with who participates; how debates are structured, how knowledge is exploited, how conflicts of interest are addressed; and how agreements are reached.

A necessary condition for co-management is an understanding that institutions are socially constructed and mutable realities. Today, co-management largely involves *functional communities*, 'virtual communities' with no particular geographical or social focus beyond that of shared participation in the fishery, in contrast to the traditional *spatial communities* formed of a web of social relations tied to place, shared history and common identity. Relations among functional groups are more likely to be contractual and single stranded than in the local community where kinship and friendship ties prevail. Homogeneity, equality and stability - all characteristics of local communities - are conducive to permanent cooperation. The future of co-management may rest with *epistemic communities* centred upon specific management issues and formed of user group members, lobbyists, journalists etc who come to know and trust each other and share common perceptions of the problems and their solutions. Disembedding community based management regimes involves separating the resource from its social and cultural context and reducing the value of the social capital and the flexibility required in effective management.

All forms of management institutions, including co-management, will be influenced by the prevailing regime of property rights; but co-management does not require any particular form of ownership in which to flourish. It can occur equally under conditions of common use rights, cooperative rights and privatised rights - but the different property regimes may exert different pressures on the co-management system.

* This paper was tabled at the Workshop in the absence of the authors.

3.3.3 *The Dutch co-management system for sea fisheries*

Dick Langstraat, The Fisheries Board, The Netherlands

The cutter fleet is by far the most important sector of the Dutch fishing industry, with beam trawling for flatfish the principal method of fishing. Operating mainly in the North Sea, the cutter fleet takes 45% of the total allowable catch for plaice and 75% of North Sea sole. In 1996 landings amounted to 122,000t, valued at 324m ECU. The cutter fleet has been the main focus for the development of the Dutch quota management system, which can be described in three distinct phases:

(a) *1976-85 Introduction of individual transferable quotas.* Individual quotas were initially introduced in 1976 to provide a basis for greater certainty and security for individual fishermen, enabling them to maximise their profits through the advance planning of fishing activities and regulate their landings. These moves failed to arrest the growth in overcapacity and overfishing of the national quotas in the race to fish.

The result was the emergence of a grey market, non-transparent market streams and a negative influence on prices. The individual quotas only became transferable in 1985; it was intended to increase economic efficiency and reduce fishing capacity through the concentration of fishing in fewer, more entrepreneurial units.

(b) *1985-93 Enforcement and control.* Quota transferability was one element in the attempt to enforce greater discipline on the Dutch industry and to arrest the growth of overfishing. Licensing was introduced in 1985 to limit the total engine capacity of the fleet; two years later measures were brought in to cap the engine capacity of individual vessels and limits were imposed on beam length. Finally, in the same year, restrictions were imposed on the number of days at sea. Notwithstanding these measures, overall control of fishing effort proved elusive.

(c) *1993 to present: Co-management.* A radical reappraisal of policy in 1993, defined the objectives as 'to promote responsible fishing and a balanced exploitation of stocks' to be attained through a reallocation of responsibility between government and industry and the integration of fisheries and environmental issues. Eight quota management groups, involving 97% of cutter owners, were formed in 1993. These groups function only with official government approval on satisfying a number of conditions viz. that all group members are also members of the same PO; that the chairpersons are independent; and that groups must submit an annual fishing plan detailing arrangements for landings and deployment of days at sea allocations. The independent Fish Board, which acts as the principal negotiator between industry and government, supervises and coordinates the groups. Through the group system, management responsibility for the ITQs is transferred from the individual to the group; breaches of quota rules becomes a group responsibility and overfishing of the quota can lead to a loss of official recognition. In fact, the system has led to a drastic reduction in offences and quotas have not been exceeded since the system was introduced. In 1998, the Fish Board is expected to surrender its official supervisory role and a greater burden of responsibility will thereafter fall upon the individual groups.

3.3.4 *The fish producers' organisations of the UK: a strategic analysis*

Jeremy Phillipson, Department of Geography, University of Hull, UK

Producers' organisations (POs) have held a central position in the implementation of the EC's marketing policy for over two decades. Despite originating from a common frame of reference, they have evolved quite distinctive structural and functional forms within the different coastal states bordering the 'common pond'. In the UK, for example, they have been granted key roles in the implementation of the quota management system. However, POs face major challenges concerning their ability to interact positively within the regulatory and business environments and in meeting their own strategic

objectives. The paper describes the PO's internal and external environments and examines the implications for realising their objectives.

The PO's primary function, as envisaged in the original European legislation, was to improve conditions for the sale of fish to the benefit of their members through adjusting supplies to market requirements, improving product quality through on-board practices and the implementation of market intervention mechanisms to achieve market (and price) stability. Since 1992 POs can also be required by the member state to take some responsibility for managing catch quotas. And, from 1995, attempts have been made to strengthen POs through setting rules concerning minimum levels of activity in respect of the PO's catchment area.

The further development of POs is presently constrained by characteristic features of their internal structures and external relations. Internally, the main challenge comes from matching the individual interests of members with the long term strategic objectives of the organisation. The individualism of skipper owners combined with the democratic principles of cooperative organisation tends to inhibit attempts by the POs to introduce more robust marketing plans or the enforcement of discipline among the members. The external organisation field introduces a further range of challenges. The EU's own regulatory framework is cumbersome and opportunities for marketing aids are therefore largely underutilised. Likewise with the restrictive mechanisms of quota management. Discussions in the UK concerning the possible adoption of fixed quota allocations rather than the use of variable track records reflects some of these problems. POs may also find themselves lacking the organisational and financial freedom to operate effectively in the wider economic environment, limiting their scope for positive and innovatory engagement in the marketing sphere. Such concerns clearly raise questions over the possible extension of the PO's management remit. In the UK, POs may already have reached their outer limits. Given their existing configuration, and in particular the voluntary basis of membership, it is difficult to envisage the delegation of any further responsibilities.

3.3.5 *The functionality of fisheries management from the perspective of commercial fishermen: two cases compared*

Riku Varjopuro (Hämeenlinna) and Pekka Salmi (Finnish Game and Fisheries Research Institute, Enonkoski), Finland

Fisheries management in Finland is characterised by two contrasting approaches. For inland and coastal waters, subject to private ownership, management is vested in supervisory regional boards, comprising representatives of statutory fishing associations (the owners) and associations of recreational and commercial fishermen. In the open sea, and especially in the salmon fisheries, the state is 'owner' and manager of the resource; decisions are prepared and implemented by the appropriate government department and its regional organisations. The department may create specific committees to ensure that interest groups as well as experts are consulted,

though these seldom exert a substantial influence on management. Between 1984 and 1995, seven *ad hoc* committees have dealt with salmon management: the composition of the committees varies and not all relevant interest groups have been represented.

The use rights basis of management has proved unstable. Restrictions are often decided on an *ad hoc* basis and may change frequently; regulation of the salmon fishery changes almost annually, putting the commercial fishermen in a difficult situation. Most of the regulations relating to the two case study fisheries (vendace and salmon) are based on territorial use rights and input restrictions though in the case of salmon the introduction of TACs has substantially affected the fishery. Differences in management can be explained by comparing the decision making processes. In the case of salmon, decisions are based on scientifically produced knowledge, influenced by international organisations (IBSFC), under a centralised system. For vendace, local management decisions lean more heavily on customary practices.

Comparison of the attitudes of fishermen to the two regimes reveal divergent patterns. In the vendace fishery, professional fishermen tend to align themselves with scientists and the higher authorities in criticising the local decision making systems which are held responsible for the decrease in commercial fishing opportunities. By contrast, salmon fishermen have mostly negative experiences of the central authorities; they feel powerless against the dominant position of these 'distant' actors. In their relations with these remoter sources of influence and power, the vendace fishermen are able to exploit the complexity of the management system, while the more simple but remote salmon management regime makes it difficult for local fishermen to exert any real influence.

