European Social Science Fisheries Network

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Fisheries Dependent Regions

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Department of Geography

University of Hull

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Contents

0.0 Summary

0.1 *Introduction*

The fifth European Social Science Fisheries Network (ESSFiN) workshop, held at Nyvaager in the Lofoten Islands in August 1998, attracted 32 participants from eleven countries; a third of the participants were new to the work of ESSFiN. A total of 21 papers were presented in ten working sessions over three days.

0.2 *Proceedings*

The papers were divided into three main sections. The first dealt with the problems associated with the *definition and classification of fishery dependent regions* (FDRs), considered to be a prerequisite for a proper understanding of the economic and social impacts of fisheries policy. The means for defining, classifying and modelling the behaviours of FDRs was considered to be inadequate largely because of incomplete, inaccessible and discordant sources of relevant information. The papers considered the basis for developing a socio-economic data base for fisheries dependent areas, presented examples of classification systems in Greece and Denmark and examined the changing nature of fisheries dependence as a consequence of the erosion of traditional local linkages between fishing fleets, fishing grounds and landing ports.

The second, and by far the largest, section examined the *social impacts of fisheries policy* and was subdivided into three regional groupings: (i) the North Atlantic rim, including north east Scotland, Brittany and Portugal; (ii) the Baltic and Kattegat areas; and (iii) northern Norway. The papers provided commentaries on the problems posed by the general decline in fishing activity and identified a number of common denominators relating to the severity of the impacts in the peripheral regions as a result of (a) the introduction of more restrictive management regimes which appear to discriminate against the local inshore fisheries exhibiting the closest ties to local communities and home regions and (b) the competition and centralising strategies of the processing sector. The problems were examined at differing scales ranging from the FDR to the fishing dependent community and the individual household. The special case of the Saami fishermen in northern Norway was also considered.

The final section examined the *development strategies for fisheries dependent regions*. The papers and discussions focused on three themes: the idea of 'fisheries districts' involving the interactive networking of SMEs in the more remote FDRs in order to combat the centralising tendencies of production, processing and distribution systems; the strengthening of the fishing industry through the rationalisation of its structures and a concentration on quality rather than quantity objectives; and the need for economic diversification strategies while bearing in mind the potential risks that new investment and retraining may actually contribute to the decline in the local fishing industry. The role of grant aid, through dedicated funding programmes, was examined

and emphasis was given to the need for collaborative action among a wide range of social actors rather than externally imposed development projects.

0.3 *Discussion*

The significance of FDRs as a barometer for measuring the economic and social impacts of fisheries policy and as particular forms of 'problem regions' was confirmed. There was, however, an urgent need for careful designation and more meaningful modelling of FDRs which would encapsulate their dynamic qualities and their likely development trajectories rather than the present simpler, descriptive and static forms of classification. Questions were raised as to whether FDRs or fishing dependent communities (FDCs) were the more appropriate focus for analysis, especially where social behaviour is concerned. Both appear to be essential to a full understanding of the socio-economic problems facing the fishing industry, especially in the more disadvantaged regions.

There is also a fundamental need to distinguish between the objectives of fisheries policy, on the one hand, and social and regional policies on the other. Policy intervention should take account of three different areas of need: (i) the need to make FDRs and FDCs more efficient and better able to compete in a global market; (ii) the problems faced by particular groups who may be marginalised by the greater efficiency of the system as a whole; and (iii) the need to diversify the economic base of FDRs and FDCs without prejudicing the future viability of the fishing industry. These three requirements may well fall into different policy areas, but there is an overall need for the careful coordination of policies at the regional level.

1.0 Introduction

1.1 The following report summarises the proceedings of the workshop on *Fisheries Dependent Regions,* held at Nyvaager in the Lofoten Islands from 27th to 30th August, 1998. This was the last of five thematic and regional workshops arranged as part of the Concerted Action programme for the European Social Science Fisheries Network (FAIR CT95 0070). A total of 32 participants from eleven countries attended the workshop; a third of the participants were new to the work of ESSFiN and it was especially pleasing to welcome the first members from Portugal. The only disappointment was the absence of invited representatives from OECD, the European Commission and the Committee of the Regions through the pressure of other commitments.

1.2 Mainly because of the greater travel distance in reaching Lofoten and the breadth of the original programme, it was decided to extend the workshop to a fourth day. One significant spin-off was that much more time was available for discussion and this is reflected in the content of the report. In total 21 papers were presented in nine working sessions; a tenth session was devoted to an orientation on the Lofoten fishing industry given by representatives of *Råfisklag* (the regional sales organisation) and one of the region's largest processing firms.

1.3 In preparing the report, slight changes have been made to the sequence of papers in order to give a more logical structure to the content of the workshop. Following this introduction, the report includes the 'background paper' distributed in advance to all participants, extended abstracts of each paper and a summary of the discussions, and finally an analysis of the findings prefaced by the rapporteurs' comments. With the co-operation of our publishers, Blackwell Science, it is hoped to publish the papers in book form sometime in 1999.

1.4 In addition to the working sessions, participants had the good fortune to visit the final stages of an archaeological excavation at the site of what is believed to be the largest trade centre in northern Norway dating from the medieval period; they also enjoyed an evening's sea fishing which did little to threaten the status of Norway's fish stock but may have uncovered the myth concerning the effectiveness of Norway's fisheries management. An excursion to the outermost limits of the Lofoten Islands enabled participants to appreciate the contrasting landscapes of the inner and outer parts of the islands and to visit the well preserved fishing settlement of Aa, where we were given an excellent exposition on the saltfish industry.

1.5 The coordinator of ESSFiN wishes to thank Bjørn Hersoug and Stein Arne Rånes for all their efforts in making the workshop a very successful event. Their choice of venue and accommodation in what must be the most spectacular fisheries dependent region, combined with the superb weather, made it a memorable experience.

David Symes
Hull, October 1998

2.0 Fisheries dependent regions: a background paper

David Symes, University of Hull

2.1 *Introduction*

It is fitting that the programme of thematic and regional workshops. organised through ESSFiN, should conclude with one dedicated to Fisheries Dependent Regions (FDRs) and that it should attract such a large number of participants from a wide background of disciplinary and professional interests. Although the theme of FDRs provides a natural focus for a number of theoretical and applied social sciences, there are other reasons why the present workshop may be regarded as the culmination of a major strand of ESSFiN's work programme. In the first place, an analysis of regions dependent on fisheries is an essential component of the review mechanism leading up to the renegotiation of the Common Fisheries Policy (CFP) in 2002. According to Article 14(2) of Council Regulation No 3750/92 of 20 December, 1992 establishing a Community system for fisheries and aquaculture:

'By 31 December, 2001, at the latest, the Commission shall present to the European Parliament and Council a report on the *economic and social situation of coastal regions*, on the state of the resources and their expected development, and on the implementation of this Regulation' (my italics).

The current situation in the FDRs will most closely reflect the economic and social impacts arising from the convergence of the several strands of fisheries policy viz. conservation, structures, markets and even external relations. Just as important, FDRs will also illuminate the extent of convergence and divergence between fisheries policy and other policy areas (agricultural, social, regional *inter alia*). Significantly the CFP, unlike its big brother the Common Agricultural Policy, can be defined as an economic or sectoral policy largely unconcerned with, and insensitive to, its social impacts. It is important, therefore, to examine the relations between fisheries policy and other contingent policy areas in order to identify the policy needs of FDRs in terms of their broader economic and social development.

The aims and objectives of the workshop - and, therefore, of this briefing paper - will be to define a number of key questions relating to the socio-economic analysis of FDRs, for which hopefully the workshop can begin to provide some preliminary answers, and also to identify topics for future research. Four key questions are here used to map out the structure of this paper: how do we define and characterise fisheries dependence? what are the main elements of the socio-economic problems of FDRs which need to be addressed through policy measures? and how do existing policies relating to fisheries or regional development impact on FDRs and how might these be improved? A final section of the paper will sketch out how the workshop programme will address some if not all of these issues.

2.2 *Defining fishing dependent regions*

The problems of FDRs begin with their definition. The primary aims of definition, it is argued, is to identify those regions most at risk from both natural and policy induced decline in the level of fishing activity and least well placed to absorb the impacts of a reduction in employment and income derived from fishing. According to this aim there are three particular obstacles to be negotiated. In the first place, there are no Europe-wide data sets that will automatically and adequately define FDRs: national data sets tend to treat the basic parameters of employment in the fishing industry in a non-standardised form. Secondly, it is likely that the extent of fisheries dependence will be concealed rather than exposed by data sets constructed at a macro-regional level (e.g. NUTS II); only at a local level can the reality of fisheries dependence be easily recognised and even then not in all cases. Thirdly, at almost any scale the notion of 'fisheries dependence' will seem a contradiction in terms. Attempts to measure the regional significance of fishing related activities will tend to yield low and potentially unconvincing results and such measurements are often complicated by the fact that in many areas fishing is embedded in a strongly pluri-active local economy. There are few regions in Europe - outside Iceland, the Faeroes and North Norway - where fishing related activities account for a significant share of total employment or Gross Regional Product (GRP).

Not only is the fishing industry a very small, almost insignificant sector of the EC's economy, it is also a highly dispersed one. Of the 299 fishing dependent areas identified in the *Regional Socio-Economic Studies of the Fishing Sector*, commissioned in 1991, in two thirds employment in the catching sector accounted for under 2% of total employment. Even the application of a generous multiplier to the jobs at sea (5:1) would fail in most instances to give a convincing picture of fisheries dependence.

(a) Problems of definition

In defining FDRs, economic criteria based on employment, added value and GRP, would seem to be the most accessible and straightforward. Other criteria may be used if there is a secondary objective in identifying the main centres of fishing activity e.g. the volume and value of landings, though in many cases such port based statistics do not correspond to census areas used to collate population or employment data. There are further problems in identifying which occupational groups to include in an employment based definition - whether to restrict coverage to those engaged in the harvesting sector or to extend the range to include merchanting, processing, distribution and ancillary trades. In the latter case, many of the downstream jobs are not exclusively concerned with the fishing industry. There are, moreover, inevitable problems of equating full time, part time, seasonal and even 'recreational' involvement in the fishing industry.

However those problems are solved, definition will inevitably end up as a 'numbers game', involving some arbitrary threshold value for

inclusion/exclusion in the list of FDRs. It is important in arriving at an adequate definition to combine both absolute and relative values in the index of fisheries dependence; otherwise, important components of the fishing industry may be lost to view. Relative numbers, for example, will tend to focus attention very largely on the stereotypical remoter, sparsely populated, rural FDAs but ignore the existence of important concentrations of fishing activity in the more populous urban settings. In the UK, relative numbers would quite correctly highlight fisheries dependence in the Highlands and Islands of Scotland but conceal the existence of a large fisheries dependent sector within the city of Hull.

(b) The Regional Socio-Economic Studies

The *Studies* provide a rather unconvincing initial attempt to define and analyse fisheries dependence within the EC: in practice they probably reveal more about the technical problems involved than about the nature of the regions themselves.

Altogether, throughout the EC12 fishing related activities accounted for some 604,000 jobs and an overall income of 11.8 billion ecu, or a mere 0.4% of employment and between 0.2 and 0.3% of income in the Community (Salz, 1993). Although these figures may underestimate the true extent of employment and income generation attributable to fishing related activities, they place the industry in context and adequately summarise its insignificant role in the overall economy. Paradoxically, the 21 *Regional Socio-Economic Studies* identified a total of 299 coastal zones, which embraced a total population of 106 million or 31% of the EC12 total and accounted for 95% of fishermen and 75% of those engaged in related activities.

The *Studies* encountered all of the problems of definition referred to above: lack of commonality in the size and status of the geographical units used to define the zones - they ranged in size from c 2,000 population to around 3.5 million; a lack of standard definition of fishing related occupations; difficulties in achieving a reasonable equivalence in estimating the employment and income values of part-time and seasonal workers etc.

As Table 1 demonstrates, a significant proportion of the total fishing related employment was to be found in zones with very weak levels of dependence on fisheries (<2% of total employment). Part of the explanation lies in the very extensive areas covered by some of the coastal zones: the lower the level of spatial disaggregation, the weaker the level of dependency. Only 37 coastal zones - characteristically small in extent - recorded employment dependence in excess of 10%; these were regionally concentrated in four regions: north west Spain, southern (Atlantic) Spain, eastern Italy and the north and west of Scotland. Surprisingly, the coastal areas of Brittany responsible for a significant share of total landings in the EC12 do not figure in the list of areas with the highest dependence on fishing. Again the explanation lies in the choice of regions (departements) used to record the data. Overall the impression is of fishing as a highly dispersed economic activity with low

levels of spatial concentration; indeed the 74 zones recording employment dependence levels in excess of 5% accounted for only 40% of the total fisheries dependent employment.

Table 1: Employment in fisheries dependent regions (Source: Salz, 1993: Statistical Appendices)

	Dependence on fisheries related employment (%)					
	10 and over	5 - 9.99	2 - 4.99	1 - 1.99	<1	Total
Zones	37	37	60	58	97	289
Population (million)	1.8	4.9	8.1	17.8	70.8	103.4
Employment (million)	0.6	1.6	2.7	5.9	26.6	37.4
Fisheries dependent employ.						
Fishing	67,126	58,004	42,547	45,791	63,372	276,840
Other	65,414	61,335	39,617	36,155	30,698	233,219
Total	132,540	119,339	82,164	81,946	94,070	510,059
%	26.0	23.4	16.1	16.1	18.4	100.0
Cumulative %	26.0	49.4	65.5	81.6	100.0	

(c) Future progress

While the definition of FDRs may rest exclusively on economic criteria (employment, GRP etc.), it is certainly not enough to focus the subsequent analysis either on economic data alone or on fishing related activities *per se*. The analysis of the FDRs for the purpose initially defined above, *viz.* identifying those regions most at risk from declining levels of fishing activity, must focus on the economic, social and demographic characteristics of the *areas* concerned. The lists of FDRs will need to be rearranged according to meaningful typologies which link economic and socio-demographic indices. Thus, the analysis must go beyond the boundaries set up for the 1991 *Studies*; sadly, these boundaries have been largely reconfirmed in the remit for the surveys of FDRs commissioned earlier this year. Retention of the very narrow economic perspective - albeit under the guise of 'socio-economics' - merely confirms the view that the CFP is neither more nor less than an economic policy. Work undertaken earlier by ESSFiN in developing the framework for a social data base for FDRs has elaborated some of the social and demographic data required to give a more balanced and rounded view of their character (Otterstad *et al*, 1997).

2.3 *The taxonomy of FDRs: a definition of vulnerability*

Among the most seriously disadvantaged regions today are those remote rural areas which have traditionally depended on the exploitation of primary resources through agriculture, forestry or fisheries. In the past, the disadvantages of harsh physiographic conditions affecting topography, climate and soil, combined with that of remoteness from urban and regional markets, have often been offset by proximity to abundant fishing grounds. Much of the

Atlantic Fringe of Europe, stretching from the North Cape to the Straits of Gibraltar, was characterised by a dual economy of farming and fishing in which the prolific but often seasonal and largely fluctuating fisheries provided a 'buffer economy' able not only to enrich the livelihoods of coastal communities but also to absorb displaced labour in times of industrial recession. With the downturn in fishing activity, induced by declining resources and regressive policy measures, these regions are now exposed to severe economic hardship - falling incomes, increasing indebtedness, rising unemployment and a weakening demographic base.