Most fishermen have little or no opportunity to influence management decisions. A majority favour greater cooperation to overcome these problems. For vendace, the Fisheries Region would be an appropriate basis for co-management, providing the statutory fishermen's associations were to delegate their regulatory powers to the Regions. For the salmon fishery, currently managed in a centralised top:down regime, a larger scale of management is essential. A federative system where government sets the management goals and detailed regulation is determined in a decentralised system could provide the answer. But in both cases, professional fishermen are poorly organised and there is distrust of their own organisations.

3.3.6 *There is more to compliance than legitimacy ... and more to policy than institutions*

Mireille Thom, Nethybridge, Inverness-shire, UK

The aim of the paper is to argue that alternative management systems are often argued on too narrow an understanding of the policy process and of the environment in which it evolves, placing particular emphasis on notions of legitimacy. Legitimacy may be a necessary but not sufficient condition to

ensure greater compliance, let alone achieve desired outcomes. Ensuring compliance is viewed as the end result of a process which begins by increasing user participation leading to increased legitimacy for regulatory measures and resulting in greater compliance and improved outcomes. Undeniably institutions do have an impact on policy outcomes but to overstate their role is to ignore a host of variables which impact upon and shape the outcomes. To disregard these variables is to risk repeating the same mistakes in the alternative management systems.

Poor or non-implementation of commonly agreed policies in international regimes and organisations is rife. The problem is common to many policy areas and is closely related to the member state's role in implementation. Analysing the situation for European fisheries, ten preconditions based on Gunn (1978) may be identified for 'perfect implementation' viz. (i) the circumstances external to the implementation agency do not impose crippling constraints, (ii) adequate time and sufficient resources are made available to the programme; (iii) the required combination of resources is available; (iv) the policy to be implemented is based on valid theory of cause and effect; (v) the relationship between cause and effect is direct and there are few, if any, intervening links; (vi) dependency relationships are minimal; (vii) there is an understanding of, and agreement on, the objectives; (viii) tasks are specified in correct sequence; (ix) there is perfect communication and coordination; and (x) those in authority can demand and obtain perfect compliance. From such an analysis, it is clear that perverse outcomes are caused by a number of variables, embracing elements beyond participation and legitimacy.

Responsibility for enforcement of the CFP is the legal duty of the member states. Their willingness to pass and adopt measures to regulate activities of their fishermen has not been matched in the development of their enforcement agencies or in cooperation with other member states. Monitoring and control are undertaken by an array of agencies for which enforcement is one of a number of duties. National traditions are reflected in systems of law used to deal with infringement and prosecution. Assessing the effectiveness of enforcement is difficult: lack of reliable data hampers investigation. As for fear of detection acting as deterrent, its force is diminished by leniency in the courts.

The implications of these findings for alternative management systems is to urge caution in the advocacy of greater user group participation. Concepts of democracy can be used to warn against dangers of agency capture which could result in putting special interests before the public good.

Reference: Gunn, L.A. (1978) Why is implementation so difficult? *Management Services in Government*, 33, 169-76.

3.3.7 *Fishermen and administration: the confrontation of two world views**

Alain Dréano, Section Régionale de la Conchyliculture de Bretagne-Sud, Auray, France

Any analysis of the perceptions of the fishing industry held by those most deeply involved - the skipper owners - must start from a number of basic facts. The harvesting sector is the first stage in a chain of economic production, analogous to that of agriculture. For many years fishing has been in distress and is currently undergoing a change on an unprecedented scale. In Brittany fishing occupies a particular place in the region's history, culture and economy. The formation of the EU, globalisation of the economy and, not least, the responses of the local economy are related elements which contribute to the complexity of the situation. At the local level, relations between administrators and fishermen may be quite strained, reflecting the distance between their points of view. There is a confrontation between two distinctive world views: a macro-economic approach which seeks to unify and standardise the industry in the shape of prevailing economic models - its proponents are administrators skilled in handling global economic intelligence which gives them a source of power; and a pragmatic approach at the level of the individual fishermen who seeks refuge in his work - these social actors are steeped in a culture which values their mastery of the technical means of primary production and which, in a sense, creates a form of powerlessness. These two groups of actors are unfamiliar with each other's world view. Is it possible, therefore, that these two groups could converge to construct a common future for the industry?

At sea the fishermen hunts his quarry in the context of a vast and limitless space, yet one in which there are strict rules of behaviour broken only at serious risk. Life on board - twenty hours at a stretch, five days out of seven - is organised for the sole purpose of fishing with each crew member sharing a common objective: a good catch. The skipper will use his experience and skill to map out a strategy for his enterprise - a form of macro-economic management. Back on land, the fishermen faces different hazards: he can only discourse intimately with those who have shared his kind of experience as a fishermen. But he must also confront those whose life is based exclusively on land. A sense of caste is formed: a maritime identity transmitted by rites, knowledge and history and 'suffered' in the sense that for many fishing is an employment of last resort. It is an identity created in two separate modes: at sea, based on competition, rivalry but also solidarity; on land, based in the community where the fishermen shares the same world as those whose lives are spent entirely on land. The micro-economy of the individual enterprise is joined with others in the port and the fishermen's life is enriched by his social relations within family and community - both essential elements in his struggle against his social fate.

These two worlds overlap and the key elements in the structuring of this interface are cooperation, professional representation and the family. Today, however, as seen from the fishermen's viewpoint, the interface does not

function correctly. Though legally a participant in the decision making about the rules and regulations which govern his activity, his influence is overshadowed by the neo-liberal market. Thus in the minds of the fishermen there exists a real gap between those who live from the sea and those who live on the land.

* This paper was tabled at the Workshop but not presented.

3.3.8 *Discussion*

Discussion dwelt largely but not exclusively on the successes claimed for the Dutch system of co-management and, in particular, the group management of ITQs. It was suggested that prevention of monopolisation of quotas was not really a problem: several countries including Iceland and New Zealand have introduced legal limits on the levels of quota ownership. Doubts were expressed about the real successes of the system in reducing infractions against regulations and also the availability of sufficient experience and skill among fishermen willing to serve on the co-management boards. The Dutch system has to be seen not as an ideal type but as the product of a historically determined situation and the need to restore trust between government and industry. The situation in which the system has evolved has been quite favourable - a reduced size of fleet has allowed fishermen to buy additional quotas and so reduced the pressure to contravene the regulations. Issues of concentration of ownership have so far not become a problem: the system allowed weaker enterprises to be retired with a reasonable level of compensation from the sale of quota and decommissioning grants. Should redistribution become an issue, one solution could be to ring fence individual quotas by obliging vendors to offer them to other group members before placing them on the open market. The selection of independent chairpersons was recognised as a key feature in the successful operation of group management, together with the transparency of the decision making process including mechanisms for dealing with non-compliance. There may yet be scope for the introduction of an independent investigator but the evidence, to date, is of a more law abiding industry. Although fishermen may be unwilling to report the offences of neighbours and friends, they are also less likely to offend the norms of a defined and recognisable group. Well informed, independent leadership had also helped in the education of group members in the management process.

Producers' organisations in the UK were seen to suffer from voluntary membership which allowed maverick fishermen to escape the constraints of group membership - though there were several other reasons for non-membership. Some fishermen felt excluded as a result of the fact that sectoral quota management was restricted to over 10m vessels. Different institutional traditions may help to explain why the possibility of individual quotas and group management had not been more fully investigated in the UK.

The 'utility' of Gunn's ten conditions for an ideal implementation was challenged in the context of applied research which deals with the real world.