Despite the difficulties in definition and analysis alluded to above, it is possible to infer a number of taxonomic features of FDRs. They relate to three broad aspects: location, economic structures and social characteristics.

(a) Locational problems

By definition, the fishing industry is largely confined to marginal locations within the national and European economic space i.e. along the coastal margins and among the offshore islands. Not all fishing related activities are conducted from remote rural bases. Indeed, the tendency over the years has been towards a concentration of activity in urban centres with a broader range of infrastructural services, a more diverse economic structure and a more mature business environment. Nonetheless, there are significant parts of Europe where the fishing industry plays an important role in an otherwise underdeveloped rural economy.

Peripherality, influenced both by the physical configuration of the area and by the geographical distribution of economic activity within it, is therefore a salient feature of many if not most FDRs and a significant deterrent to inward investment. The concept of peripherality is closely linked to accessibility, reflecting the fact that physical distance imposes costs in terms of money, time, access to information, organisational and institutional inefficiency (Keeble *et al*, 1988). As a result, mobile capital is reluctant to locate in peripheral areas disadvantaged by distance, poor infrastructure and what may be termed 'peripheral vision'. Although geographical distance has been modified by the development of telecommunications and information technology, the real costs of transport and communications remain substantially higher in peripheral locations. Peripheral regions must, therefore, rely largely on locally initiated, small scale, labour intensive projects which exploit local resources and/or cater for local markets.

Many of the structural characteristics of the less urbanised rural FDRs are derived from, or at least influenced by, peripherality. These include a narrowly based employment structure with a tendency towards an industrial monoculture based on fisheries, sometimes supplemented by agriculture and tourism; high levels of self-employment in small scale, family based enterprises; seasonal variations in activity rates in fishing, farming and tourism with the concomitant of pluriactivity and/or seasonal unemployment; and weak economic, social and institutional infrastructures. The more strongly

the area is characterised by these features the greater the economic and social impacts of a reduction in fishing activity.

(b) Economic structures

Characterised by the predominance of small and medium sized enterprises and geographically restricted labour markets, FDRs have suffered the consequences of structural change within the fishing related industries resulting from an increasing substitution of capital for labour, specialisation and economies of scale, which have conspired to reduce the number of jobs both at sea and ashore.

The processing industry has been undergoing a vigorous period of rationalisation, especially in the primary processing sector, leading to a reduced level of employment opportunities in fewer but larger plants. The closure of many of the smaller factories has also led to a relocation of fishing related employment from the local community to larger urban centres. But changes within the processing sector go beyond a simple reduction in numbers. As Hanssen (1997) demonstrates, there has been a shift from relatively open local labour markets, based on transfers of local knowledge and traditional skills, to the progressive closure of the system, where an increased use of capital restricts access by an unskilled local work force. Thus, there is a progressive change in local labour markets from low skill, casual or seasonal employment - which suited the conditions of a pluriactive economy quite well - to more specialised, full time skilled jobs.

Vedsmand *et al.* (1997) have also demonstrated some of the problems facing FDRs, arising from a path dependent evolution of fishing related activities associated with specialised mass production overtaken by a 'boom and bust' scenario affecting raw material supplies. The tendency towards over-investment, the failure of local and regional economic institutions to respond quickly to the changing circumstances and the weak integration of the fishing industry in the wider regional economy are highlighted in their analysis of a fisheries dependent island community in the Baltic.

(c) Socio-demographic concerns

In many instances, FDRs will suffer the same bundle of socio-demographic disadvantages as are commonly found in remoter, agriculturally based rural areas, namely strong outmigration of younger, better educated people, an ageing population, rising unemployment and under-employment. The particular problems of attracting 'new blood' into an industry where recruitment is inhibited by the inability to acquire licences and/or quotas and of maintaining generational succession in family businesses burdened by diminishing profitability and increasing uncertainly are frequently highlighted.

Several authors have attested to the profound socio-cultural changes in the nature of the fishing community. Writing of the situation in north east Scotland, Nuttall and Burnett (1997) have suggested that it is increasingly

difficult to claim that the fishing village still exists as a clearly defined entity: patterns of in- and out- migration have modified their socio-demographic characteristics and blurred their social and spatial boundaries. In occupational terms, the traditional spatially defined community of common interest articulated through close knit kinship and neighbour relations have tended to be replaced by more dispersed associational networks based on formal contractual relations (Nuttall and Burnett, 1997; Jentoft *et al*, 1998).

The traditional occupational community has become 'encapsulated' within a more diversely structured spatial community, especially in those coastal areas which have attracted significant numbers of non-local in-migrants and tourists. Jentoft (1995) has also contrasted two stereotypes of fishing community: the 'embedded community', similar to the traditional spatial community characterised by local kin and neighbour networks, and the 'corporate community', 'owned' and articulated by the dominant firm. However the contemporary fishing community may be characterised, it is fairly clear that in many instances the interests of the fishing industry have been diluted and the role of the local fishermen's association may well have been marginalised in the context of local community affairs. At a time when increasing emphasis is being placed on grassroots initiatives to stimulate the development of the local region, the marginalisation of fishing interests may be a cause for concern an a focus for further analysis.

2.4 *Coping with change: modernisation and diversification*

The prospects for maintaining, let alone expanding, employment within the fisheries sector - except for aquacultural development - are infinitesimal. Modernisation of the harvesting sector and further rationalisation of the downstream sector will cost rather than create jobs. Opportunities for the sustainable development of many FDRs will therefore rely upon 'diversification' and 'reconversion' rather than the expansion of the fishing industry *per se*.

Within agriculture, post-productivist policy has emphasised the role of diversification in terms of introducing alternative crops and livestock into the farming system or more importantly, the redeployment of resources (land, capital, labour and management skills) into non-agricultural enterprises. In the case of fisheries, diversification strategies are much less easy to identify. All three of the traditional coping strategies recognised by Eikeland (1997) are now constrained by state intervention. Flexibility in participation (i.e. engagement in a pluriactive economy) has been discredited by economists as inhibiting specialisation, technological efficiency and economics of scale, and 'outlawed' by governments through adoption of minimum participation rates to qualify for licences, quotas and grant aid. Potential for the exploitation of new fishing grounds or under-utilised stocks is limited in terms of quota availability, technological accessibility and market opportunities. Attempts to redirect surplus fishing capacity to alternative fisheries have met with little success in the past.

Redeployment of resources, currently tied up in fisheries, to other enterprises is constrained by the immobility of capital and human skills. Unlike agriculture, where land and other fixed assets have considerable potential for re-use in housing, holiday accommodation, sports and leisure activities etc., in fishing the main capital assets are tied up in vessels and gear with limited opportunities for conversion to other productive uses. The only asset with a high market value is the licence and quota allocation attached to the vessel.

A further constraint on diversification is the immobility of labour. Fishermen are highly skilled professionals but their skills are often locally specific and unrecognised outside the informal association of other fishermen. Even on the larger vessels, only the skipper, engineer and mate are likely to hold certificates attesting to their skills. The informal skills of fishermen divide into two groups: specific (fishing, fish handling) and general (seamanship and, in a number of cases, engineering). The former would appear to have little application outside the industry itself. Surprisingly, there has been little redeployment of the specific skills into the now rather overcrowded fish farming sector; aquaculture has developed largely on the basis of external capital supplied by multi-national corporations. The possibility of redeploying fishermen into the tourism and recreation sector as operators of vessels for cruising, diving or sea-angling has only limited appeal; for many it would represent a debasement of their skills.

The restructuring of FDRs would therefore seem to rely more on the processes of reconversion than on a spontaneous redeployment of assets held within the fishing industry. Reconversion implies a deliberate programme of action to modify the existing economic structures and employment opportunities within the target areas. Intervention, in the form of infrastructural investment, the creation of new enterprises and retraining, requires the support of the state.

2.5 *Policy response*

At present fisheries policy will invariably accelerate the processes of structural rationalisation endemic in a capitalist economy and therefore aggravate their economic and social impacts. Virtually all aspects of fisheries policy - resource conservation, structural reform and liberalisation of markets - will conspire to reduce the level of fishing activity. Under conditions of overexploitation of finite but renewable resources, the basic aim must be to re-establish the equilibrium between a sustainable resource base and harvesting capacity through a reduction in fishing effort. It is quite simply impossible to square the circle of protecting the long term future of the fish stocks and protecting full employment within the industry in the short term. Issues of social equity can only be effectively addressed during the second phase of the policy strategy, once a sustainable equilibrium has been established.

The CFP is unquestionably a sectoral, production oriented policy. Socio-economic 'fall out' from the policy is, to all intents and purposes, an externality to be addressed through other policy areas. This is in contrast to the Common Agricultural Policy which tends to internalise concern for the

casualties of structural change through support for small, low income farms and economically distressed Less Favoured Areas. Under *Agenda 2000*, the new less protective CAP will still include among its objectives (i) to ensure a fair standard of living for the agricultural community and to contribute to the stability of farm incomes; and (ii) to promote the creation of alternative income and employment opportunities in rural areas (Fischler, 1998). Similar objectives are missing from the present CFP and unlikely to appear in the reformed Policy after 2001. There is little or no evidence of 'positive discrimination' in support of vulnerable sectors or FDRs; such action would be in violation of the principles of non-discrimination and relative stability.

Awareness of the problems facing the FDRs and the need to combat the adverse effects of current fisheries policy has been slow to evolve. Initially the assumption seemed to be that FDRs could be adequately treated as a sub-type of agriculturally dependent regions and addressed through the same policy measures within Objective 1 or 5b regions. The rejection in 1992 of a proposal to establish an Objective 6 specifically to address the problem of FDRs appeared to condemn them to anonymity.

Instead of new structural fund, the Financial Instrument for Fisheries Guidance (FIFG) was introduced in 1993; in association with a revised Objective 5(a), to assist the modernisation of the sector. With a commitment of only 885 million ecu over the period 1994-99, FIFG is not surprisingly the smallest of the Structural Funds. It is used almost exclusively to support the rationalisation and modernisation of the production structures (*viz.* vessels, ports, processing, marketing and aquaculture). In fact a significant use of FIFG has been to provide funds to assist the decommissioning of vessels through the Multi-annual Guidance Programme (MAGP) and the modernisation of the remaining fleet (Table 2).

In 1994, a Community initiative - PESCA - was launched with a commitment of around 300 million ecu from the Structural Funds to complement the structural aid available under FIFG and assist the strengthening and diversification of the economy in areas dependent on fishing, within Objective 1, 2, 5b and 6 regions. Half of PESCA funding is earmarked for Objective 1 and 6 regions, the latter covering the sparsely populated areas in Finland and Sweden. In essence, PESCA provides financial support to improve the effectiveness of the local fishing based economy through small scale capital projects, and enhance the quality and value of fishery products through training and improved technology; it also helps fishermen retrain for other jobs normally outside the fisheries sector and often in tourism and craft related employment.

The PESCA initiative has not been universally welcomed and its contribution to the restructuring of the sector has been very limited (Annual Report of the Court of Auditors, 1996). There is some suggestion that PESCA is simply funding the inevitable, while others oppose any funding of projects which help to erode the status of the industry. The overall achievements of PESCA are

hard to evaluate: reconversion is bound to be difficult in areas where other sectors of the local economy are already saturated or in decline.

Table 2: Projected FIFG expenditure, 1994-99: Objective 5a (Source: European Commission, 1997)

Activity	FIFG allocation	
	million ecu	%
Adjustment of fishing effort	171.5	19.4
Other fleet measures	45.5	5.1
Modernising/renovating fleet	174.9	19.8
Port facilities	64.5	7.3
Processing, marketing	228.3	25.7
Promotion of products	43.8	4.8
Aquaculture	96.0	10.7
Protected marine areas	9.7	1.1
Socio-economic measures	-	-
Other measures	54.3	6.1
Total	884.9	100.0

Although the direct contribution to FDRs from FIFG and PESCA may be small - though not out of keeping with the relative importance of the fisheries sector overall - it is important to remember that the majority of FDRs, and especially those with the highest levels of dependence, are to be found in areas which currently qualify for assistance from other Structural Funds (ERDF, EAGGF and the Social Fund). The overlap between FDRs and Objective 1 regions is especially notable: 60% of FDRs with dependence levels in excess of 10% were located in Objective 1 areas (see Table 3). Fishing dependent regions may therefore benefit directly and indirectly from the economic and social aid that such funding provides.

Table 3: Distribution of FDRs in relation to Objective 1, 2, 5b regions (provisional)

	Dependence on fisheries employment (%)					
	10 and over	5 - 9.99	2 - 4.99	1 - 1.99	<1	Total
Objective 1	22	21	29	26	36	134
Objective 2	4	1	7	7	12	31
Objective 5b	3	5	11	8	8	35
Other	8	10	13	17	41	89
Total	37	37	60	58	97	289

Several other regionally based Community initiatives may also apply coincidentally to FDRs. Most notable is the LEADER initiative, applicable to rural areas in Objective 1, 5b and 6 regions, which probably also offers the

most appropriate model for locally sponsored development in the remoter FDRs, based as it is on collaborative action involving the local community.

Clearly one of the urgent tasks is for a thorough evaluation of the extent to which FDRs are able to benefit directly or indirectly from the diverse sources of funding and development initiatives available throughout the Community.

2.6 *Policy change*

In March this year, the European Commission announced proposals for a major reform of regional policy as part of *Agenda 2000*, which could have important repercussions for the FDRs, (Commission, 1998). Although the basic priorities of regional policy will remain the same, namely the economic and social convergence between and within Member States, the reform of the funding system for the period 2000-2006 will attempt to achieve a more focused approach through

* concentration of aid from the Structural Funds;
* integrated strategic planning;
* decentralised and simplified assistance;
* more effective and better supervised monitoring.

From the point of view of FDRs, there are two main points to note. First, the *concentration of development aid* will mean a reduction in the qualifying areas from the current 51% of the Community's population to 38%. Objective 1 regions will be cut from 25% to 20%, with areas at risk including the Highlands and Islands, Northern Ireland and the Republic of Ireland, *inter alia*. A new Objective 2 area, targeting industrial, rural and fishing dependent areas in economic decline and facing problems of economic restructuring, will subsume existing Objective 2, 5b and 6 regions but with a sharp reduction in the target population from 26% to 18% of the Community total. A list of areas qualifying under the new Objectives 1 and 2 will be drawn up once the proposals have been approved by the Council of Ministers. Grant aid to the 'disqualified' areas will be phased out over a 6 or 7 year period, terminating in 2005. At the same time, the Community initiatives will be reduced in number from 15 to 3; among the casualties will be PESCA.

A second significant feature of the reform is the adoption of an integrated strategic approach, seeking to avoid previous problems of a fragmented, isolated and sometimes disparate approach to development. Thus, all regional aid will be channelled through a single regional programme with all available funds, including FIFG, intended to contribute in a coherent and mutually supportive manner (Commission, 1998).

These developments pose a further set of questions for the FDRs. It is likely that many fishing dependent areas will be excluded from the revised list of

qualifying areas. There will be less opportunity to focus attention on the specific problems of fisheries dependency. And there will clearly be a need for greater awareness and representation of fisheries interests in the national and local bureaucracies to ensure that due attention is paid to the plight of FDRs.

All this comes at a time when a potentially significant reform of the CFP is taking place. It is difficult to envisage a revised Policy condoning any less stringent approach to resource conservation and structural rationalisation. The overall target for a reduction in fishing effort of between 30 and 40% is likely to remain the central platform of the scientists' agenda. Although the derogation favouring Member State control of inshore waters out to the 12 nm limit seems likely to be retained, the political argument between 'equal access' and 'relative stability' has yet to be resolved. Any decisions which find in favour of less protection for national interests and greater Europe-wide competition for resources and markets could result in greater pressures being brought to bear on some FDRs. Thus, even before we have time to develop an effective definition of FDRs and an adequate approach to their socio-economic problems, the situation is certain to change. The threat of further instability makes the achievement of a full and detailed understanding of the nature of fishery dependent regions all the more urgent.

2.7 *The Workshop*

It is expected that the Lofoten Workshop will take our knowledge and understanding of FDRs and their development opportunities and constraints very much further than has been possible in this background paper and will begin to formulate answers to some of the questions which have been posed explicitly or implicitly. The purpose of the Workshop is both to present fresh evidence and revisit familiar themes in the hope of providing a new and relevant slant on the theme of fisheries dependent regions and their policy needs. Accordingly, the programme is divided into four themes, shared among six sessions, together with a plenary session which will attempt to summarise the proceedings and construct an agenda for future research. These four themes focus on:

* placing FDRs in the context of globalisation, fisheries resource management and the transition to responsible fisheries;

* defining FDRs in terms of their data requirements, typologies and strategic planning options;

* examining the social impacts of fisheries policy through case studies in the North Atlantic Arc, north east Scotland, Bornholm (Denmark), southern Brittany, Peniche (Portugal), Finland and, of course, Norway; a separate section of the programme will be devoted to the situation of the Lofoten islands - one of the classic examples of FDRs in Europe; and

* framing perspectives on the development of FDRs in relation to EU funding, community business development and regional planning projects.

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3.0 Proceedings

3.1 The definition and classification of fisheries dependent regions

3.1.1 *Introduction*

A prerequisite for a full understanding of the economic and social impacts of fisheries policy is the identification of those regions most dependent on the fishing industry which will inevitably bear the brunt of policy decisions in the sector. At present the methodologies for defining and categorising FDRs are poorly developed, partly because of inadequate or inaccessible data or because of discordant systems for representing statistical information both within and between different countries and also because information relating to the fishing industry is inadequately contextualised within the broader economic and social characteristics of the region.

It is appropriate, therefore, that the workshop should start with a group of papers which explore these issues and present the results of some preliminary excursions into the task of defining and categorising FDRs. *Phillipson's* paper reflects on the deliberations of the ESSFiN task group which attempted to establish the framework for a socio-economic database for fisheries dependent areas in Europe. His analysis details some of the opportunities and constraints, identifies the most appropriate geographical level for the collation of information and postulates the kinds of information required to enable a meaningful analysis of FDRs. *Kasimis and Petrou* take the issue a stage further by attempting to define FDRs in Greece based on the use of employment data for the 51 prefectures; their paper reveals a complex situation and highlights the problems of using absolute or relative employment to define dependence. Turning to the related question of developing simple typologies to distinguish different categorical situations of dependence, *Raakjaer Nielsen and Vedsmand* contrast and compare three case studies of FDRs in Denmark and their capacities for adaptation and growth (a theme also explored by *Lindkvist* in section 3.2.5). Finally in this section *Morin* gives the issue of regional dependence a rather different slant by examining the ways in which traditional linkages between fishing fleet, fishing grounds and home port which originally gave rise to the notion of dependence have broken down; as a result, the criterion of 'real economic link' has become far too vague to be used in mediating arguments for regional preference in quota allocation systems.

3.1.2 *Delimiting fisheries dependent regions: the role of data bases*

Jeremy Phillipson, University of Hull

The need for a more regionally sensitive policy for Europe's fisheries poses a major challenge for fisheries managers and the issue of FDRs constitutes a key component. Issues associated with the delimitation of fishing regions and their

dependency are analysed in a paper which outlines the findings of the Data Base task group set up within ESSFiN.

The concept of regional fisheries dependency frequently lacks clear definition and adequate supporting evidence. A region can be considered dependent on fishing only if the industry provides the basis of its economic and social fabric; this will depend on a range of economic, demographic and social characteristics for the region as a whole rather than the particular attributes of the fishing sector *per se*. 'Regional dependence' places the fisheries sector in its regional context, taking into consideration the extent to which the fishing industry is integrated into the economic structure of the region through markets and processing activity. Analyses of regional dependency on fisheries are quite rare and tend to emphasise the character of the fisheries sector rather than the overall economic structure and linkages with fishing activity.

Any attempt to analyse regional dependency immediately exposes a number of definitional problems, a dearth of relevant data and a divergence of statistical cultures. Among the definitional problems, one of the most significant is the choice of scale and unit of dependency - finding the right balance between too coarse a spatial mesh which dilutes the notion of dependency and too fine a mesh which will substitute 'local' for 'regional' dependency and pose more serious problems of data deficiency. Differing units of aggregation for data relating to fisheries (ports), employment characteristics (travel to work areas) and demographic structures (municipalities) also complicate the quest to build an accurate picture of regional dependency. Likewise, attempts to create a comparative international data base must confront the problems of a remarkable diversity of 'statistical cultures' which are intensified at the lower spatial scales. This diversity is not confined simply to the difference in data recording and presentation methodologies between countries - it can also occur within countries (e.g. Spain, UK) and is probably most acute when dealing with information relating to the fishing industry itself and to its downstream sectors.

There has been little progress to date in relating fisheries data to the socio-economic characteristics of coastal regions. The 1992 Socio-Economic Studies, commissioned by the EC, involved a narrow selection of economic variables and the virtual exclusion of social data. The ESSFiN task group recommended a relatively modest approach to correcting this deficiency. Using NUTS 4 level data, it proposed profiling coastal regions on the basis of a wide range of economic (employment, activity rates, industrial structures) and socio-demographic (population structures and trends, housing, health, education) variables. To these would be added fishery dependency indices calculated on the basis of absolute and relative data highlighting the economic significance of the fishing industry to the regional economy.

3.1.3 *Identifying fisheries dependent regions in Greece*

Babis Kasimis, Institute of Urban and Rural Sociology, Athens; Anastasia Petrou, University of Patras

Fisheries management has been ascribed the responsibility of resolving the paradox between ecologically sound and economically efficient resource harvesting in a market economy that tends to promote unsustainable patterns of fishing activity. The social aspects of sustainable fisheries management have been systematically neglected; indeed the social objectives of fisheries policy have rarely been stated. Clear definition of FDRs should be able to identify those regions that will bear the brunt of a revised CFP, including drastic reductions in fishing effort and the repercussions for employment and income levels for those engaged in fishing related activities. Until this is achieved, no concrete conclusions concerning the impact of fisheries policies on the regional economy can be reached. The paper attempts to identify FDRs in Greece using fishing activity and economic dependence variables at NUTS 3 level: 15 out of the 51 Greek prefectures can be characterised as FDRs.

The importance of Greek fisheries is small in terms of employment and value of production. The fisheries are conducted mainly inshore on a traditional, small scale family basis, involving little technical modernisation, entrepreneurship or specialised training. Only aquaculture equates to the concept of a dynamic, competitive sector. Since 1971, significant increases have occurred in the number of vessels, volume of production and value of exports, while employment has fallen. Overall, fishing accounts for 0.53% of GNP and 0.40% of total employment.

Two types of variable are used to define FDRs: first, those that relate to fishing activity *per se*, including the number of fishermen recorded in the area, their percentage of the national fishing employment (relative fishing activity rate) and their percentage of total employment in the area (employment ratio). Ten prefectures account for 64% of the total employment in fisheries, with activity rates ranging between 10.6% (Attiki) and 4.1% (Kavala). However, not all of these 'top ten' feature among those with the higher employment ratios, reflecting the fact that some of the highest concentrations of fishing activity occur in well developed, urban prefectures. The two variables used to denote economic dependence - the employment rate (proportion of working age population actively employed) and the industrial index (proportions of employed population in primary, secondary and tertiary sectors) - begin to reveal a more complex pattern. Of the 51 prefectures, 15 can be identified as FDRs: they are distributed across areas with different levels of economic development. Attiki and Thessaloniki, for example, are large urban areas with well diversified economies, while many of the island prefectures are remote and exhibit underdeveloped economic structures. In many FDRs, fisheries provide a complementary role to agricultural and tourism activity. Further research is needed to develop a more comprehensive knowledge of Greek fisheries, its interactions with other economic activities and the socio-demographic characteristics of those engaged in the fishing industry.

3.1.4 *Development potentials of fishery dependent communities: experiences from Denmark*

Jesper Raakjaer Nielsen, IFM Hirtshals; Tomas Vedsmand, Danish Technological Institute

It is appropriate to study fishery dependent regions by defining different categories of fishing community according to contrasting structures, development patterns and future opportunities and recognising that their future development patterns will follow specific trajectories according to geographical location, socio-economic structure and industrial specialisation. The paper compares three Danish case studies, undertaken by the authors, referring to Bornholm, Esbjerg and Skagen. Their different demographic, geographical, historical, socio-economic and industrial structures enables a discussion of the future perspectives for each community and the inherent changes in the local dependency on fisheries and fisheries related activities.

The analyses are based on a theoretical perspective of regional and industrial economics. This implies, among other things, that the focus is placed on the local and regional consequences of a strongly competitive and globalised fish market. Fisheries are perceived as a sector which needs to contribute to the local and regional economy and therefore needs to adapt to changes occurring in the global economy in order to maintain or increase its competitiveness. From this perspective, local industrial and socio-economic conditions, together with local dynamic and institutional arrangements, are important as these present different opportunities for participation in the global market.

The three case studies describe the conditions of stagnation, decline and expansion enabling the development of a typology covering the essential differences between local fishing communities and their ability to adapt to change, taking into account the fact that dependency on fishing and related activities has declined in most localities. Based on this typology, the paper ends with a discussion of the future perspectives for fishery dependent communities in Denmark.

[Note: the full text of the paper was not available at the time of compiling this report]

3.1.5 *Relative stability and the concept of fisheries dependent regions*

Michel Morin, ENSAR, Unité Halieutique, Rennes

Fisheries dependence is the result of economic processes which have evolved historically according to a combination of geographical specificity, economic and social conditions and political culture. It has led to a contrasting situation among coastal regions: some regions close to a resource have developed little or no dependence on it while other regions have acquired a dependence on remote fisheries. Until the 1970s access to such resources was not a problem:

located beyond the 6 or 12nm zone they were high seas resources, open to all. With the declaration of sovereign 200 mile zones, in the EC access was defined by national catch quotas allocated on the principle of relative stability. One of the elements to be calculated was the level of dependence on fisheries. Relative stability defines a more or less static balance between the level of resources exploited by Member States which contradicts the dynamics of a free market economy. As a consequence, the principle becomes increasingly meaningless.

Relative stability is thus in part intended to serve the needs of the regional economy and preserve the socio-economic fabric of FDRs. It also assumes that those vessels entitled to fish the allocated resource remain an integral part of that fabric. But the links between vessel, home port and fishing ground have been considerably weakened: in the extreme case of quota hopping, the reality of the economic link has disappeared. Two basic Community rules derived directly from the Treaty of Rome support the undermining of relative stability and the links between FDRs and 'local' resources: the 'right of establishment', which permits acquisition of fishing vessels (and fishing rights) by other Member States' nationals; and the 'free movement of workers' allowing fishermen from one Member State to become crew members of another Member State vessel without residence qualifications. Both rules have been tested in the European Court of Justice on several occasions. Undoubtedly the notion of relative stability is constrained by these higher principles which have blunted its effectiveness.

Meanwhile, several developments have reduced the strength of the links between the fishing fleets and the concept of a home port: improving means of land transport means that the catch can be offloaded at a 'forward base' in preference to the home port, as with the French fleet fishing off the north west Scottish coast. Alternatively, the vessel owner may elect to sell his catch where prices are highest, building up economic ties with more than one port.

The criterion of 'real economic link' is too vague to prevent the development of quota hopping and the further erosion of the traditional links between fishing grounds, quotas, fleets and landing ports which originally helped to consolidate the concept of FDRs.

3.1.6 *Discussion*

Much of the discussion focused on the purpose of defining FDRs and the need for simple and meaningful forms of classification. Surprisingly little attention was paid to the inadequacy of data source and the incongruence of both systems and 'census units' when attempting international comparisons - though these points were reiterated in several papers throughout the workshop.

It was widely accepted that FDRs were of importance in a policy context not only in terms of identifying and measuring the economic and social impacts of fisheries policy but also as the objects of economic, social and regional

policies looking to strengthen the position of these one-sided, problem regions. The interests of the social sciences focus on three aspects: (i) the definition of fisheries dependence and the delimitation of FDRs, where it may be sufficient to rely on economic (i.e. employment) criteria; (ii) description and analysis of the economic and social conditions within FDRs which calls for a much broader range of economic and social data; and (iii) the creation of typologies to assist in identifying specific policy needs and in formulating plausible development strategies - here the need is to distil selective economic, social and cultural indices.

There was a vigorous debate over the utility of classification, seen by some as more in the nature of intellectual self-indulgence than creating a useful tool for policy purposes. Two main objectives were posited: as inputs to the social science of fisheries with the aim of fashioning analytical tools for achieving a better understanding of the situations occurring within FDRs; and, subsequently, as inputs for policy makers in the attempt to find more relevant and more effective solutions for the problems within FDRs. These two objectives are closely linked. Delimiting and categorising FDRs should also be seen as part of a political process, carrying moral overtones of distinguishing between those who do and those who do not merit special assistance through public funds.

To serve both the academic and political purposes, it was judged important that classification systems be kept simple; otherwise, there was a danger of obscuring rather than exposing the salient features of FDRs. Classifications typically represent the surface conditions which are in turn related to underlying structures and processes which are frequently in a state of flux as a result of policy change. There is a real danger that static forms of classification will ignore the dynamic tendencies within FDRs and thus leave us with little more than historical snapshots of little relevance for policy makers. It might be appropriate to think more in terms of model building, which can accommodate and articulate the dynamics of change, rather than static forms of classification.

Underlying the discussion was a need for clarification of the concept of dependence and an awareness that concentration on the characteristics of the fisheries and impacts of fisheries policy may well mask the importance of other factors. Although models of the fishery system (see Lindkvist; Vicente and Ramos) tend to factor in a wide range of internal and external influences, the tendency when discussing FDRs is to focus largely, if not exclusively, on the harvesting sector and to regard dependence as a function of the linkage between local fleets, local fishing grounds and local markets. Many FDRs are now dependent on 'external' or non-local resources and inward flows of raw materials through international trade.

3.2 The social impacts of fisheries policy

FDRs and their individual components - fishing dependent communities - provide a living social science laboratory for the analysis of economic, social and demographic responses to fisheries policy. Most of the papers presented in the workshop provide commentaries on the problems confronting both the general decline in fishing activity and the specific conditions of particular fisheries. A number of common denominators emerge relating to the severity of the impacts experienced in the more peripheral regions resulting from the introduction of restrictive management regimes, and to the apparent discrimination against local inshore fisheries which exhibit very close ties to the local community and region. The papers have been arranged regionally, starting with the North Atlantic rim, continuing with two papers which refer to the Baltic and Kattegat regions, and concluding with a special focus on North Norway - a classic example of fisheries dependence at a macro-regional level.