Compliance, it was suggested, was as much to do with effective prosecution of those who wilfully ignore the rules. Effective enforcement was very expensive and required not just more resources but also much stronger legislation. But to rely on prosecution is to suggest that the regime is essentially unworkable: participants need to perceive the direct benefits of compliance rather than the negative costs of prosecution. Even if full compliance were achieved, there is no guarantee that the policies would work. There are simply too many sources of uncertainty involved, not least in the insecure nature of fisheries science. We may be using the argument of non-compliance as a refuge for bad policy. Management systems should be studied as integrated wholes and not as loose assemblies of parts which can be analysed in isolation.

3.4 The integrated management approach

3.4.1 *Introduction*

The dimensions of fisheries management are constantly changing: the latest challenge - attempting to integrate the concept of ecosystem management - calls for radical changes to existing systems. Institutions must be altered to admit new stakeholder interests and the approach to fisheries policy adjusted to take account of the precautionary principle. Three papers address these questions in very different ways. *Tasker and Knapman* describe the relevant international agreements relating to marine environmental conservation and distinguish between two main approaches to management - the designation of marine protection areas and the proscription of particular fishing methods. *Hersoug et al.* examine a new and quite radical approach to environmentally friendly fishing - eco-labelling which allies notions of consumer power to the principles of responsible fishing. This has already been tried with some success in the American tuna fishery and is now being developed on a much broader scale through the Marine Stewardship Council initiative. For *Steins*, focusing on inshore fisheries, the issues are even wider as they involve a greater range of potentially conflicting uses of marine space; her paper compares the approaches to integrated management in the UK and the Dutch Wadden Sea.

3.4.2 *Eco-labelling: a new challenge to fisheries management*

Bjørn Hersoug, Petter Holm and Stein Arne Rånes, Norwegian College of Fisheries Science, Tromsø, Norway

A new challenge for fisheries management comes from eco-labelling. Attributing the crisis in world fisheries to the management institutions as captured by economic interests, eco-labelling seeks to mobilise the consumer of fish products behind environmental concerns through the certification of eco-friendly production. The paper compares the approaches of eco-labelling, ITQs and co-management in the context of Norway's cod fisheries.

The present system of management in Norway is the accumulated outcome of more than 60 years of state intervention. The system is strongly centralised,

even to the extent that negotiation between the industry and government is conducted mainly through the Norwegian Fishermen's Association on behalf of the whole industry. Today the cod fishery is regulated by effort as well as by output and complemented by an array of technical measures. The management system is both comprehensive and expensive. Without state income from oil and gas revenues, it is doubtful whether such a system could be afforded. It is relevant to ask whether more control would yield greater gains or whether a better system can be achieved at lower costs.

A major debate concerns ITQs; in 1992 a Ministry proposal was defeated through strong opposition from the harvesting sector. Nonetheless, Norwegian fisheries have experienced a gradual introduction of ITQs through other means linked to the transfer of licences, the introduction of the 'unit quota system' for the trawler fleet and individual vessel quotas in the inshore feet. The expected outcome - a rationalisation of the fleet - would help reduce management costs.

In the Norwegian context, employment and settlement objectives, rather than business profitability, are the ultimate goals of a 'co-management' approach which emphasises the role of pluriactivity as an expedient to protect employment in remoter coastal areas. Regulations governing both the agricultural and fisheries sectors militate against pluriactivity. Various attempts have been made to link the allocation of resources to community and regional development, but such initiatives have met with little success.

Eco-labelling is a new concept. Its European origins lie in the Marine Stewardship Council initiative, undertaken jointly by the World Wildlife Fund and Unilever, to establish principles for the sustainable use of fisheries and thereby set standards for individual fisheries throughout the world. Processors and exporters will be asked to establish purchasing groups which buy only from certified fisheries. Such a system would pose problems for the fishing industry. Ultimately the regulatory agency could be privatised, certification become the responsibility of an independent authority and the role of national management agencies marginalised. Alternatively, governments may assume the initiative so that control remains in the public domain. Pressure on the industry will increase; breaches of regulations would affect not only the individual responsible but the entire certification system. The effects upon fishing patterns, incomes and markets could be crucial.

The likely outcome is that in Norway the management system will continue to reflect a mix of alternative approaches rather than any coherent 'grand design'.

3.4.3 *Marine environmental management and fisheries*

Mark Tasker (Joint Nature Conservation Committee, UK) and Paul Knapman (English Nature, UK)

Fishing can have a profound effect on marine ecosystems, impacting not only on target species but also non-target species and their habitats. The aim of nature conservation is to minimise the adverse effects of man on nature; in the

context of the marine environment understanding of the processes and implementation of appropriate measures are still in their infancy. Prior to the mid-1980s, few studies had been completed and their conclusions very rarely incorporated within fishing policy. Subsequently, major reports have been published, mainly by ICES and focusing largely on the North Sea. The effects of fishing may be divided into two broad categories: direct, including species mortality, habitat disturbance and waste inputs (discards and offals), and indirect, mainly concerning changes to habitats and ecosystem structures. Examples of both types are detailed in the paper.

The broad aims of nature conservation may be summarised from the UN Convention on Biological Diversity as to ensure biological diversity and the sustainable use of its components. The Convention which is global and legally binding implies that biological criteria must be taken into account and given greater weight in management decisions; not only should fish stocks be exploited in a sustainable manner but there should be minimum adverse effects on biodiversity. The aims of the Convention are supported through a number of specific conventions, including the *Protection of the Marine Environment of the Northeast Atlantic* (OSPAR), *Conservation of Migratory Species of Wild Animals* (the Bonn Convention) relating, *inter alia*, to small cetaceans, seals and migratory birds, and *Conservation of European Wildlife and Natural Habitats* (the Berne Convention) which underlies much of the European legislation on the conservation of wild birds (Directive 79/409/EEC) and wildlife habitats (92/43/EEC). However, only a patchy framework of legislation relates specifically to marine environmental protection and conservation. Within the CFP, protection and conservation of the marine ecosystem is referred to in Article 2, Regulation 5760/92, but has received little attention in policy development.

Two types of conservation measure may be applied in the context of the marine environment: designated areas, in the form of marine nature reserves or larger exclusion zones, and specific restrictions, as for example with the banning of drift nets over 2.5km. Of particular significance for the designation of conservation areas are the wild birds and habitat Directives which require the creation of Special Protection Areas and Special Areas of Conservation covering coastal and inshore sites.

The challenge of marine environmental and fisheries management lies in bringing the two together within a common framework. Existing systems in the European sea are not yet taking up the challenge. However, the North Sea Conference Intermediate Ministerial Meeting in Bergen has agreed three objectives for integrated management: ensuring sustainable ecosystems; achieving sustainable resource exploitation; and guaranteeing economically viable fisheries. Although the precautionary approach was also identified as a key feature of integrated management, the ecosystem approach has still to be realised in practice.

3.4.4 *Alternative management systems for inshore fisheries: integrated approaches in the Isle of Wight and the Wadden Sea*

Nathalie Steins, Department of Land and Construction Management, University of Portsmouth, UK

Under the CFP, autonomous coastal state management exists in respect of the 12 mile territorial limits, leading to a variety of inshore management systems within the EC. The coastal zone is also witnessing the development of new economic activities (aquaculture, aquatourism and seabed mining) together with the designation of conservation areas. Multiple use of inshore waters calls for an integrated rather than sectoral approach. Integrated coastal zone management (CZM) is a complex issue, involving many competing stakeholders and a potentially wide range of conflicting interests. Two different approaches are examined: coordinated sectoral management in the UK and fisheries co-management in the Dutch Wadden Sea.

Within the UK, the government's coastal zone policies continue to reply upon sectoral management, while at the local level a more integrated approach has been adopted informally by local authorities. One example is the Medina Estuary Management Plan, commissioned by the Harbour Authority and formulated on the basis of consultation with local user groups and other interests through 'topic groups'. The policy process led to the creation of a group (River Medina Oysters Co. Ltd.) to represent the minority fishing interests, its inclusion on the commercial and economic use topic group and active consideration of an application for a Several Order to regulate the oyster fishery.