3.2.1 *The North Atlantic rim*

Hamilton and Duncan provide a comprehensive overview of the situation in the North Atlantic, integrating studies from Norway, the Faroes, Iceland, Greenland, Newfoundland and Maine, demonstrating the universal tendency among the smaller, more remote fishing dependent communities for depopulation and ageing population structures, and establishing the importance of scale (population size) in determining the fate of such communities. For North East Scotland, *Nuttall* offers a qualitative analysis of a region where many coastal villages are losing their identity as fishing communities as a result of the balance of in- and out-migration, and where those whose livelihoods depend on fishing are coming under critical scrutiny from the wider community. *Prat* examines the influence of legislative changes on the nature of the fishing industry in south Brittany; whereas Community and international legislation has only marginally reduced the access of Breton fishermen to their traditional grounds, national legislation has imposed more severe limitations on fishing opportunities. Two papers describe the situation in Portugal: *Moniz and Kovács* examine the overall situation of declining fishing opportunities and employment and the absence of strategies for development; they outline a current multi-disciplinary research project which aims to elaborate different scenarios for the future of the fisheries socio-economic system. *Vicente and Ramos*, on the other hand, focus on the municipality of Peniche - Portugal's most fisheries dependent community - analysing the structure of the harvesting and processing sectors, noting the dearth of research, development and management institutions and pointing to the ways in which tourism is usurping the role formerly held by the fishing industry.

Fisheries dependence and social change in the North Atlantic Arc

Lawrence Hamilton and Cynthia Duncan, University of New Hampshire

Communities along the northern rim of the Atlantic from Norway through the Faeroe Islands, Iceland, Greenland and Newfoundland to Maine share a dependence on fisheries and a limited range of economic alternatives. The analysis focuses on the most recent period of dependence - post 1980 - a time marked by the industrialisation of harvesting and processing, overexploitation of key species, the socio-economic consequences of globalisation and well documented environmental change, culminating in the collapse of groundfish stocks in parts on the North Atlantic. Fisheries dependence, measured by relative employment, exhibits continuous skewed distributions at community and regional levels within each North Atlantic Arc country. Fisheries dependence appears to be a matter of degree rather than characterising distinct categories of place.

Over the past decade, while their national societies grew, fishing dependent communities in the North Atlantic Arc have been more likely to shrink. Many of the population declines occurred following environmental changes. Outmigration, particularly by young adults, is the obvious cause of such decline but other dynamics have been at work including declining birth rates which earlier had buffered the effects of outmigration. Many fishing dependent communities have, over a relatively short space of time, changed from 'youthful' to 'old age' structures.

Population decline is symptomatic of much deeper social transformations revealed through more detailed analysis of local communities and life histories. In Norway, for example, community level analysis revealed the importance of perceptions of young people - especially women - who saw more opportunities in larger communities where urban amenities make life easier and more stimulating. Population losses occurred when young people left the area for further education and jobs, established careers and families and never returned. In eastern Iceland, where fishing can bring high rewards, it is not strongly favoured as an occupation. In other instances, new cohorts of young, entrepreneurial, community minded fishermen have chosen to settle in the North Atlantic Arc, in some cases regarding the alleged disadvantages of remote locations and small communities as less real than the perceptions of previous generations of young people.

Scale matters when trying to understand the extent of economic dependence. Smaller, less diverse communities are more vulnerable to downturns in resources and markets. Fishery dependent communities tend to end up as smaller places with fewer employment options. These findings reflect modernisation of the industry and the impacts of labour saving technology. But demographic changes reflect a more general 'modernisation' of society, within which there are contrasting elements: traditional inshore fisheries associated with the well-being of local communities and more modern offshore fisheries often tied to non-local, corporate controlled fishing fleets. Such differences in

who is fishing, how and from what places have profound implications for how we think about the future of communities that depend on fishing.

The social impact of fisheries policy in north east Scotland

Mark Nuttall, University of Aberdeen

Although wealth generated by the offshore oil and gas industry has transformed the economy of much of NE Scotland since the 1970s, the region remains important to the Scottish fishing sector. Demersal landings contribute over £100m to the regional economy. Yet defining NE Scotland as an FDR is complicated by the fact that the fishing industry is embedded within a diverse local and regional economy in which traditional industries and modern technologies combine to provide employment: some fishermen also participate in other sectors of the economy. Employment in the primary sector remains relatively high, but while the fishing communities are found within a relatively remote and sparsely populated peripheral area, the region also contains relatively prosperous, high growth districts. Many people commute from the coastal communities to Aberdeen for work and education.

Traditionally, local fisheries have been small scale and family based, developing their own distinctive forms of social organisation, centred on close knit kinship groups, separate from those associated with other activities. But as fishing has become technologically sophisticated, key crew members are recruited from well qualified non-kin. Out- and in-migration has altered the demographic and social structures of many coastal villages and blurred the identity of fishing communities. Dispersed networks of occupational association are replacing kin-based groupings. But local identity remains important for the political organisation of fishermen; they still draw on resources of common culture and social identity derived from fishing.

Dependence on fishing is increasingly precarious: today many fishermen face the prospect of loss of income and the decommissioning of their boats. But fishing has always been a risky occupation and NE Scotland has a history of depressed harvests and markets. However, today's crisis is attributed by the fishermen to the failings of the CFP. Fishermen question the science on which the policy is based, the attempts to instil discipline through designated landing ports and the EU's working time directive which threatens the characteristic share system. Concern is also expressed over the impacts of new regulations in the processing sector. At the same time, skippers are coming under increasing scrutiny relating to their own behaviour. Fishing is seen by the public and portrayed by the media as a morally suspect and even criminal activity. The local press regularly reports on illegal landings and misreported catches. The romantic image of fishermen as 'the last hunters' is being replaced by one which holds them responsible for environmental catastrophes. Declining safety standards are seen to contribute to what is Britain's most dangerous occupation and accusations of negligence and poor seamanship rebound not only on the skipper and crew but also on the community. Meanwhile, fishing

organisations in Scotland argue for greater regional control of the fishery and for the inclusion of local knowledge in an ecosystem approach to management that could help to restore the image of the fishermen and the fishing community.

The influence of legislation of fishing in Breton Cornouaille

Jean Luc Prat, Centre de droit et d'economie de la mer (CEDEM), Brest

The south coast of Brittany includes a number of important fishing ports - Douarnenez, Audierne, Saint Guénolé, Le Guilvinec, Lesconil, Concarneau and Lorient *inter alia* - all located within the same département of Finistère and linked to the Chambre du Commerce et d'Industrie for Quimper. A quarter of all fresh fish landed in France is handled through these and other smaller ports. The influence of the primary economic sector is significant, accounting for over 11% of the region's employment. The present structure of the fishing industry comprises non-industrial of semi-industrial coastal and deep-sea trawlers, freezer purse seiners and longfin tuna vessels operating gillnets. The coast of Cornouaille is thus very much in harmony with the concept of an FDR. The paper is concerned primarily with the impacts of legislation governing access to the fisheries.

Cornouaille's fishing industry depends on access to both local inshore and remote offshore fishing grounds. International and EC legislation has not seriously affected access to resources. Under the basic conditions of the CFP Cornouaille's fishermen are allowed to continue fishing in the 200 mile zones adjoining the British and Irish coasts and Regulation 3760/82 also allows the fishermen to remain fishing in certain areas of the British and Irish 6-12 mile zone. Likewise, the activities of the distant water fleets have continued under EC Agreements in line with Article 62 of UNCLOS. Notwithstanding these general remarks, the evolution of international and EC legislation has had some specific negative effects on Cornouaille's fishing industry, including the exclusion from Icelandic waters previously exploited by Douarnenez trawlers, the closure of Mauretanian waters to the fishing of spiny lobsters by French vessels and the imminent fate of the ten gillnet tuna vessels following the EC agreement to ban such fishing under Regulation 1239/98. This latest legal intervention will probably result in the diversion of fishing effort onto other overexploited fisheries in the Bay of Biscay.

Up until the late 1980s, the Cornouaille fishing system presented a remarkable picture of stability. This situation has, however, deteriorated due to a decreasing resource base, market organisation and structural policy. Markets have become weaker in face of increasing imports, the strength of the French franc and the declining prices paid for particular species. National legislation under the Mellick Plan has intensified the structural problems for the harvesting sector, including the introduction of a licensing regime and the inauguration of fishing plans. The future of fishing in south Brittany remains

uncertain and under these conditions the FDR faces irremedial damage to its economic and social condition.

Fishing dependent communities, socio-economic change and scenarios for the development of policy strategies in Portugal

Antonio Brandão Moniz and Ilona Kovács, Universidade Nova de Lisboa

Some fisheries dependent communities in Portugal are facing severe structural changes, due to either increased scarcity of resources or political measures which conflict with local economic interests and result in serious social problems including poverty and unemployment among certain social groups. Most of the conflicting interests are linked to the industrial strategies of the vessel owners' and fishermen's organisations, fish processors, shipbuilders and aquaculturists that contravene regulations established at the level of the EC, the state or the region.

The future of work, employment structures and qualifications in the socio-economic system - which can be defined as including the harvesting sector and related sectors such as shipbuilding, aquaculture, fish processing, marketing and distribution, *inter alia* - remains an unknown area for the social actors involved and, as a result, no significant planning measures or strategies exist. 'Zero-sum' orientation characterises social behaviour. It therefore seems appropriate to develop forecasting techniques for socio-economic analysis of changes within the fishing dependent communities and to make clear the influence of such changes for planning strategies. A recent research project (MARHE) aims to elaborate scenarios for the future of the socio-economic system. The project relies upon the cooperation of different scientific disciplines such as biology and economics - the classical components of fisheries policy elaboration - and also sociology, demography, geography and robotic engineering, in addition to cooperation between researchers and the social actors (unions, employees, research and education, local authorities etc.).

In Portugal the fisheries sector is still strongly characterised by a set of unsolved problems - ecological, economic and social - all of which are interconnected. Specific mention should be made of the scarcity of natural resources, unbalanced ecosystems, severe economic problems, technological capacity, lack of qualified and skilled personnel, unemployment and social exclusion. At the same time the fisheries sector is an area of diversity and struggle among the interests of the different social actors involved. The complexity of the research project leads to two basic requirements: interdisciplinarity and the involvement of the social actors in the research activity. Involvement of the social actors draws particular attention to the identification of problems, the search for solutions and the elaboration of the means of data collection. In this instance, the research methods include a Delphic analysis, a survey of youth attitudes on employment in the fisheries

sector, a quality management survey of the processing industries and a survey of R and D infrastructure.

Socio-economic dependence on fishing in Portugal: the example of the port of Peniche

Duarte Nuno Vicente and Ana Rapaz Ramos, Escola Superior de Tecnologia e Gestco, Peniche

As with most other European coastal states, the fishing industry makes only a small contribution to GNP (<1%) and employment (>1%) in Portugal. Regionally and locally the industry assumes a greater relative importance with Peniche, situated to the north of Lisbon, emerging as the country's main fisheries dependent municipality, accounting for c.20% of the working population. To date the analysis of Portugal's fisheries has been undertaken almost exclusively as an independent economic activity. The need is to model the fisheries socio-economic system, developing systemic analyses of all activities connected to the fisheries sector. At present this ambition is frustrated by a lack of statistical information at the local and regional scales, through which to articulate the theoretical model. Statistical information is particularly poor at the level of the municipality - the smallest of the administrative units in Portugal. No data are available at this scale for the analysis of different branches of the fishing industry. Indeed, there has been little attempt to segregate fisheries related data from that generally available to describe the primary sector as a whole.

Peniche municipality contains c.30,000 inhabitants of which c.18,000 live in the urban centre where the fishing activities are located. The municipality's principal activities are agriculture, fishing and fish processing and, more recently, tourism. Recently there has been a steep decline in the share of employment held by the primary activities (agriculture and fishing) and an increase in jobs in public administration, tourism and other tertiary activities, which reflects the macro-economic trends for the Portuguese economy. The 1990s have seen Peniche develop progressively as an urban centre.

Fishing in Peniche is organised in three distinctive segments: (i) *siege net fishing*, targeting small pelagic species and undertaken by purse seiners (24-27m in length) with crews of 25-30 men and accounting for 70% of fresh fish landings by weight but only 30% by value; (ii) *inshore artisanal fishing* from boats, 4-20m in length and with crews up to 18 in number, using a variety of gears and harvesting a wide range of species; and (iii) *distant water fishing* off NW and W Africa, accounting for 50% of the total landed value. Over the past ten years the industry has witnessed a progressive decline in the volume of landings and a decline in the processing sector, except for the canning industry which has been revitalised by the location of one of Heinz North America's plants. Overall, Peniche presents a well established fishing port with sound infrastructure and vocational training facilities, but a dearth of research, development and local management institutions. Socially the industry attracts

fewer young people; tourism is invading the spaces previously occupied by the fishing industry and the cultural heritage of fishing is being lost. Deeper analysis of the present and future situation in Peniche and other coastal regions requires access to greatly improved data sources.

3.2.2 *The Baltic and Kattegat*

The two papers which focus upon this important sub-region, while describing familiar situations of declining employment opportunities and 'rural' depopulation and addressing the underlying issue of social justice, also highlight two new themes. The first concerns the pricing out of inshore fishermen from certain coastal locations due to rising land values at the coast and in the archipelagos prompted by the 'Third Wave' of modernisation, namely the leisure revolution. The second raises the question of the relevance of a more flexible, pluriactive approach to sustainable rural development. *Piriz* traces the evolution of fishing in the Bohuslän archipelago of western Sweden and its role in helping to create the concept of 'a living archipelago', but notes the tendency for modern management institutions to marginalise local coastal fisheries, leading to an ageing population in the more rural areas and poor recruitment opportunities for young people. In the case of Finland, *Salmi, Salmi and Lappalainen* refer to the conflicts between professional and part-time or recreational fishermen and the discriminating effects of new forms of regulation; their central question is whether the increasingly marginalised part-time fishing can remain a key element in developing a sustainable strategy for local rural economies.

Dependency changes, modernisation and the coastal fisheries in Sweden

Laura Piriz, National Board of Fisheries, Göteborg

In Sweden both the number of people dependent on fisheries and the form of the dependency have altered in recent decades. Since 1950 several fishing dependent communities have undergone a period of drastic population loss and decreased dependency on the coastal fishery. At the same time, a more capital intensive fishery has developed based mainly in Göteborg. Overall, fisheries make only a small contribution to national revenue and the political influence of coastal fisheries is weak: their needs are therefore at risk from intra- and inter- sectoral trade offs. Small scale fisheries in Sweden confront two critical problems: how to increase the involvement of young people and how to legitimate their rights in a multiple-use coastal zone.

Within the Bohuslän archipelago in western Sweden, the ecological diversity has encouraged a variety of fishing patterns. Here the industry is more diversified than in other parts of the country. Dependence on fisheries is affected by attributes in the very mobility of the resources, the integrity of the habitats and the socio-political agreements that afford those habitats and ecosystems some degree of protection. According to Swedish regional policy

the creation of 'a living archipelago' (*en levande skärgård*) is a key strategy within which coastal fisheries should play an important role in sustaining the diversity of livelihood. At the same time, however, modern expectations in terms of living standards, allied to scarce resources and poor economic returns, makes the attainment of the coastal fisheries' role difficult. A tendency of modernisation is for increased mobility of people, capital and resources; in the coastal zone, the increasing value of land for recreation has helped to displace many of those formally engaged in the production sector who can no longer afford to live there.

Modern fisheries are going through a process of dislocation associated with a profound reorganisation of time and space: the more mobile sectors of the industry become less dependent on local resources and adapt their strategies accordingly. Two fishing sub-cultures have emerged: a centralised, capital intensive sector and a localised, periphery based, low technology and weakly capitalised inshore sector. Resource management institutions have been moulded to the needs of the former. Numbers of active fishermen were halved in the period 1945-75 with an early decline occurring in the south and east and a later decline (1960s and 70s) in western Sweden. There has been a strong trend toward the increasing age of the fisherman: 11% are over the age of 65. This trend is particularly strong in the rural areas and in the coastal fisheries where opportunities for young people to gain experience in the industry are poor and where the costs of entry to the fishery are high. Further concentration of opportunities in the capital intensive sector is likely to result from the impact of the CFP and its structural policies. Clearly, socio-political and economic conditions constrain the small scale fisheries and so narrow the socio-ecological environment for survival in the archipelago.

Part-time fishing in Finland: a flexible local strategy or a nuisance to management?

Juhani and Pekka Salmi, Finnish Game and Fisheries Research Institute; Ari Lappalainen, Fishery Museum Association, Riihimäki

Tensions over the allocation of harvesting rights among different groups of fishermen - as between full time professionals and those who participate only part time - are increasing. Modern managerialist approaches experience difficulties in coping with the heterogeneous nature of the part-time fishery. In Finland increasing regulation is tending to exclude many occasional and part-time participants. More than half of Finland's population lives in rural areas and their livelihoods are often split into various combinations of employment including fishing. A large number of Finns also spend their leisure time beside lakes, rivers and the sea. Recreational motives in fishing are stronger than those of subsistence, but the Finns still value their catches highly. Part-time fishing and its management is discussed in the light of evidence from three regional examples, with the purpose of discovering whether the actions of management in controlling part-time fishing are in conflict with the flexible strategies of the rural economy.

Although in recent years decision making has shifted towards the state, private owners and local fishery associations are still in principle the prime movers in the management of coastal and lake fisheries though their actions have often brought them into conflict with the central authorities. With entry to the EC, established practices in the registration of fishing vessels - which earlier had defined the basis for full-time and part-time fishing - were called into question. The state authorities have proposed tighter restrictions. The exclusion of part-time fishermen through legislation is legitimised on the grounds of their allegedly negative effects on resource sustainability and markets. The definition and thereby the rights to use commercial gears is under discussion in the Finnish parliament.

In Finland at present, part-time fishermen are variously defined as those who earn at least 15 or 30% of their incomes from fishing. So defined, part-time fishermen are found mainly in rural areas, have an average age higher than that for full-time fishermen and are more likely to engage other family members in the fishing enterprise. On the basis of a 30% earnings rule, roughly half the fishing enterprises can be classified as part-time but these can be divided into two sub-groups - those who take part mainly to supplement their incomes and those with a permanent occupation outside fishing for whom participation is principally as a leisure activity. The latter accounts for two thirds of all part-timers and is found mainly in the Baltic Sea fisheries whereas the supplementary income participants are more strongly associated with the lake fisheries.

Resource uncertainty and the pluriactive nature of the rural economy have increased the flexibility of the lake fishery in Finland. Although incomes are low, they still have a crucial importance in terms of the flexible involvement of the family in the household economy which could be threatened if rigid income limits prevent fishermen from taking temporary jobs outside the fishery. In the increasingly managerialist approach to fisheries, the role of local decision makers is being diminished and the heterogeneity of part-time fishing discounted. Conflicts between full-time and part-time fishing could be mitigated through cooperation on a regional basis.

Discussion

It was deemed appropriate to consolidate the comments relating to presentations on the North Atlantic and the Baltic and Kattegat regions, as discussion ranged over issues common to both areas. Three initial questions were posed: how to disaggregate the social impacts; how the notion of integrated management might be applied in the case of FDRs; and how the linkages between the fishing industry and the wider regional economy might be strengthened. The last of these questions is more appropriately dealt with in Section 3.3, dealing with the strategic responses to fisheries dependence.

Presentations from a variety of national and regional backgrounds touched upon a very wide range of conditioning factors - some related to fisheries

policy, others to trends in the national economies and still others to the processes of globalisation. A key question, therefore, is how do we 'unpack' these different factors and how do we quantify their economic and social impacts, given the complexity of the contextualising conditions. This remains a particular challenge to the social sciences and is clearly linked to the earlier discussions on definition, delimitation and categorisation of FDRs.

Overall the papers reflect two distinctive developmental perspectives: the *traditionalist*, emphasising the social and cultural values of the inshore fisheries and bemoaning the negative impacts of modern regulation policies; and the *modernist,* focusing on economic efficiency and the greater viability of capitalist, offshore operations in an unstable global market. In fact the two perspectives are interrelated: modernisation processes lead to the 'dismantling' of traditional fishing systems which in turn creates poor internal recruitment, the in-migration of 'guest workers' to fill the job vacancies, and a growing tendency for 'illicit' fishing practices. In a free market economy, the ascendant tendencies are those which favour economies of scale, technology and centralisation and these are being underwritten by governments through regulatory regimes which emphasise efficiency, competition and professionalisation. There is a need to avoid the pitfalls, which not infrequently entrap the social sciences of trying to understand development through the analysis of negative effects of development on traditional systems. We need to focus rather more on analysing the processes that promote successful patterns of modernisation and we also need to model the linkages and interactions between 'successful' FDRs and other types of expanding regions. Underlying all of these questions is the *political* choice of what kind of fishery do we wish to sustain; so far the choice has been made largely on economic criteria, to the exclusion of social and cultural value judgements.

Inevitably the role of government in sustaining dependency through various forms of production, income or marketing subsidies was raised. Where fishing has collapsed in regions where the production system was supported by state intervention - as in Newfoundland - governments are now obliged to support individuals through welfare payments. The problem is how do we identify and manipulate those opportunities which will allow economic and social pressures to be taken off people who are at present 'corralled' into traditional occupations through systems of local knowledge and skill assessment (see section 3.3 below); and how do we overcome the disadvantages of distance, scale and social deprivation without venturing into potentially disastrous exercises in social engineering. It was also suggested that we should be seeking to build up the local, political capacity for communities to counter the narrow, centralising policies of government which reduce the opportunities for sustaining smaller communities through diversification.

Coastal regions have witnessed major changes in fashion in relation to development planning. Twenty five years ago it was fashionable to believe that government could and should intervene in planning the regional economy and redesigning certain key sectors. Such strategies proved unable to cope with the dynamic tendencies stimulated by external, international factors as well as

changes within the national economies (e.g. oil and gas related development). More recently the state has reassessed its position and is no longer quite so keen to play an interventionist role. But governments are still required to play a 'catch-up' game and to moderate the worst effects of negative economic change. The basic role of the state is in helping to provide a sound rationale for management and to ensure adequate infrastructural provision. Central planning of the industry is no longer feasible. However, governments do still need to 'protect' vulnerable sectors and regions against the effects of destabilising events in the global economy (collapse of the Russian rouble; turmoil in Asian financial markets etc.). Such events - as well as unforeseen environmental changes leading to the collapse of key fish stocks - may force the hands of government into adopting a more interventionist role rather than leaving the short- and medium-term future of FDRs to the vicissitudes of the market economy.

The discussion of individual case studies highlights the diversity of dependence and the difficulty in agreeing a comprehensive and operational definition of FDRs. We may possibly be firing at the wrong target when trying to link fisheries policy and FDRs. In fisheries management the real target is the individual fisherman as the recipient (or otherwise) of licences and quotas; the community is scarcely of relevance and FDRs are simply characterised by the aggregation of individual impacts. But in terms of social costs, these are reflected much more vividly at community level. Should communities rather than regions be the focus of the social scientists' attention, and should quota allocations be based on the community and allocated according to dependency?

The situation in southern (Atlantic) Europe reflects some of the tendencies observed in the North Atlantic rim but the fishing industries are less well integrated and poorly documented. Informal 'solutions' to the problem of declining fisheries tended to follow the easy option of surrendering facilities and jobs to the burgeoning coastal tourist industry. Poor and variable incomes from fishing, particularly in the inshore sector, compound the problem and young people in particular are moving to jobs with greater income security.

Summarising the wide ranging discussion, attention was drawn to (i) the high incidence between FDRs and Objective 1 regions in the EC, underlining the connections between fisheries dependence and retarded economic growth; (ii) the problems of scale in terms of many fishing dependent communities and how this might be addressed; (iii) the changing nature of dependency in the fishing industry from the traditional reliance upon the merchants to modern dependence on financial institutions and quota allocation systems - fishers have rarely, if ever, been 'free spirits', and (iv) the recognition that the EC is a managerialist institution but whereas it is necessarily involved in regulating the fishing industry, it seems reluctant to involve itself in managing the social consequences of its policy.

3.2.3 *Norway*

Until quite recently Norway's fisheries policy has been guided by two fundamental precepts: open access and the importance of maintaining the coastal settlement pattern especially in the heavily fisheries dependent areas of northern Norway. The resource crisis of the late 1980s and early 1990s affecting the main Arctic cod stocks brought about a marked shift in the management approach. A much more restrictive access regime, based on what was initially assumed to be a temporary system of individual quota management, was introduced. The new system tended to privilege the larger vessel sector located mainly in western Norway, thus threatening to undermine the viability of the smaller fisheries dependent communities in the region and reigniting the debates on social justice and qualified access rights. The significance of the shift in management strategy underscores each of the papers on FDRs in Norway.

Lindkvist returns to the question of categorising fishing dependent communities (see section 3.1), using two variables - production and employment - to distinguish between 'dependent' and 'independent' fishing communities and further subdividing dependent communities into large and small: his analysis confirms the view that smaller and more peripheral dependent communities are unable to compete with the larger, more centrally located communities. Focusing on the situation in Finnmark - Norway's most northerly and fisheries dependent *fylke* - *Hanssen* is concerned to answer the question of whether the peripheral coastal communities suffer more from a lack of resources or a lack of young people willing to work in the fishing industry, and to explain the lack of both in terms of the changing systems of resource allocation. In *Jentoft's* paper attention is drawn to a more closely defined issue of social justice - the Saami population's claim for independent fishing rights as an indigenous people in the aftermath of the introduction of individual vessel quotas for the cod fishery which favours the full time professional fisherman. *Pettersen's* contribution refocuses attention away from the notion of fishing dependent regions and communities and towards what may be regarded as the basic unit of dependence - the household - and examines the ways in which the new system of regulation has impacted on household strategies in two fishing municipalities in Nordland and the changing roles of women who are being squeezed out of the industry as employment opportunities are reduced. Finally, *Holm, Hersoug and Rånes* reexamine the renowned co-management systems for the Lofoten fishery, arguing that it is wrong to interpret it as an example of resource management; instead it should be seen rather more simply as a means of 'traffic management' and conflict avoidance in what is one of the most congested seasonal fisheries in the world.

Supportive and undermining properties of fishing activities and production systems in Norway's coastal regions

Knut Bjørn Lindkvist, University of Bergen

The Norwegian fishery is, in principle, open to most actors; stocks are not reserved for regions or regionally defined groups. Those who have the means - and the backing of strong regional business environments - will benefit the most. When discussing fishery regions it is important to consider the significance of human intervention in the fishery system based on the quest for profit. In such a perspective, small scale fishery regions have little chance of success.

In the smallest and most peripheral fishing communes in Norway, alternative employment in the private sector is negligible, though small processing plants in the periphery are just as capable of making a profit as larger ones. Hitherto, cultural sustainability - support for fishing based settlements in the periphery - has been considered an important aspect of policy. But the fishing industry has largely failed in its efforts to support the peripheral regions, as the case of Finnmark clearly demonstrates. The destiny of the coastal communities depends in part on maintaining access to resources for the local production systems and sustaining their ability to compete. Spatial models are examined in order to determine how best fishing regions may exploit the ongoing processes of global change for their benefit.

Using two variables - production (volume of landings) and fishery related employment (as a share of total employment) - Norwegian fishing communes can be located in three main categories: (i) large fishery dependent communes (52), (ii) small fishery dependent communes (27) and (iii) large fishery independent communes (17), with a fourth residual category of c.200 communes. The majority of category (i) are located in Northern Norway; category (ii) is evenly distributed between north and south; but category (iii) communes are mainly concentrated in the south. The classification can be used to locate trends in the value of production, the structure of the fishing fleets, the numbers of processing plants etc. What emerges is that the larger fishing communes - categories (i) and (iii) - are the most centrally located and highly urbanised; they are characterised by offshore fishing activity and modern processing facilities and supported by a stronger infrastructure of financial, consultancy and research institutions.

Overall, the analysis confirms the view that the smaller and more peripheral regions are unable to compete on an equal footing with the larger, more coastal locations in a fishery system built on efficiency and use of technology. While some communities may survive as independent, most will experience adaptations of greater dependency on large companies. Those that remain unable or unwilling to change and restructure will be less able to contribute positively to the development of FDRs. Modern expansive fishing systems will displace small scale systems and gradually take over their domains.

Fisheries dependent communities in Finnmark: fish dependent, people dependent or both?

Ketil Hanssen, Finnmark College

Fisheries dependent communities in Northern Norway face two main problems: how to get their legitimate share of the fishery resources and how to hold on to young people. The two problems are linked because fisheries dependent communities and regions need a stable population base to support their claims for a fair share of the resources. Amongst the ten coastal municipalities in Finnmark, none have recorded population increases in the period 1986-1998; most have lost between 12 and 25% of their population, while only the town of Hammerfest and Båtsfjord commune have recorded losses under 4%. Such changes highlight the issue of 'fisheries dependence' *v* 'population dependence': do coastal communities suffer more from a lack of resources or people? The paper focuses on the labour markets in fisheries dependent communities and on the processing industry's role as a change agent.

Among the smaller coastal communities, alternative employment opportunities are scarce: public sector employment is confined largely to primary school, kindergarten and home based care of the elderly. The private sector dominates employment but offers few options outside the fisheries sector except in a limited range of retail provision. Even Båtsfjord (2500 inhabitants), an administrative centre, has c 50% of its workforce in fishing and fish processing, though the range of other employment in both the public and private sectors is quite extensive. Within the fishing industry, employment in the harvesting and processing segments has witnessed an increasing share involved in servicing the final product, although the largest numbers of people are engaged in unskilled processing jobs.

Despite declining populations, the fishing industry remains profitable. For Finnmark the question is how to distribute the resource rent from fisheries. Issues have arisen over Saami fishing rights, but the broader problem is the allocation of resources between the mobile offshore fleet and the local coastal fleets. If the former is privileged then fewer coastal communities will be needed to service the harvesting sector; if the latter is preferred, more people will be able to share the resource rent. But is outmigration from the coastal communities related to employment opportunities in fishing or to other factors? Attitudes to working in the fishing industry have changed since the 1970s with a growing preference for 'easier' jobs in the service sector. A more detailed study of a small fishing community - Sørvær in Hasvik municipality - examines the response of individuals to changing fortunes in the harvesting and processing industries and the role of the processing industry as an aspect for change in a declining community. Extending the concept of preferential rights for local fishermen through 'community quotas' is seen as one possibility for improving the position of the smaller coastal settlements, providing the quotas are used to promote a range of fishing related activities rather than simply prop up the existing frozen fish processing industry - a

dinosaur in the evolution of fishing dependent communities in Northern Norway.