By contrast in the Netherlands the government has opted for a statutory co-management approach wherein the fishing industry, in collaboration with environmental groups, is responsible for designing and implementing measures for integrated management. Protection and conservation of the Wadden Sea is based on two planning instruments - the Nature Conservation Act, 1981 in which the Wadden Sea is designated a state nature reserve and the Wadden Sea Memorandum 1981 which provides the basis for planning, conservation and management undertaken by all levels of public authority. Detailed management plans have been drawn up by the user groups in respect of the major shellfish fisheries (cockles and mussels) involving ground closures, reductions in fishing vessels and technical measures. The substitution of a managed fishery for the previously free fishery has won approval from most fishermen and there is a basis for cooperation between previously opposed interest groups.

The analysis points to a number of important conclusions concerning integrated coastal zone management. The presence of formal links and channels of communication between the different parties are indispensable, as is the decentralisation of authority and decision making. Integrated management is feasible at the local level where it is founded on locally compatible solutions carrying widespread public support.

3.4.5 *Discussion*

The concept of integrated fisheries management remains somewhat obscure especially in terms of its aims and objectives. We have struggled, rather unsuccessfully, to reach agreement on the balance of objectives for fisheries management and we now face the added complication of a different set of objectives associated with the sustainability of the marine ecosystem. A more precise definition of ecosystem management is called for. Concern over the balance of priorities returns us to the critical issues raised in Collet's paper; it is not a question of Nature coming before Man but rather of an apportionment of Nature's bounty between man and other elements of the ecosystem. Man's role in increasing that bounty through aquaculture was noted.

'Integrated management' demands a more comprehensive view of the marine environment than that envisaged in the incorporation of ecological objectives within fisheries management. Integrated ocean management should also take account of the exploitation of non-renewable resources of the ocean bed, the problems of marine pollution etc. A fully integrated approach is emerging in inshore waters in the concept of coastal zone management.

Concern was expressed over the implications of the Marine Stewardship Council initiative as a means of securing sustainable fisheries. It raises awareness beyond the boundaries of the scientific community; it draws attention to the failure of state-led policies. But there are also some misgivings at the apparent bypassing of the democratic and legislative processes, the placing of management responsibility largely in the hands of multinational corporations and the implications particularly for less developed countries.

3.5 **Alternative modes of regulation**

3.5.1 *Introduction*

The concept of alternative management systems is not confined only to notions of institutional reform, though this issue has clearly dominated discussions in the social sciences to date. Social scientists have been somewhat slow to address the question of alternative regulatory measures - as for example the substitution of effort quotas for the discredited catch quotas. Only the issue of individual transferable quotas has provoked a strong response from the social scientists. The assumption behind *Morin's* contribution is that the range of regulatory measures in fisheries may be constrained by legal interpretations of property rights. He argues that, in France, restrictions placed on access to and use of marine resources have already altered the legal status of fisheries and proposes that 'qualified property rights' should be instituted as a basis for good management. Two papers consider the introduction of new regulatory measures in Mediterranean fisheries with strongly differing conclusions concerning the role of local management institutions. *Frangoudes* examines the fate of artisanal fisheries in Mediterranean France and the attempts to regulate fishing effort through the introduction of a licensing system. She notes quite marked differences in attitudes to locally instigated systems, deemed as

appropriate, and centrally imposed systems criticised as insensitive to the particular conditions of Mediterranean fisheries. In his analysis of the problems confronting the purse seine fishery in the Spanish Mediterranean, *Alegret* traces the largely abortive attempts to introduce quota systems to control fishing effort, noting the negative influence of the *cofradias* which are unable or unwilling to expand their horizons beyond coping with purely local issues.

3.5.2 *The juridical status of fishery resources and the concept of ownership*

Michel Morin, Saint-Nazaire, France

Quotas are the principal means of regulating fisheries. Although they afford little grounds for satisfaction, they have probably helped to stave off an even more severe crisis. Criticisms of quota management are numerous but most evolve around questions of ownership. Fisheries resources have customarily been regarded as *res nullius*, especially in countries which apply the principles of Roman law. In effect, fish belong to no one until captured; in this context management involves the policing of fishing activity through rules governing open and closed seasons, permitted gears etc. As a result fisheries are subject to the risk of large numbers wanting a share in the resource. Those with the means to buy a boat, equipment and employ qualified fishermen - and willing to obey the rules - can take part. This was the case in France until recently. But now fisheries are managed in a very different way: access is no longer open to all. The state has introduced a specific measure for limiting access (*permis de mise en exploitation*). *Res nullius* has become obsolete; yet fisheries cannot be described in terms of absolute property rights - they cannot be defined as *res propriae*.

The tendency in recent years has been to create a sense of property through the system of catch quotas - a system favoured by those with the means to profit from ownership. Defenders of the project argue that the granting of individual quotas corresponds with the organisation of the economy and the key role of the market. But they point to the need for quota allocations to be synchronised with a 5-10 year investment cycle rather than the fluctuating circumstances of annual allocations. They also question whether equity in allocation can be sustained over several years except under conditions where quotas are granted in perpetuity as entitlements to a fixed percentage of the TAC. The law must adapt to these changing realities. The solution is to regard fisheries as *res quasi propriae* recognising that interest in the resource occurs not only at the moment of capture but also in the anticipation of its utilisation and profit. Thus, management is not simply a matter of regulating a hunting activity but also of establishing rules for 'qualified property rights'. The switch in approach cannot solve all the management problems but it does provide an opportunity to reorient management in a spirit of co-responsibility rather than competition.

Problems remain as to how to translate this approach into practice. The state will need to find the most appropriate juridical instrument - an '*etablissement*

public' in France or public trust in Britain, for example. There is also the question of the geographical definition of such rights in relation to the area of the state's competence and the need to divide what are coherent fisheries ecosystems between different states. The identity of the participants is relatively easy - those with active fishing interests as defined through licensing systems etc. Perhaps the most complex aspect concerns representation in the decision making process and balancing the claims of different user groups. Administrative management through a public authority is not the only available solution. The schema outlined remains highly theoretical: 2002 may be the appropriate time for taking such a step once the guiding principles of equal access, relative stability or coastal zone preference have been determined.

3.5.3 *The implementation of a licensing system: the example of Mediterranean France*

Katia Frangoudes, OIKOS, Rennes, France

At the start of the 1960s the French Mediterranean fisheries sector was dominated by small boats (*catalanes*) under 10m in length, operated by non-specialist fishermen who deployed different gears according to the season and the availability of different species. These artisanal fishermen found representation of their interests in the traditional *prud'homies* rather than the *comités locaux des pêches* established by decree in 1945. Major changes were to occur during the 1960s mainly as a result of the intervention of the public authorities rather than from pressures within the fishing industry. Development of the sector through the modernisation of the fleet and the building of larger vessels took place at the instigation of the central administration in response to advice from the research institutes, to the detriment of the artisanal sector. By the end of the 1960s few *catalanes* survived. Two types of fishing had taken their place: bottom trawling and night seine (*lamparo*), an established method in the Mediterranean brought back to France by repatriated French fishermen who had been based in North Africa. The increase in vessel numbers and in production from seasonal fisheries like the sardine led to the saturation of markets and sharp falls in market prices.

Faced with such problems the Regional Fisheries Committee in 1964 proposed the introduction of a licensing system for pelagic trawlers which would impose certain conditions on the licence holders. The central administration rejected the proposal, principally on the grounds that it would infringe the general principle of freedom to fish; but when the proposal was resubmitted some four years later, they finally agreed to its introduction. In 1970 the number of trawlers was strictly limited and the opportunities for night seines to covert seasonally to trawling suspended. An increasing specialisation of fishing was taking place: the days of the non-specialist operator were strictly numbered and the *lamparos*, now in severe difficulties, were no longer able to convert to pelagic trawling. Only the trawler owners were able to benefit from the system of licensing, particularly with the growth in the unofficial trade in licences.