Rights to nature: a natural right? Fisheries management from a Saami perspective

Svein Jentoft, University of Tromsø

1990 was a turning point in Norwegian fisheries - from that date the coastal and fjord cod fishery became subject to individual quota management, ending the long established principle of open access. Although the original intention was that individual quotas (IQs) were to last only until the ending of the Barents Sea cod crisis, it now seems that IQs are here to stay. At the time no one seriously questioned the need for strict regulation of the fishery but there were criticisms of the design of the new quota system especially from the recently established Saami parliament, which argued that not only were Saami interests being neglected *de facto* but the system negated international law on indigenous peoples' rights. Up to that time, Saami rights had rarely figured in discourses on public management. But property rights - private or public - applied to natural resources raise issues of great complexity: 'as rights proliferate, conflicts multiply' (Ehrenfeld, 1993). In Northern Norway several groups compete for fishery resources; however, over the centuries inter-marriage has tended to blur the boundaries of specific ethnic groups.

The Saami parliament claimed that the new vessel quota system discriminated against traditional Saami fisheries adaptations and that it was unfair that small boats using non-mobile gears should be hardest hit by the new regulatory system. Large numbers of traditional Saami fishers were disqualified under the quota allocation system; and even those who received quota entitlements under the non-individualised 'maximum quota system' were liable to be prevented from realising their full entitlement because of their culturally adapted system of fishing.

In advising the Ministry of Fisheries, Smith (1990) recognised the legitimacy of the Saami claim for the protection of their natural rights as an indigenous people and recommended the introduction of positive discrimination, based on residence rather than the individual, to sustain the Saami fishing rights. The Saami parliament was immediately granted a seat on the Fisheries Regulatory Council advising the Ministry on fisheries management but the demand for a Saami fisheries zone in which the use of mobile gears was to be outlawed was treated with much greater scepticism. The Ministry, while acknowledging that local management systems may become necessary in the future, withheld support for the principle of positive discrimination.

The issue of Saami rights returns us to the question of *res communis* (or *allmenningsrett* in Norwegian law) *v res nullius* (*allemannsrett*) and the issue of 'natural rights' *v* 'property rights'. Can Saami claims to uphold their natural rights be effectively accommodated within *allemannsrett* which has been the

basic principle of Norwegian fisheries management? This is an important question for an FDR like North Norway where indigenous peoples form a significant minority grouping.

[Eherenfeld, D. (1990) *Beginning Again: People and Nature in the New Millennium*. Oxford, Oxford University Press.

Smith, C. (1990) Om samenes rett til naturressurser - særlig ved fiskerireguleringer. *Lov og rett*, 507-534]

The social impact of fisheries policy in North Norway after the cod crisis

Liv Toril Pettersen, Nordland Research Institute

Resource crises in Norway's fisheries have led to strict regulation and restricted access. Liberalisation of trade and changes in government support and business regulation have also contributed to changing conditions. The effect of the cod crisis has been the closure of the commons through licences and quotas and problems for young people wishing to enter the fishery. It has limited the ability of households to depend on fisheries for their primary source of income; in particular, women have assumed a more central role as economic providers, but their links to the fishery have declined. The paper examines the impacts of such changes on household adaptations and gender differences in the inshore sector through a qualitative survey of two sparsely populated communities in Nordland, remote from centres of employment.

Inshore fishing dominates the two municipalities, with cod the most important species. While the traditional fishery has declined, fish farming has greatly expanded. Outside fishing the public sector is the largest employer especially for women, though with reductions in public expenditure there is little prospect of future employment growth.

What were formerly identified as crisis strategies for household survival at the time of the cod crisis have become more regular solutions to the changing conditions of the fishing industry. *Expansion* of the family enterprise implying an increasing involvement of women is not a solution found in the two communities; rather is it through *diversification* of the household economy and engagement in paid employment - mainly in the public sector - that the woman's role has increased. *Retrenchment*, involving the restructuring of activity and expenditure on the basis of reduced incomes from fishing and other employment, and *withdrawal*, implying almost complete reliance on social welfare payments, are also found in the present process of adaptation.

Regulation of the industry has created new problems for the inshore sector which lacks the security of minimum quota allocations. Fishing has become a full time, professional occupation requiring regular access to resources and stable conditions for delivering the catch; it has grown much closer to the requirements of wage labour - a regular income based on relatively stable

employment and the fishing household has also grown closer to the two income norm for urban society. But the coastal fleet is more intimately tied to the local processing plant: reduction of the fleet threatens the viability of the plant while closure of the plant undermines the security of local inshore vessels. Recruitment has become problematic and the ambition of crew members to own their own boats has waned. Parental scepticism towards their children's entry into the inshore fishery has become more marked. The fishing household's vulnerability is being exposed in new ways, including dependence on the political will to maintain welfare payments and grants to the public sector. As employment in fishing decreases women are being squeezed out of the industry. More women are therefore looking to education to enhance their employment prospects in the service sector. Finally, the distinctive coastal culture - and, indeed the very continuity of the family's participation in the fishery - is weakened as a result of the loosening attachment of women to the traditional coastal fishery.

Revisiting Lofoten: co-managing fish, people or conflicts

Petter Holm, Bjørn Hersoug and Stein Arne Rånes, University of Tromsø

Co-management is emerging as the preferred choice, among social scientists, for an institutional solution to the crisis in fisheries management. It takes as its premise the lack of legitimacy of 'command and control' forms of management leading to low compliance, ineffective regulation and high enforcement costs. It rests on empirical evidence that fishers are willing and able to solve collective action problems. The approach though has important limitations. It tends to assume that co-management institutions are already in place and all that is required is recognition and empowerment by government. This line of argument understates the degree to which modern co-management represents a break with traditional institutions and is bound to face new economic, social and political issues. The paper challenges some key assumptions found in co-management literature and questions whether co-management regulations are capable of dealing with collective action problems as complex as those presented by resource management. Using the example of co-management in the Lofoten fishery (Jentoft and Kristoffersen, 1989), emphasis is placed on the discontinuities between traditional forms of regulation and those demanded by modern resource management.

Regulation of the Lofoten cod fishery originated in the 1897 Lofoten law. Its key features included the division of the fishery into 15 control districts, with a superintendent and control force of 8 inspection vessels; each fishing vessel was required to register before the start of the season; within each district, skippers - divided into gear groups - elected their own inspectors to oversee the regulations and the inspectors elected committees for each of the 15 districts, with a common chairman appointed by central government. The question at issue is whether this arrangement constitutes a resource management system or whether its real purpose was conflict resolution in a crowded, multi-gear seasonal fishery.

Since 1989 the regulatory system has undergone major changes following implementation of a quota system for the coastal cod and the curtailing of the Lofoten cod season. The system of electing the Committees was altered in 1995 with responsibility falling to the Nordland Fisherman's Association rather than the participating fishermen; the internal inspection system has ended; and the number of control districts has been reduced to four. The overall result is a weakening of user participation, reflecting a reduction in the overcrowding problem. In its original form the control system did not really meet the criteria of a resource management system - there was no intention that the regulation should ensure a sustainable fishery. Basically it was designed for traffic regulation.

The lesson to be learned from this analysis is that the co-management concept needs to be more specific rather than all-inclusive. It should be reserved for institutional arrangements that entail intensive user participation, including co-responsibility as a key resource management function. Seen in this light, the co-management model is well suited to the management of marine resources that exhibit local, contextual and contingent traits.

[Jentoft, S. and Kristoffersen, T. (1989) Fishermen's co-management: the case of the Lofoten fishery. *Human Organization*, 48 (4), 355-365]

Discussion

Although an integral part of the North Atlantic rim, Norway is treated as a separate case partly because it lies outside the EC and is therefore not subject to the same system of management and also because, in the past, fisheries management in Norway was characterised by a distinctive set of social objectives in terms of incomes and the preservation of the coastal settlement structure. The papers and the discussion focused principally upon northern Norway - a region which, as a result of recent changes in fisheries policy, appears to be losing out in terms of competition with other parts of the country and where dependence rests, at least temporarily, on supplies of Russian raw materials and supplies of foreign labour.

The fisheries debate in northern Norway encapsulates the traditional perspective on fisheries and outdated assumptions concerning linkages between fleets, resources and first hand markets occurring within a local or regional ambit. But today a new ideal type is emerging where the resource is managed as a national rather than local asset, where fishing is carried out by a national fishing fleet with vessels from southern and northern Norway delivering wheresoever the landing prices can be optimised, and the processing industries are competing to attract overseas supplies. Ownership of the processing industry is mixed; in Finnmark two thirds of the firms are owned by non-local interests. Part of the workforce is also recruited from overseas. All of these modern features tend to create instability in the settlement pattern according to which communities are the winners and which the losers in the competition for resources, labour and markets. A question for national and

local government is how to influence the situation in order to give greater guarantees of settlement stability without undermining the viability of the fishing industry as a whole. Influencing the harvesting sector through subsidies to the local fishing fleet is impractical; influencing the processing sector is difficult when so much of it is 'foreign' owned; influencing the situation through the preferential allocation of access to resources might be the best option though it would be certain to meet with considerable opposition from the more powerful interest groups within the sector.

Discussion also focused on the example of regional co-management of the Lofoten cod fishery. It was postulated that in Lofoten, fisheries management was designed to secure resources for all who traditionally participated in the sectional fishery - both local and non-local fishermen alike. It was also argued that to describe the system simply in terms of 'traffic management' was too narrow a view. Management of access is the very essence of resource management; it was addressing a problem structurally similar to Hardin's 'tragedy of the commons' scenario by attempting to coordinate access rights through strict control over the time when fishing could be undertaken. The system was based on a combination of scientific advice and local knowledge and was a good example of the parametric approach, controlling access and fishing effects at critical phases in the life cycle of the target species. This defence of the Lofoten system as an example of co-management of the resource base failed to convince all participants and especially those who held that the system was principally concerned not with the conservation of the stock but with maximising the catch potential, allocation of access rights and conflict avoidance.

The third main focus for the discussion concerned the household as a critical unit of study when attempting to understand the social impacts of fisheries management. It was recognised that FDRs serve as an umbrella term, sheltering concepts of community and household. In the past it was assumed that fishing households - like small farm households - were structurally and functionally different to the nuclear household associated with urban societies. Now it is clear that there is increasing convergence of household form. In analysing the social impacts of fisheries policy, it is interesting to discover how households are responding to the pressures of change including, for example, the incidence of family breakdown, threats to the social reproduction of the fishing household, changing social origins of fishermen's wives and patterns of socialisation of the children. In common with other forms of occupational household, women are increasingly searching for jobs unrelated to fishing, family ties are becoming looser, husbands and wives pursue different social activities. Because women are leaving rural areas in search of education and employment, there are some problems in terms of the social reproduction of the fishing family but, in contrast to farming populations, fishermen have customarily benefited from much wider 'catchment areas' for partners, reflecting the seasonal mobility of the fishing industry.

Several of the presentations had highlighted different strategies for securing the future of FDRs and fishing dependent communities - through preferential

access to resources in the case of the Saami people; through diversification strategies in terms of household incomes; and through competition and efficiency within the fishing industry based on the continuous improvement in productivity necessary to maintain a competitive position in international markets. Different strategic responses will be pursued by different individuals, interest groups and communities. The overall development of the FDR will reflect the balance of those strategic responses.

3.3 Development strategies for fisheries dependent regions

3.3.1 *Introduction*

The final set of papers turns from the pathological analysis of the problems facing FDRs to a consideration of the ways and means of stimulating adaptive development in these disadvantaged areas. There is a more or less universal acceptance of the fact that employment and income in the harvesting sector will continue to decline as the resource base deteriorates and further rationalisation is encouraged either through the operation of market forces or policy intervention. For many, therefore, the future development of FDRs relies upon the diversification of their economic base rather than from growth within the fisheries sector. There is a point, however, where diversification through new investment and retraining may inadvertently contribute to the decline of the fishing industry by diminishing not only job opportunities in a limited labour market but also the image of the industry as a suitable area of employment for young people. This theme has already materialised in previous sections of this report. The following papers present what may be considered a balanced view of the development opportunities for FDRs. Strengthening the position of the fishing through the internal rationalisation of its structures, especially in the processing and distribution sectors, and concentration on specialised quality products for a discerning consumer market are set alongside strategies for the introduction of new forms of employment and a reduced reliance on the fisheries sector. The role of grant aid through dedicated European funding programmes (FIFG and PESCA) is highlighted as well as the importance of collaborative action among the wide range of social actors involved. Significantly all contributions, in this and the preceding sections, assume that there is a vital role for state intervention and that a market solution to the problems of developing FDRs is not an option.

Van Vliet's paper contextualises the fishing industry within the globalisation trends affecting the food industry at large; he argues that the concept of 'flexible specialisation' and 'fishing districts' (after Piore and Sabel, 1984), and a reskilling of those engaged in the fishing industry, offers the chance for SMEs to form a countervailing power to combat the influence of mulitnational food companies. The present and future shape of European funding for the sustainable development of FDRs is considered by *Coffey*, who suggests that Agenda 2000 reforms may help to shift the allocation of public funding from its present preoccupation with economic rationalisation to projects which favour local, environmentally sustainable management. *Steins* analyses the

success of the sometimes maligned PESCA initiative in Ireland where almost 90% of available funds have been committed in support of a wide range of projects which will both strengthen the local fishing industry and broaden the economic base of coastal communities - a testimony to effective cooperation between the state, community organisations and the individual. The theme of community based development is continued in *Haugh and Pardy's* account of the 'Villages in Control' project in north east Scotland promoted by local authorities and a local enterprise company; their paper stresses the need for the careful evaluation of local resources - especially in terms of traditional labour skills - and the need for the community to achieve a sense of ownership of the development projects. By way of contrast, the last paper by *Llaneza, Junceda, Suárez and Carrillo* details a more traditional planning approach to the future development of the fishing industries and related employment in the Atlantic coastal region of Portugal and southern Spain: for them, the role of the regional administration and research institutions is vital in managing change in a depressed FDR.

[Piore, M. and Sabel, C. (1984) *The Second Industrial Divide: Possibilities for Prosperity*. New York, Basic Books]

3.3.2 *Confronting globalisation: the need for reskilling fishermen*

Martijn van Vliet, Erasmus University, Rotterdam

The food industry is rapidly changing: the food chain has been turned upside down and the power of the multi-nationals has assumed massive proportions in the process of globalisation. Such changes have certainly not by-passed the fishing industry. Primary producers experience difficulty in adapting to these changes and those engaged in the harvesting sector have become marginalised. In the FDRs a vicious circle is created in which their economic basis is questioned, investment is reduced and those dependent on fishing lose confidence in the future. Finding a solution is difficult: the dominant perspective envisages a process of modernisation leading to a more closely integrated fish chain dominated by multinational food companies or retail organisations in which fishermen become dependent suppliers of the core multinationals. This will possibly 'save' the fishing industry but it is unlikely that the FDRs will survive.

This dominant perspective is, however, based on a limited view of modernisation. True, the fisheries sector and the distribution chain will have to modernise. The post-war trajectory based on increasing volume of production has ended and with it the logic of Fordist mass production of the 1950s, 60s and 70s. Modernisation of market relations within the distribution chain does not have to follow a neo-Fordist or a 'Toyotist' path. By making use of 'flexible specialisation' it should be possible to develop 'fishing districts' in which small and medium sized enterprises (SMEs) in the harvesting sector can cooperate to form a countervailing power against the influence of the giant manufacturing and retail organisations.

A modernisation process that focuses more on the demand orientation of the sector can be stimulated providing the fisheries sector plays an active rather than passive role. But the Fordist production strategy of resource exploitation in the post-war years contributed significantly to the deskilling and alienation of the fishermen, reducing their ability to take an active part in the renewal of the sector. The bases of their craftsmanship - knowledge and harvesting skills - were undermined, while the increasing number of other professionals (both public and private) controlling their activities has further increased the dependency of fishermen on outside forces. There is a clear need for reskilling fishermen, through developing new skills that make it possible for them to operate more effectively in the post-harvest sector. The concept of 'fisheries districts' - not simply as geographical concentrations of firms engaged in similar activities but also as neighbouring firms cooperating with each other - is not an alternative to multinational-led modernisation. But it can help to balance power relations within the production/distribution chain and so benefit the competitiveness of the chain as a whole. Such spatial networks of SMEs will need to be supported by forms of collective institutions in which cooperation can flourish.

3.3.3 *European funding for sustainable development of fisheries dependent areas*

Clare Coffey, Institute for European Environmental Policy, London

The structural policy of the CFP underpins the various attempts by the EC to transform Europe's fishing industry by providing capital investment to assist the industry's adjustment. Initially developed on an *ad hoc* basis supporting the modernisation of the fishing fleet and the improvement of the processing and marketing sectors, since 1993 the investment plans of Member States have been presented as part of a more strategic programme and supported by a single Financial Instrument for Fisheries Guidance (FIFG) which is itself integrated with the Community's broader system of Structural Funds aimed at reducing regional disparities within the EC. Under *Agenda 2000* a new financial framework, including the reform of the Structural Funds, was outlined in 1997. If the proposals are adopted then aid for the fisheries sector would be concentrated on fewer regions than at present.

The Agenda 2000 proposals offer the prospect of increased coordination between the various funds and the possibility of some strengthening of environmental safeguards implying a shift of resources away from investment in increasing rationalisation of the industry's structures in favour of locally appropriate management of resources. The share of FIFG devoted to traditional coastal fisheries could be expected to increase in line with changing priorities for sustainable development. A further theme is the devolution of management responsibilities to more broadly based local programmes. To ensure more effective use of the Structural Funds will require more sophisticated monitoring and evaluation, including stronger baseline data on natural resources and more appropriate environmental indicators relevant to the fisheries sector.

Although the overall reduction in fishing capacity is perhaps the most important 'environmental' measure funded through FIFG, more carefully tailored programmes will be needed to ensure compliance with sustainable development objectives, including the possibility of zonal planning within a framework of integrated coastal zone management. Support for coastal communities dependent on fishing is also required. While direct subsidies are no longer a realistic option there is perhaps potential for rewarding specific forms of 'environmentally sensitive fishing', drawing upon the example of recent agricultural support schemes.

3.3.4 *The PESCA programme and its impact on fisheries dependent communities in Ireland*

Nathalie Steins, Centre for Coastal Zone Management, University of Portsmouth

Following the integration of the Structural Funds and the introduction of FIFG in the early 1990s, the Commission recognised that such measures were inadequate for tackling the particular problems of FDRs and accordingly established a more targeted scheme - PESCA - in 1994. Its aim was to assist fishing communities to diversify away from traditional activities and to support alternative activities. The programme, funded through the Structural Funds, has an allocation of 293m ecu over the period 1994-99 - 139m ecu for Objective 1 and 6 regions, 149m for other regions and 5m for implementation of transnational operations. Uptake of PESCA has been mixed. In Ireland the scheme has been actively promoted and by August 1998, 153 projects had been funded representing nearly 90% commitment of available funds. The main areas to receive support have been shellfish cultivation (52), marine tourism (34) and stock conservation and enhancement (20). Shellfish aquaculture is seen by government as a prime mechanism for diversification and socio-economic development in peripheral coastal areas.

Among the recipients of PESCA grants there is not surprisingly considerable support for the initiative. In most cases the projects would not have got off the ground but for the availability of grant aid. There is, however, some concern that for individually sponsored projects the level of personal financial commitment is too high and that certain types of project may become oversubscribed and the market saturated. From the perspective of the development agencies the main disadvantage is the limited funding available - inadequate to meet the number of applications - and there is regret that the PESCA programme is due to end at a time when Ireland is likely to lose its Objective 1 status.

Not all countries have been as effective in the implementation of PESCA. But in Ireland the impact of the scheme on FDRs has been considerable, accelerating development in aquaculture and tourism. Success is attributed to five factors: a conscious decision to create a PESCA-section within Bord Iascaigh Mhara; the integration of the programme with campaigns at regional

and local levels; the development of user-friendly guidelines for application; the existence of Aquaculture Development Officers based in coastal communities giving direct access to advice and training; and the flexibility of the programme funding a wide range of projects from feasibility studies and training programmes to specific ventures in, for example, marine tourism. However, weaknesses can also be identified: the level of bureaucracy involved in administering the programme; limited availability of funds; the principle of matching funds where individual applicants have to raise 45-40% of the total investment in a regional context of low incomes; and the premature conclusion of PESCA which could jeopardise the future of some projects. Overall, successful implementation of the PESCA initiative in Ireland demonstrates the ability of individuals, community organisations and governments to work together to strengthen the socio-economic structures of FDRs, though an integrated approach to infrastructural development in these regions is an essential complement.

3.3.5 *Community business development in coastal villages in north east Scotland*

Helen Haugh, University of Aberdeen; William Pardy, Community Business Development Advisor, Aberdeenshire Council

North east Scotland is a well established fishing region, with c.10,000 direct jobs in fishing, fish processing and related activities, containing three major fishing ports and many smaller fishing based coastal communities. Since the advent of the oil industry in the early 1970s, oil-related employment has become a key element in the economic development of the region though this tends to conceal problems in other sectors, including fishing which is expected to shed further jobs in the future. After considerable lobbying by the Grampian Regional Council, Objective 5b status was granted to the coastal region north of Aberdeen in 1995. External funding, though important, is not enough to bring about essential changes to the economic, social and cultural ways of life that have persisted over the years. Indeed financial aid may actually slow down the process of adaptation if it allows existing patterns of behaviour to be sustained without altering the expectations of the local population. Retraining can also prove regressive if the recipients lose their status within the community. The issue of 'identify' can be important.

The paper reports on the Villages in Control (ViC) project, a joint initiative between the local authorities and the Local Enterprise Company launched in 1993 and aimed at regenerating the economic livelihood of fragile rural communities dependent on a small number of large employers or a single economic sector such as fishing. The basic philosophy was to engender a 'bottom up' approach through community participation. Two executive officers were appointed to spend six months in each of the six selected villages (three of which were dependent upon fisheries) implementing a three stage programme - establishing contracts, creating a local action group and generating a strategic plan for the community. The outcomes varied. Qualitative evaluation of the project revealed that ViC had evolved largely as a

business development project targeted on the local business community: its success therefore depended on the viability of the existing business community. Generation of a strategic plan was not a sufficient end in itself as diversifying the community's economic base away from traditional, culturally bound perspectives needed to facilitate skill transference and an awareness that traditional skills can be shaped to provide the future economic opportunities. This could not be fully realised within the short time scale of the ViC initiative. Nonetheless most projects were based on exploiting existing skills rather than the creation of new ones.

The need to stimulate local participation in the economic and social regeneration of fishing dependent communities is certain to continue. Contraction of employment in the fisheries sector also seems set to continue. Outside assistance takes the form of *animateurs* whose purpose is to help local communities develop their own strategies for development: it is important that they are not perceived from within the community as external change agents. The challenge is to develop economic development based on indigenous human and physical resources but not be drawn into the 'development myopia' of a narrow range of 'traditional' solutions.

3.3.6 *New employment perspectives in southern European fishing regions*

José Luis Osuna Llaneza, José Carlos Cuerda García-Junçeda, Carlos Bueno Suárez and Alejandro Rodriguez Carrillo, Instituto de Desarrollo Regional, Sevilla

The nature of fisheries dependence along the southern part of the Atlantic coastline of Spain and Portugal originate in a number of specific conditions including the traditional influence of fishermen's guide (*cofradias*) in Spain and mutual societies in Portugal, diversity from different patterns of ownership, fishing patterns and location and the effects of the bilateral agreement between Spain and Portugal limiting the number of Spanish vessels entitled to fish in Portuguese waters and defining the nature of activities for several ports along the coast. Whereas the Portuguese industry is characterised by artisanal fisheries - small vessels operating in coastal waters and providing the basis of income for a large number of households - the Spanish fleet is smaller in number but considerably greater in tonnage and with a much greater catching capacity. Over the last ten years the number of jobs in the harvesting sector has fallen by 21% with rates somewhat higher in the Spanish sector. Explanations for this sharp downturn in employment are to be found in (i) entry into the EC with its more restrictive fisheries regime; (ii) loss of access to third country waters; (iii) a reduction in the real value of landings under conditions of market liberalisation; and (iv) the deterioration of stocks on traditional fishing grounds.

Opportunities for improving the situations in the fisheries sector and for generating additional employment and income in the region are constrained by a number of 'bottlenecks'. These include (i) lack of adequate data on the state

of the fisheries; (ii) problems in negotiating access to third country waters; (iii) risks of overfishing coastal waters through the presence of unregistered vessels; (iv) low levels of horizontal and vertical integration within the fishing sector; (v) an ageing and technological limited fishing fleet; (vi) declining economic rents for fishing enterprises; (vii) weak levels of investment; (viii) archaic marking systems, poorly adapted to new information technology, globalisation tendencies and changing consumer preferences; (ix) a weak and declining processing sector; (x) major imbalances between domestic production and market demand; and (xi) inadequate social infrastructures in the form of welfare systems and retraining schemes to assist in the redeployment of labour.

In order to stimulate new employment within the region it will be necessary to embark on a participatory approach to engage the commitment of all the economic and social agencies. A three stage research-led programme is required first to collate and evaluate relevant information from primary and secondary source materials; secondly, to undertake a more detailed analysis of the local labour markets in the region; and, thirdly, to bring together the major agencies to outline strategic guidelines for solving current employment problems. It is clear that rationalisation of the harvesting sector will continue and that a major effort will be needed to upgrade the downstream sections of the distribution system to improve quality, increase added value and expand employment opportunities. The existing local knowledge base must be fully utilised and enhanced through modern training programmes adapted to the region's needs and opportunities.

3.3.7 *Discussion*

Although the concept of 'industrial districts' is clearly a useful and important one, there is a danger that global enterprises will attempt to buy up the innovative firms and thus destroy the networks on which the concept rests. It is essential that we consider the modernisation processes that alter the distribution of economic power and divert resource flows from 'dependent' to 'independent' regions. Capitalist economic organisations and especially multi-national companies, are capable of wresting power from local organisations, thus denuding FDRs of their influence, even where relatively strong regional economic networks exist. But the capitalist process of accumulation and concentration is not a predetermined way of restructuring industry: history indicates the co-existence of different forms of industrial organisation. However, in the ethos of the European Community, where the concepts of a single market and freedom of movement for capital, labour and goods, those organisations capable of competing within a neo-liberal market system will prosper, presumably at the expense of smaller independent firms. In many cases successful global companies are managed for no other purpose than making a return on the capital invested - they have little connection to regional patterns of production or demand. Intervention by the state (EC, national government, local authorities) will be necessary to defend local interests.

There is increasing evidence that the EC intends to act as Europe PLC - an essentially economic organisation whose policies are driven largely by a concern for efficiency and value for money. This is intimated by the proposed reform of the Structural Funds. Although the total resources available for development aid are not to be reduced, the target areas are to be cutback and projects tied to much broader integrated development programmes. The implicit striving for administrative efficiency and cost effectiveness is in part a response to criticism of the handling of Structural Funds, including PESCA, by the Court of Auditors *inter alia.* But just how does one ensure cost effectiveness in combating the problems confronting FDRs? In particular, how does one measure the 'value for money' factor of PESCA projects? Also, how does the rhetoric of subsidiarity and the importance of local development initiatives square with the Commission's renewed faith in their integration within broader regional development projects? The drive for simplicity, efficiency and effectiveness embodied in the subsidiarity principle and reiterated in *Agenda 2000* may suggest that national administrations will be bypassed and more attention will be paid to the environmental as well as the social consequences of development. But whether the Commission has the will to relax its control or the means to side-step the Member State is doubtful. The Member State is unlikely to roll over and let itself be ignored.

One of the aims of the relatively low cost, small scale community development programmes is to balance and blend incomers bearing new ideas with those who have lived in the community for a long time and who may be suspicious of, and therefore resistant to, new initiatives. The methods employed are to help bring what may be latent ideas to the surface and to provide support for their realisation. Formally funded government approaches create a dilemma: the funding is attractive but usually short term and not always well directed. The effects - especially where ventures fail to realise their promised potential - can be debilitating. What is missing are innovative ways for the community to own and invest in its own local economy. Those who have access to funding are usually those who know how the business community works; such people are at a premium in many of the smaller FDRs. Local projects should not be judged only on the basis of their short term cost effectiveness. One of the most important indicators of added value is to be found in the expanding capacity of the local community to take responsibility for coping with the problems it is facing. A less sympathetic analysis of community development would argue that unless new job opportunities are being created either in the fishing industry or through diversification, the alleged improvements in community spirit are of little relevance.

A key attribute of the PESCA initiative is its attempt to bridge the bureaucratic top:down approach to development and the bottom:up approach which to be more sensitive to the needs and opportunities at the local level. The lack of uptake in PESCA in terms of environmental initiatives was noted and in part explained by the very narrow perspectives adopted by certain administrators, especially at national government level, who tend to remain locked into a productivist approach. Representatives of fishermen's organisations are also sceptical, while the problem for the environmental agencies is frequently a

lack of knowledge, interest and involvement in fisheries related issues. The kinds of pressures which have worked for the success of the LEADER programme are lacking.

4.0 Analysis

The final session of the workshop was devoted to a broad ranging debate on the main findings of the three days of presentations and discussion, led by the comments of two rapporteurs whose remarks are summarised below.

4.1 *Rapporteurs' remarks*

Jesper Raakjaer Nielsen, North Sea Centre, Hirtshals

Most of the contributions addressed, in rather different ways, the problems of defining and delimiting FDRs; in most cases the presentations were based on economic data collated at NUTS 3 level. Qualitative descriptions of FDRs presented in other papers were illuminating, not least in the way that, taken together, they serve to describe highly complex socio-economic and cultural structures, suggesting that the search for a simple, universal classification of FDRs will continue to elude the grasp of social scientists. The best that we can expect is the development of simple typologies encompassing the national scene. A third set of papers, rather fewer in number, focused more on the macro-level frameworks emphasising the globalisation of markets. The markets for both fresh and processed fish products are becoming increasingly competitive: global sourcing has become common, seriously reducing the dependence on local landings and, therefore, the location of the processing industry becomes more flexible. It is no longer an essential condition that the processing industry should be in areas close to the fishing grounds and the point of landing.