The general extension of the licensing system in 1993 to include small non-specialist vessels had very different origins. Unlike the earlier system introduced in 1970 at the request of the local industry, the later move was the result of an administrative decision. Indeed, the new system is often criticised because it failed to take account of local opinion. According to some *prud'homies*, a general licensing system was incompatible with the conditions of the Mediterranean where management could only be effective at the local level. It prevented the flexibility of operation essential for both the resources and the fishermen; and the rigidity of the system, involving a freeze on new licences, made it difficult for young fishermen to enter the industry.

The history of licensing in Mediterranean France has weakened the position of fishermen's organisations. The initial refusal of the central administration was a rebuff for the local committees whose earlier introduction had reduced the roles of the traditional *prud'homies*. Reform of the local committees in 1991, increased the representation of small scale fishing interests and improved the representation of the committees through elections. But it has failed to generate greater collaboration among the fishermen to negotiate the implementation of the general licensing system.

3.5.4 *Alternative management models to solve the purse seiner crisis in Catalonia*

Juan Luis Alegret, Department of Geography, University of Girona, Spain

Fisheries management models in the Spanish Mediterranean have traditionally been based on control of fishing effort. In the 1970s the government's policy prioritised the development of industrial fleets to the detriment of the artisanal fleet. Complementarity of fishing patterns was established between trawling and purse seining, helping to reduce inter-sectoral conflicts. At present the purse seine fleet, targeting small pelagic species on the Catalan coast is experiencing difficulty in adapting to change. The long established monospecies fishery demonstrates that reliance on effort control is beginning to prove unworkable. The paper analyses the attempts to develop new forms of management.

One of the characteristics of the purse seine fishery is the sporadic nature of catches, reflecting the migratory behaviour of the targeted species; modern technology has not solved this problem. The labour intensive nature of the fishery, conducted at night and without security of earnings, has attracted marginal workers from within the labour market. The fleet is becoming barely competitive and is competing with French vessels fishing the Golfe du Lion with more productive and remunerative pelagic trawls.

The Spanish purse seine fleet is subject to a single law covering all national waters, which does not reflect the sensitivities of the Mediterranean fishery and fails to protect local fishermen from the entry into Catalan waters of purse seiners from other parts of Spain. Attempts by the Autonomous Community government to control entry by non-Catalan vessels in the 1980s were stymied in the courts which found in favour of the central government's objection - a

decision which now defines the division of responsibility between central government and the Autonomous Community, relegating the latter to a largely implementational role.

In 1991 the central government reintroduced the Autonomous Community's earlier proposal to limit the number of vessels through the introduction of a baseline list, using the concept of the 'temporary operational home port', restricting the numbers and length of fishing of non-local boats. This approach, approved by the *cofradia*, licenses a maximum number of non-local vessels with rights to fish in the disputed waters. It is, however, a system designed to limit effort and it has not prevented depletion of resources and falling market prices. Attempts were made to introduce catch quotas and a withdrawal price mechanism. But the *cofradias* failed to meet the criteria set by the EC for its producers' organisations and it was left to an independent initiative to attempt the introduction of landing limits in return for guaranteed prices, which foundered on the inability of the *cofradias* involved to agree the criteria. The *cofradias* are dominated by local perspectives and the personal interests of their leading representatives - the failure of the quota regulation scheme illustrates their inability in respect of issues requiring supra-local agreements. If *cofradias* are unable to change themselves from within, the system will redefine their roles to allow other social agents to assume management responsibilities. Indeed, the latest move to resolve the problem of the purse seine fleet attempts to place negotiations on a broader base, involving vessel owners, unions and merchants, alongside the *cofradia*.

3.5.5 *Discussion*

[Due to the failure of the arrangements for taping the proceedings of this part of the Workshop, no record of the discussion relating to these papers was available.]

4.0 Analysis

4.1 Introduction

This section includes the commentaries from the three rapporteurs, presented in the form of extended summaries (4.2-4.4), a digest of the discussion from the concluding open forum (4.5) and a brief overview of the proceedings (4.6).

4.2 *Rapporteur I: Didier Le Morvan, CEDEM, Brest, France*

My initial reflection on the scope and content of the workshop may appear somewhat peripheral to its central theme. It refers to the involvement of lawyers in future multi-disciplinary approaches to the issues of fisheries management in Europe. Are they sufficiently well represented at present? The answer is probably 'no'. Several new scientific perspectives can be opened up through legal analysis and most sub-divisions of the field of law have a potential contribution to make. Indeed, various aspects of international, European and national law have been noted during the proceedings. Therefore, one objective should be the development of networks among researchers working in these fields. Several years ago, CEDEM proposed the formation of a European institute for the Law of the Sea: is it not an opportune moment to relaunch such a project?

In discussing the conceptual approach to fisheries management, it is important to include issues relating to the legal status of the resource. Morin's paper was significant in this respect and the workshop has clearly acknowledged the problems of ownership and attempts at patrimonially based solutions. The definition of 'patrimonial use' is far from easy and represents a key challenge for legal experts as does the issue of 'ownership' in respect of the sea and its resources. Here there is a need for comparative studies. It is also necessary to expand the approach. Traditional legal qualifications of the concept of property rights are very diverse: Morin's paper treated the issue of *res nullius* but there is also, for example, the concept of *res communis* in relation to the common usage of a particular sea territory. These traditional constructs have important applications in treating issues of equal access, designation of fishing zones etc.

A second key element, touched upon in several presentations, concerns the legal basis for the formulation, implementation and enforcement of fisheries policy. The proposals are both provocative and paradoxical. They include, for example, the deepening of European integration, renationalisation of the fisheries sector, regionalisation of policy and the notions of subsidiarity and the delegation of responsibility. Again, it seems important that legal experts become involved in these aspects of the debate. According to Symes, geographical regionalism is justified by the diversity of regional circumstances. There is not just one sea but several regional seas. There is scope, therefore, for further multi-disciplinary research on formal and functional regionalism in a marine context and its relation to the distribution of

responsibility between the Community, the member states, their regions and the professional organisations.

I was struck, but not surprised, by the number of interventions which referred to the absence of a clear statement of the objectives of fisheries policy. Can legal experts provide some 'added value' in this area of the discussion? One of the early presentations (González Laxe) referred to the conception of the CFP within Article 38 of the Treaty of Rome and its parturition in the agricultural policy area. The identification of specific objectives for fisheries policy, which are not borrowed from the CAP, is a precondition for effective alternative management systems. One of the new developments to emerge from the Maastricht Treaty was the bringing together of environmental objectives and the precautionary approach in all policy areas. Two key questions are apparent: is the arsenal of Community instruments for environmental regulation adequate and appropriate when applied to fisheries policy or do we need to identify more specific measures? And, secondly, how are we to interpret the precautionary principle in a fisheries context, in the light of the multiplicity of definitions and past experience in searching for agreement on measures to ensure sustainable fisheries (e.g. gear regulations)? This is an important area for future debate, in which legal experts must be involved.

CEDEM is beginning to look at these kinds of issues within a multi-disciplinary approach and in a multinational context. Despite the existence of the EU, we are still left with a confusing mosaic of national legislation.

4.3 *Rapporteur II: Christian Lequesne, Fondation Nationale des Sciences Politiques, Paris, France*

A key question for those involved in research on European fisheries policy is how to understand and interpret a policy placed outside the customary framework of the state. One cannot begin to understand the CFP simply by examining the different interests of actors within the sector. One must also take account of other factors. This commentary will elaborate this point through three sets of observations.

There is a school of French sociology which believes that before any research is undertaken it is first necessary to examine its sociological context; as a result, the tendency is to become bogged down in theory and for the empirical study to be neglected. While not subscribing to this approach, it is important to recognise that in analysing a policy area like fisheries one is obliged to explore the relationships that link scientific understanding to political decision making. It is remarkable how often political decisions have to be legitimated through scientific evidence. In fisheries we have a classic example in the scientific basis for stock management and the regulation of catches. But the more we understand the science, the more we recognise that the attribution of causal links is subject to great uncertainty. Yet we persist with the authority of science.

It is a notable feature of environmental policy that administrators and politicians tend to seek the legitimation of tough policy decisions in 'soft' scientific knowledge. The scientist thus becomes an unwitting mediator between the decision makers and the social actors (fishermen). All public policy is structured not only by the strategies of the key actors involved but also by the dynamics engendered by scientific information. Today, however, the science which is central to the understanding of fish stocks and the calculation of fishing rates is being confronted by a science which focuses on the institutional management of fisheries. We are therefore moving from the primacy of experimental science to a dialogue with social sciences. As Collet has argued in this workshop, if the predictive capacity of fisheries science is in question, is it any longer reasonable that scientists should play such an important role in the policy process. Should not the scientists adopt the precautionary principle in respect of their own roles in the policy domain?

The second set of remarks concerns the issue of global interdependence which bears heavily on public policy at several different levels. In fisheries the manifestations of this interdependence are very diverse: in the case of the markets, the issue of quota hopping; with the means of production, the problem of 'multi-nationalisation' of the large scale fishing enterprises; and in the environmental context, the inter-relationships of the marine ecosystem. Such interdependence poses the question: which is the most appropriate level for political intervention? And one of the most common answers refers to co-management at the local level. My view is that this form of political organisation is 'manageable' only within certain limits or where the competition between user groups is relatively weak. As Steins, in her study of the Isle of Wight and the Dutch Wadden Sea points out, co-management can work quite well within the 12 mile limits where questions of sovereignty are simplified. Beyond such limits it will become more difficult because of the potential for 'territorial' conflicts. The situation calls for a recognition on the part of the social actors of an interdependence above the level of the nation state. As Morin observed there is the need for transnational solidarity beyond the territorial limits; yet, in reality, fishermen think only in terms of national solidarity. One of the contradictions of democracy in contemporary Europe is the gap between the transnational spheres of action and the statebound nature of political representation.

The final set of remarks addresses the implementation of fisheries policy. Returning to the question of co-management, it is remarkable how often its advocates claim that it will be both more effective and more democratic - something of a paradoxical assertion. Fisheries in Europe are heterogeneous: both artisanal and industrial with different fishing techniques, investment patterns, markets etc. In such a situation, collective action should logically be translated into demands for autonomy and self-regulation for the sub-group. It would be difficult to develop collective action given increased autonomy within the social system. The essential characteristics of the CFP, on the other hand, are that it is designed centrally, seeks to create a common system of regulation and thus leaves little room for manoeuvre at the local level for differentiation. The increasing centralisation is becoming less and less

acceptable to the fishermen who wish to institutionalise their distinctive sub-cultures.

One outcome of this is the proposal for the devolution of decision making. Thus, we return once again to the question of the most appropriate level for the autonomisation of the social sub-systems in terms of the implementation of a more differentiated fisheries policy. According to Bailly, the answer lies in existing local institutions: the *cofradias, prud'homies* and *comité des pêches.* Moreover, it is important to recognise that public policy is seldom built on a 'greenfield site' but nearly always strongly influenced by history and culture. How else could one understand Langstraat's assertion of the strength of direct representation of fishermen in fisheries management in the Netherlands except through an appreciation of the system of mediation between state and society, historically shaped by the Calvinist tradition? The rediscovery of the concept 'small is beautiful' in the context of co-management is striking. But the notion that 'small is also more democratic' may owe more to romanticism than to empirical observation. Not only is there evidence that at local levels certain groups of fishermen pay scant attention to the interests of other fishermen but there is also the risk of clientalism developing.

4.4 *Rapporteur III: Torben Vestergaard, Department of Ethnography and Social Anthropology, University of Aarhus, Denmark*

It was perhaps predictable that the workshop should have kept to the realistic middle ground, avoiding extreme and simplistic models or management perspectives. But a question which was never properly formulated was: alternative to what? The CFP has to be renewed in 2002 and the CFP was, of course, questioned and discussed both inside and outside of the formal sessions. There are theoretical reasons why it makes no sense simply to ask whether the CFP has failed. It is not possible to say whether another policy would have been better, for the simple reason that the fisheries have already changed with the development of the CFP. The policy has evolved like an organism that modifies its own environment as part of the process of evolution. The fisheries and the marine environment are by now, to a degree, products of the CFP. This implies, as Collet and Langstraat observed, that the ecosystem cannot be precisely defined because it is not an autonomous, natural system with an objective independent existence or normal state. Regardless of its problems, the CFP also has some of the qualities of a gradually evolved organism: the Policy and its national implementation have adapted to countless small things that cannot be taken into account in the grand design of a totally new system adapted to a non-existent *status quo ante*. But solutions should be sought for the problems currently generated by the CFP. In his contribution González Laxe commented on the repercussions of CFP decisions and compromises within the fisheries and the instability it has created. This would call for research into the generation of instability by the long term, in-built characteristics of the CFP as against generation of instability caused by the fact that the Policy changes from time to time.

'Alternative' might also refer to conventional bio-economic theory. Even if this is no longer news, the workshop did focus on management systems alternative to the reductionist view that has only two opposed management options: political control of fisheries by the state or economic regulation by the market. It is generally recognised that fisheries cannot be managed as an isolated bio-techno-economic domain for two reasons. First, fisheries as an activity is embedded in a context with economic, social, cultural, political, technical and environmental dimensions. The need to take embeddedness into account was emphasised in Jentoft *et al.'s* paper. The embeddedness argument is a general point made by several social sciences; it implies that responses to political intervention are generated from a wide and comprehensive basis and not just from biological and economic effects. The concept of forcefield analysis proposed by Salz, as one way of conceptualising factors to be accounted for in fisheries management, describes a cross-disciplinary checklist addressing the various forces that fisheries are suspended between. The workshop clearly recognised that fisheries and fisheries management involve not just bio-economic facts, but also social organisation, cultural meaning and values.

A second reason for widening the scope of attention is that fisheries are affected by an increasing number of new interests linked with consumer and green movements and with rival uses of marine or coastal resources (Hersoug *et al.*, Steins, Tasker and Knapman *inter alia*). Fisheries are, as always, part of a wider context, but fisheries management is now politically required to take account of a widening field of interests raising new types of problem and conflict.

Corresponding to traditionally narrow policy goals, the field of research used to be narrower, even if this was not a logical necessity. Social science experience seems increasingly to be that, regardless of the policy goals, management success depends on more than theoretically successful system effects on stocks and economy. The importance of legitimacy for compliance was raised by several contributors. Thom's paper gave the opportunity to consider the notion of legitimacy in a means/ends perspective. Legitimacy can be seen in an instrumental perspective as relating to the means of ensuring compliance. But legitimacy may equally be seen as an end in itself - a criterion of shared goals between authorities and industry and a criterion to help identify unacceptable policies. Basic social and cultural preconditions for effective management systems could be summarised in the requirement that they must be right and they must work. From both a public policy and industry perspective values and facts must be taken into account.

The issue of alternatives refers to both policy content and policy framework. In his briefing paper Symes suggested that attention be focused not on types of regulation but on institutional frameworks of management. This was observed to a surprising degree. There was little discussion of quotas, ITQs, effort regulation, output regulation, technical limitations etc. The scenario began with the CFP as it is (common policy frame and national implementation) and discussed the logical possibilities for next moves: more centralisation of the

CFP and its management versus national (Crean) or local (Sipponen) policies and management systems. The option discussed by Symes was that of management systems at the level of 'regional seas'. Again discussion centred on the middle ground, perhaps for obvious reasons. The centralised option would have to be extremely simple or extremely detailed so as to accommodate the differences in the Europe's fisheries. Extreme devolution of management authority would have problems in coordinating fisheries that would still utilise common stocks. Unlike most EU issues, fisheries cannot be reduced to a domestic, national problem because it takes place in territories between nations and not inside nations. Even without a CFP this problem would not go away.

Many problems are linked with, and to some extent delimited by, 'regional seas'. The argument could be that regional seas management would be a way of adapting the CFP to the differences in Europe's fisheries at a level which maximally corresponds to clusters of similarities between the European and the local. It would at the same time mobilise user groups and associations with a reasonable level of shared understanding. Industry representatives from the EU Baltic states are already developing a quite successful regional cooperation in their preparations for the meetings of the International Baltic Sea Fisheries Commission. Discussion on regional management at any scale implies the question of rights delimiting access to and exclusion from fishing or participation in decision making. Frangoudes rightly observed that representation of the industry at local or regional level does not necessarily correspond to composition of a locally heterogeneous industry. There are local differentiations of the industry into segments of technique and scale.

In the search for management solutions between the extremes of the state (or EU) and the individual and the inseparability of ecology and economy from social life, attention automatically turns to the involvement of user groups. More than half the papers addressed, in one way or another, participation and co-management: in theory (Jentoft *et al.*), regional (Symes), national (Crean, Langstraat, Phillipson), local (Sipponen, Bailly, Alegret, Varjopuro, Frangoudes) and regarding enforcement (Thom). Bailly warned against the uncritical use of the term 'co-management' and it is important to recognise that co-management can refer to any situation from where user groups are regularly asked for comment to the other extreme of user group management where public authorities are in the position of being consulted. In the workshop, the issues were more precisely delimited: spatial and technical delimitations of management fields, types of formal and informal territorial rights, organisational properties of particular groups and problems of defining rightful stakeholders in co-management.

Established institutions usually hold an advantage over newly designed ones in that they are total social phenomena with the stability and adaptability that this provides. Jentoft *et al.* give a definition of institution that may be kept in mind when discussing frameworks for fisheries management, because it transcends a notion of institutions as only constraining, including their enabling and creative potential. "Institutions consist of cognitive, normative and regulative

structures and activities that provide stability and meaning to social behaviour. Institutions are transported by various carriers - cultures, structures, and routines - and they operate at multiple levels of jurisdiction".

With a bearing on the question of turning institutions to new or extended uses, Le Morvan drew attention to the juridical conditions that any management initiative has to adapt to or change. One of the issues in co-management in the grey area between law and tradition is the question of identifying legitimate stakeholders. In some countries it is a centuries old tradition for authorities to seek advice from those directly involved in the fisheries. With 'integrated fisheries management' and 'integrated coastal zone management' new interest groups enter the scene. Who has a right to participate: authorities, the industry, the marketing and processing sectors, consumer groups, ecological movements? Where are the demarcation lines between accepted tradition, parliamentary democracy and extra-parliamentary influence? This stakeholder issue was introduced in the briefing paper but barely touched on in the workshop. Most directly it was addressed by Hersoug *et al.* in their paper on eco-labelling. Is the Unilever-WWF Marine Stewardship Council initiative an 'illegitimate' attempt at extra-parliamentary political influence? And will the consequence be that vertically integrated multinational firms stand to gain advantages over less resourceful individual fishermen in the periphery?

4.5 Summary of the open forum

In line with the Workshop programme as a whole, the final discussions tended to refocus attention on issues of devolved management, joint responsibility and regionalisation. The deliberations of the Workshop had perhaps added to rather than resolved the complexities and ambiguities of co-management. The continuing absence of a precise definition allows the concept to mean 'all things to all people' and to become regarded, erroneously, as a general panacea for the ills of fisheries management. The issue is no longer to elaborate the concept but to determine in what particular contexts co-management is likely to prove effective. How far can the industry progress towards self-regulation as a result of shared responsibility? Can fishermen's organisations - like POs - be persuaded to take on responsibility for monitoring, surveillance and control, expensive aspects of implementation which at present are carried out, somewhat ineffectively, by the member states' central institutions? Devolving the costs of management to the industry is an integral part of the agenda for devolving responsibility.

Some unease persisted over the concept of regionalisation which was seen by some to threaten the fragmentation of management into an ill-fitting jigsaw puzzle for the Community's 'common pond'. One solution might be for the Commission to develop its own regional approach to management, taking advice from regionally constituted advisory groups but retaining responsibility for the formulation of policy in order to ensure the harmonisation of policies throughout the Community, according to the agreed principles of non-discrimination and relative stability.

The discussion finally returned to the two key coordinates of policy making - the temporal and spatial dimensions. Whereas the discussions throughout the Workshop had tended to emphasise the importance of spatial scales and the need to find the appropriate level for the implementation of policy, little attention had been paid to the problems created by the very short time horizons apparent in fisheries management. The importance of developing a much longer term perspective for the attainment of the goals of fisheries management had been noted at the outset of the Workshop. But is there a fundamental conflict between the two objectives of decentralisation and devolution, on the one hand, and the lengthening of the time frames, on the other? Would the greater influence given to local actors through devolved management systems tend also to emphasise short term planning horizons? How might these two potentially discordant objectives be resolved?

4.6 Concluding remarks

Underlying most of the Workshop proceedings has been a largely outspoken, but sometimes tacit, criticism of the achievements of the Common Fisheries Policy. Yet most of the contributions pointed very clearly to the need for some kind of collaborative framework within which to develop a management strategy for fisheries. The European Community and its Common Fisheries Policy are expected to provide the framework. The Workshop has tried to identify ways and means of improving that framework. It has focused attention on the reform of the institutions rather than the policies *per se*. In doing so, it has reaffirmed a belief in the need for decentralisation and devolution of policy making, which only a few would dissent from.

According to some, the discussion has been insufficiently provocative. The Workshop has chosen to adopt a non-radical agenda, in the sense that it sought a reform of the management system from within, involving the adaptation of existing structures rather than their replacement by wholly new structures or no structure at all. Regionalisation is not, in itself, radical; what may appear much more radical is the implication of a transfer of decision making authority from the centre (Brussels) to the regions. There was little or no challenge to the content of existing management policies - little critical appraisal of alternative regulatory mechanisms. Even when such issues appeared to be the central concern, the argument eventually turned on the competence or otherwise of particular institutions to propagate new regulatory measures.

As on previous occasions, with a few notable exceptions, fisheries were dealt with in isolation - divorced from other aspects of the marine environment, other competing uses for marine space and other sectors of the regional economy and local society. We need to lift our eyes and gaze upon a somewhat broader horizon and, in so doing, to embrace the wider set of relationships between science, the political process and the subject groups, on the one hand, and the global economy, consumer markets and the harvest groups, on the other. This last remark prompts the question of multi-disciplinarity - an issue to which we frequently give token recognition but rarely devote much time to elaborating. Perhaps the idea of forcefield analysis provides us with a

mechanism but, at the risk of sounding too much like the archetypal social scientist, what we need to do is identify the proper institutional framework for a multi-disciplinary approach.

5.0 Implications for research

5.1 Because the social sciences are a broad church, no one research methodology can be said to characterise their approach to the creation of meaningful knowledge. In simple terms, research may be divided between that which tends towards generalisation through model building, with a wide but rather shallow level of application, and that which tends to particularise through in-depth studies of facts and meaning with a rather narrow range of application. The case study approach, which embodies the latter, was criticised by some participants on the basis that it fails to advance both theory and empirical knowledge of policy issues: trying to understand the whole by a detailed analysis of its parts was deemed unfruitful. But this is to misunderstand the purpose and attainments of case studies, which may be likened to the 'test tubes' of experimental science, in which the systems of values, organisational forms and patterns of interrelations within the fisheries sector can be explored. The research agenda should recognise the need for both approaches - the generalising model and the particular case study - but the real challenge lies in trying to integrate these two approaches. We need to translate the findings from detailed case studies into 'utilities' for the policy maker. In a very real sense, this is the function of ESSFiN.

5.2 Because the Workshop dealt primarily with what are core areas of social science research, many of the outcomes from the Workshop point to the need for a fine tuning of existing approaches and a reorientation of existing themes. Nonetheless a number of specific areas can be identified. Some of these follow from the comments of the rapporteurs from disciplinary areas which are presently underrepresented in the active part of the Network.

5.3 Research into the *decentralisation and devolution of fisheries policy* needs to be developed through more precisely defined and detailed case studies. In the case of regionalisation, research should both elaborate the pattern of relationships between European, regional and national levels of governance, focusing more on the mechanisms of policy formulation and implementation and also, through detailed studies of particular regional seas, attempt to identify the potentials for effective participation and collaboration. At the same time, there is a need to examine patterns of inter- and intra-regional variation and the clustering of ecological, economic and socio-cultural characteristics.

5.4 For *co-management*, the task is to define in which fisheries and under what conditions co-management can provide a solution to management problems. This will involve identifying the properties of existing organisations, institutions and groups which may be judged competent and relevant to undertake additional management responsibilities. In particular, boundary problems relating to the delimitation of spatial, sectoral and organisational management fields requires closer investigation.

5.5 The importance of research into *'integrated fisheries management'* (i.e. the integration of fisheries and ecosystem management) was highlighted in the Aarhus report. This was re-emphasised in the course of the present Workshop

with a specification of the need (i) to develop a more precise definition of the concept; (ii) to clarify the relationships between 'integrated fisheries management' and existing notions of integrated coastal zone management; (iii) to examine the compatibility of management systems with their bases in formal scientific knowledge and the informal knowledge systems generated through the practical experience of fishing; and (iv) to assess the institutional requirements for 'integrated fisheries management'.

5.6 In the somewhat neglected field of *law*, several themes for research can be identified including (i) the need to redefine the legal status of marine resources in a spatial context; (ii) the application of ownership and inheritance principles to natural resources; (iii) the relevance of different levels of decision making (local, regional, national and supra-national) in relation to the (re-)distribution of legal competence; and (iv) the implications of legal systems for the formation of political choices. Likewise, in the field of *political science* the following research themes were noted: (i) the historical dimensions of policy design; (ii) the limits to decentralisation in terms of the exercise of political power; (iii) the relations between science, bureaucracy and political choice; and (iv) cultural variations in the capacity of fishermen's organisations to influence policy design and implementation. However, it is important that these themes be treated not as separate, discipline centred research topics but as part of an interdisciplinary approach to the understanding of issues relating to fisheries policy and to the critical analysis of alternative management systems.

Appendix A: Programme

European Social Science Fisheries Network: FAIR CT95 0070
Workshop on Alternative Management Systems
Brest, 18-20 September, 1997: CEDEM, Faculté de droit et des sciences économiques
Université de Bretagne Occidentale

Coordinator:	David Symes
Manager:	Jeremy Phillipson
Local Workshop organiser:	Katia Frangoudes

Thursday 18th September

0900 - 0915 Registration

0915 - 0930 Opening of Workshop

0930 - 1045 Session 1: Approaches to management: past, present and future
Chair: Peter Friis

Serge Collet (Germany) From sustainable resource use to the governance of the marine ecosystem: function and role of the ethic of the sea

Fernando González Laxe (Spain) The inadequacies and ambiguities of the Common Fisheries Policy

Pavel Salz (Netherlands) Force field analysis: towards integrated policy assessment

1045 - 1115 Coffee

1115 - 1230 Session 2: Scales of management: regional and national
Chair: Juan-Luis Suarez de Vivero

David Symes (UK) Regionalisation of the Common Fisheries Policy[2]

Kevin Crean (UK) Creating coastal state management within the European Community

Matti Sipponen (Finland) Fisheries regions - an improvement in coastal and inland waters fisheries management in Finland

1230 - 1400 Lunch

[2] David Symes' contribution will be presented as part of the theme paper to be circulated in advance of the workshop

1400 - 1515 Session 3: Scales of management: the locality
Chair: Jeremy Phillipson

Denis Bailly (France) Management of coastal fisheries and territorial use rights

Michel Morin (France) Towards a patrimonial management system for fishery resources

1515 - 1545 Tea

1545 - 1700 Session 4: The integrated management approach
Chair: Oddmund Otterstad

Mark Tasker and Paul Knapman (UK) Marine environmental management and fisheries

Nathalie Steins (UK) Alternative management for inshore fisheries: the need for an integrated multiple user approach

Petter Holm, Bjørn Hersoug and Stein Arne Rånes (Norway) Eco-labelling: a new challenge to fisheries management

Evening Reception

Friday 19th September

0900 - 1045 Session 5: The co-management agenda
Chair: Bjørn Hersoug

Svein Jentoft (Norway), Bonnie McCay and Douglas Wilson (US) Social theory and fisheries co-management [3]

Jeremy Phillipson (UK) The fish producers' organisations of the UK: a strategic analysis

Dick Langstraat (Netherlands) The Dutch co-management system for sea fisheries

Juan-Luis Alegret (Spain) Alternative management systems and the crisis of the small pelagic fleet in Catalonia

Riku Varjopuro and Pekka Salmi (Finland) Functionality of fisheries management from the perspectives of commercial fishermen: two cases compared

1045 - 1115 Coffee

[3] Svein Jentoft's paper will be tabled at the workshop without oral presentation.

1115 - 1230 Session 6: Alternative modes of regulation
Chair: Babis Kasimis

Katia Frangoudes (France) The implementation of a licensing system: the example of the French Mediterranean

Mireille Thom (UK) The issue of enforcement in alternative management systems

1230 - 1400 Lunch

1400 - 1515 (i) Reports from rapporteurs
Chair: David Symes

Didier Le Morvan (France)
Christian Lequesne (France)
Torben Vestergaard (Denmark)

1515 - 1545 Tea

1545 - 1630 (ii) Open forum

1630 Close

Saturday 20th September

Excursion to Concarneau and Le Guilvinec

Appendix B: Participants

Denmark	Peter Friis, Roskilde University Torben Vestergaard, Aarhus University
Finland	Matti Sipponen, Employment and Economic Development Centre, Jvväskylä Riku Varjopuro, Hämeenlinna
France	Denis Bailly, CEDEM Alain Dréano, Section Régionale de la Conchyliculture de Bretagne-Sud Katia Frangoudes, OIKOS Didier Le Morvan, CEDEM Christian Lequesne, Fondation Nationale des Sciences Politiques Michel Morin, Saint-Nazaire
Germany	Serge Collet, Hamburg
Greece	Babis Kasimis, University of Patras
Netherlands	Dick Langstraat, Dutch Fisheries Board Pavel Salz, LEI - DLO
Norway	Bjørn Hersoug, University of Tromsø Oddmund Otterstad, Senter for Samfunnsforsning
Spain	Juan-Luis Alegret, Universitat de Girona Fernando González Laxe, Universidad de la Coruña Juan-Luis Suarez de Vivero, Universidad de Sevilla
UK	Kevin Crean, Hull International Fisheries Institute Jeremy Phillipson, University of Hull Nathalie Steins, University of Portsmouth David Symes, University of Hull Mark Tasker, Joint Nature Conservation Committee Mireille Thom, Inverness-shire
European Commission	Guilermo Robledo Fraga, DGXIV