Another important observation, reiterated in many of the presentations, is the politicisation of the fishing industry and the impacts on FDRs. Fisheries management is now clearly a matter for international policy, making it more complex and reducing the influence of FDRs in the decision making. Furthermore, in a modern capitalist society, there is an inexorable tendency towards the concentration of industrial firms in favoured central locations. The fishing industry is no exception. The inbuilt impetus for concentration often lies with the financial institutions. R and D organisations, suppliers of hardware to the fishing industry and the processing industries all favour concentration. Only in the harvesting sector - and more especially in the inshore sector - are the contrary processes of dispersal and decentralisation preferred. As the power relations within the industry favour the downstream sectors, it will be difficult - if not impossible - for small fishing dependent communities (FDCs) to maintain their position. Many of these smaller communities are already losing out.

During the workshop several attempts were made to establish typologies of FDRs. Most were based on static forms of classification but there was broad agreement that in order to understand the dynamics of fisheries dependency it was probably necessary to switch the focus away from the region *per se* and adopt a community perspective. One such system is presented below, based on

the experience in Denmark. But it was also widely acknowledged that a more dynamic classification system was required in order to explain why some communities are successful while others, possibly located within the same 'static' category, are failing. Thus the initial typology (Fig.1) can be energised by the inclusion of more information relating to the resource situation, structure of productivity, basic socio-economic factors and the nature of local institutions (Fig 2). It is along these lines that social scientists need to develop the diagnostic tools for analysing FDRs and FDCs.

Figure 1: Simple typology of fisheries dependent municipalities

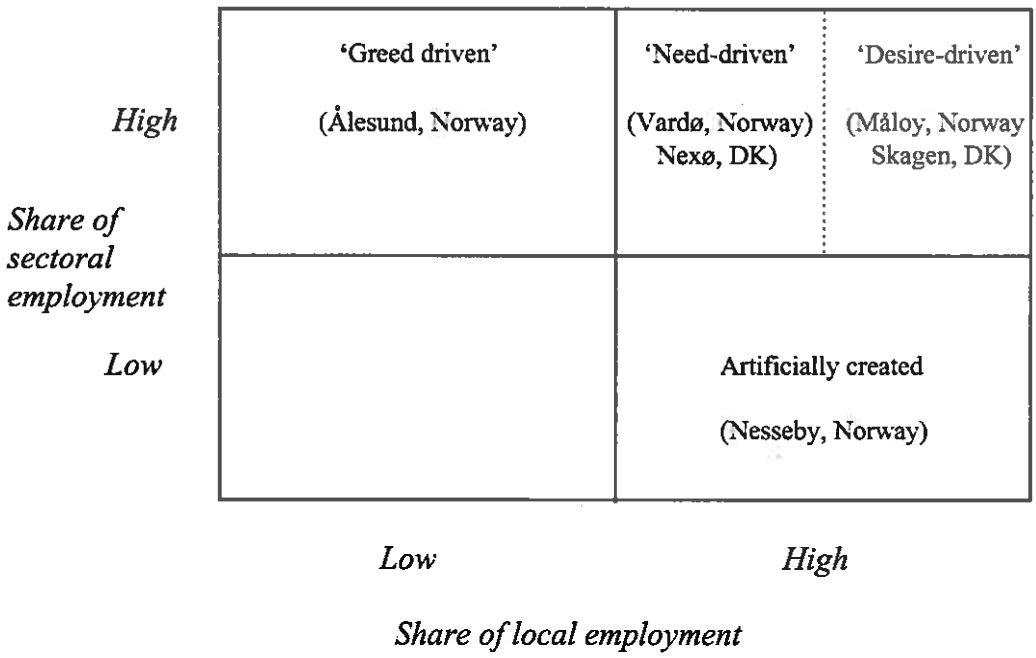
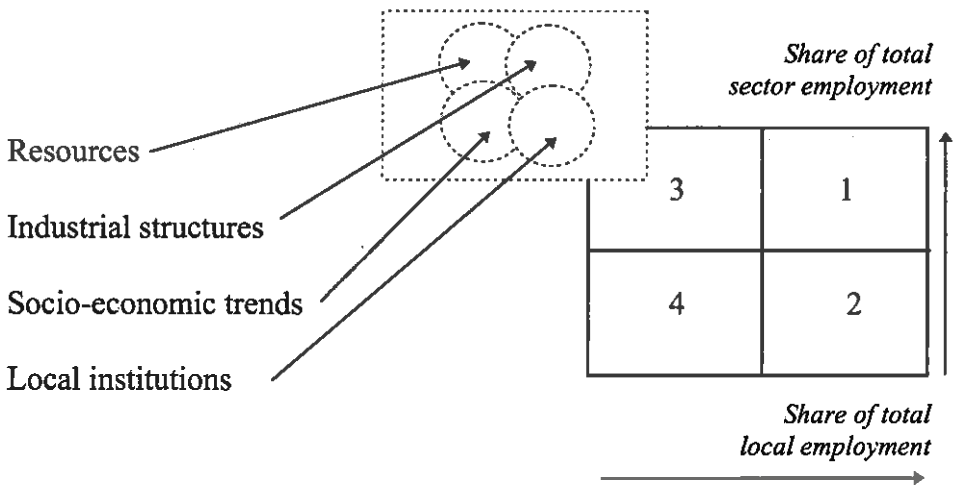


Figure 2: A dynamic variant of typology



The presentations and discussions within the workshop elicit some important findings with implications for policy development relating to the future of FDRs and FDCs:

* FDRs and FDCs can differ in character quite markedly; specific local industrial, socio-economic and institutional arrangements present different opportunities (and constraints) for successful participation in the global market;

* development policies must recognise and be able to cope with these differing situations;

* it is difficult, if not impossible, to define precisely the policy needs for FDRs at the EU level: tailor-made rather than off-the-peg programmes are required;

* an argument can be made for the regionalisation of fisheries policy which will take more cognisance of the needs of particular FDRs and so fulfil the development needs of FDCs;

* regional and local development programmes are needed to support the future development of FDRs and FDCs;

* such programmes should distinguish clearly between two different policy objectives:

  - local/regional industrial development strategies (economic orientation)

  - coastal settlement strategies (social orientation)

Bjørn Hersoug, Norwegian College of Fisheries Science, University of Tromsø

The first point I would make is that working with FDRs is not particularly successful. We have to descend to the level of the community if we are to discover which areas are fisheries dependent and which are not; if we continue to operate on the regional level we will lose a lot of essential information and understanding of the situation. A second point is that the indicators used up to now are fairly simple. There is the possibility of using other indicators and of combining these in a meaningful way - similar to the human development index used by the UN. In the FDRs there are similar possibilities to combine more indicators in order to provide a more complete picture of what is going on. Employment and income on their own are clearly inadequate. But how far we stray in the other direction is another question. The challenge surely is to simplify from a wealth of relevant information rather than hypothesise from too little information. Thirdly we have to get to grips with the dynamics of the situation in FDRs. The problem with many studies is that they tend to create a very static picture when the more interesting questions are which communities

are moving up? which are moving down? and what are the trends in different types of community?

The fourth point is more difficult, but there is a fundamental need to distinguish between fisheries policy, social policy and regional policy. These separate issues have been conflated in our discussions and have sometimes obscured important parts of the argument. Social welfare policies and regional development strategies are not extensions of fisheries policy, though this is not to argue that the three separate policy areas are not in some important ways interrelated.

Fifthly, if we are talking about FDCs we have in broad terms three very different types of intervention: (i) those primarily geared towards making the communities more efficient, placing them in situations where they can more effectively compete in a global market; (ii) those which relate to the problems faced by particular groups, like the Saami or part-time fishermen, where survival will demand protective measures very different from those used to stimulate greater efficiency; and (iii) those that facilitate what has been happening in Norway over the past twenty years, namely diversification. In our case that has meant aquaculture and in a few years time the value of aquacultural production will exceed that of the conventional capture fisheries.

Finally, most of us would agree that regionalisation of the Common Fisheries Policy is necessary as, indeed, it is in the case of Norway. The EC is trying to deal with so diverse a range of fisheries that the Policy is not working and especially because both the resource side and the market side are so extremely dynamic. We need tailor-made programmes set according to the resource situation, the industry situation and the institutional settings in particular countries or regions. Maybe the answer lies in a cascading system of developmental strategies, starting with the broad indicative policies set in Brussels, translated into national programmes designed to meet their particular needs and finally expressed as regional and local projects differentiated according to the actual situation. From a Norwegian perspective, a small fishing village in Finnmark faces an entirely different problem to that of a large urbanised fishing community in western Norway and they will need completely different programmes if each is to fulfil its potential.

4.2 *Conclusions*

Although the rapporteurs' comments can serve as a spontaneous summary of the main conclusions of the workshop, it is perhaps useful to supplement these by reconsidering the main topics dealt with over three days of presentation and discussion, introducing additional comments from the final discussions and highlighting areas of general agreement. This summary analysis takes the form of ten points, as follows:

* FDRs are important both as barometers for the economic and social impacts of fisheries policy and as particular forms of problem regions

in which the conditions of one-sided economic development are often combined with the natural handicaps of remoteness and peripherality and, in some instances, the added disadvantage of harsh physical environments;

* in order to improve the usefulness of the concept for policy makers, we need to be able to integrate a much broader range of economic, social and demographic data than is presently available in order to delimit and categorise FDRs with greater accuracy and to measure the impacts of fisheries policy more precisely;

* while simple typologies may be useful in drawing attention to the diversity of circumstances which characterise FDRs, they tend to ignore the dynamic nature of such regions particularly in rapidly changing internal and external environments; classification and model building must take account of on-going trends and the varying capacities for adaptive change, evidenced in recent case studies of FDRs and FDCs, and help to create reliable forecasting techniques for the future development of FDRs;

* recent analyses have pointed to the significance of three interrelated trends effecting FDRs and FDCs;

  (i) a loosening of traditional ties between local fishing fleets, local fishing grounds and local markets on which the initial dependence was based; as a consequence a distinction needs to be drawn between 'local' and 'non-local' forms of fisheries dependence;

  (ii) the increasing differentiation between a mobile, highly capitalised and competitive off-shore sector, well adjusted to the changing conditions of a global market for fish and fish products, and a more traditional, small scale, labour intensive sector limited in its operational range and therefore more dependent on access to and the availability of local resources;

  (iii) formal designation and allocation of access rights, especially in the form of individual quotas which tend to privilege the off-shore sector and marginalise the inshore sector thus compounding the tendencies noted at (i) and (ii) above;

* in attempting to identify and evaluate the socio-economic impacts of fisheries policy it is essential to disaggregate the effects of three separate types of policy which impinge directly on FDRs and FDCs - those directly concerned with the management of the fishery; those concerned with social welfare; and those related to regional economic development; this distinction has not always been made clear in studies of fisheries dependent areas;

* when addressing the policy needs of FDRs and FDCs, it is also important to recognise that several different issues may need to be addressed simultaneously by different policy agencies *viz*

  - policy measures aimed at strengthening the competitiveness of the fisheries sector;

  - policy measures intended to protect certain disadvantaged user groups;

  - policy measures to assist the diversification of the local/regional economy and the reskilling of the local/regional labour force;

  to ensure the compatibility of these different strategies will require close coordination between different agencies and between central, regional and local levels of administration;

* implementation of development strategies for FDRs will require a balancing of top:down and bottom:up approaches, as exemplified in the PESCA programme, and an increased sense of 'community ownership' of specific development projects aimed at the sustainable use of local resources, knowledge and skills, it will be important to ensure that these kinds of approach are not eclipsed in the proposed reforms of the Structural Funds;

* all forms of policy measure will need to guard against increasing existing levels of fisheries dependence or substituting new forms of dependence;

* despite the fact that most social scientists do not feel particularly comfortable with the concept of 'region' and are clearly more at home with the notion of 'community', it is important to recognise (i) that the region is the area in which all relevant social and economic concerns converge and where the integration of developmental activities can best take place, and (ii) that the concept of the region has been re-invented by policy makers as the unit for monitoring economic development and as a framework for directing public investment;

* although the fishing community may be the preferred social science laboratory for analysing human behaviour, it is equally important to examine how these communities interact within a regional network comprising both fisheries dependent and independent communities.

5.0 A research agenda

Fisheries dependent regions and their constituent communities should be a natural focus for social science research, integrating the established expertise in the analysis of topics such as household structures and strategies, gender and inter-generational relations, demographic change, social equity, the distribution of power and influence, community institutions, systems of governance *inter alia.* This range of experience, combined with an understanding of the fishing industry, can be readily brought to bear on a detailed analysis of the structures, behavioural dynamics and policy needs for fisheries dependent areas at varying spatial and administrative scales.

Particular topics should include:

* the development of data bases which allow more precise delimitations and more meaningful analysis of FDRs;

* the development of research tools for the analysis of underlying structures and processes which will help to determine the likely future trends and optimal development patterns for different types of FDRs and FDCs;

* a deepening of our understanding of factors which facilitate or constrain the integration of fishing related activities with other sectors of the regional economy and which operate at different scales *viz* household, enterprise, community and region; this could include, for example,

  - the analysis of demographic structures and processes;

  - the analysis of the roles of socialisation, education and training in stimulating conditions for diversification and adaptive change;

  - the involvement of fishing related organisations in the broader institutional frameworks concerned with economic development and local government;

* a detailed analysis of fisheries related employment in FDRs: how many jobs are being lost (or created)? what kinds of jobs are being lost/created (full-time or part-time or seasonal, skilled or unskilled, male or female jobs etc.)? are jobs being relocated from peripheral to more central FDRs?

* A comparative analysis of the strategic responses to crisis of employment at household and community level focusing on the socio-cultural and economic processes which may create, sustain or weaken the characteristics of embeddedness, encapsulation or more open, functional relationships within FDCs.

The emphasis in all these sample topics should be on inter-disciplinary approaches within the broad spectrum of the social and economic sciences.

Appendix A: Programme

European Social Science Fisheries Network: FAIR CT95 0070
Workshop on Fisheries Dependent Regions
Lofoten, Norway, 27-30 August, 1998: Nyvaagar, Svolvaer

Coordinator:	David Symes
Manager:	Jeremy Phillipson
Local Workshop Organisers:	Bjørn Hersoug
	Stein Arne Rånes

Thursday 27th August

0900 - 0915 Registration

0915 - 0930 Opening remarks

0930 - 1030 Session 1: Fisheries Dependent Regions in Context
Chair: David Symes

Martijn van Vliet (Netherlands) Confronting globalisation

Michel Morin (France) Fisheries resources and fishery dependent regions

1030 - 1100 Coffee

1100 - 1230 Session 2: Defining Fisheries Dependent Regions
Chair: Peter Friis

Jeremy Phillipson (UK) Delimiting fisheries dependent regions: the role of data bases

Babis Kasimis and Anastasia Petrou (Greece) Exploring the socio-economic situation of the Greek fisheries sector: towards a composite definition of the fisheries dependent regions in Greece

António Brandão Moniz and Ilona Kovács (Portugal) Fishing dependent communities, socio-economic change and planning strategies: the case of Portugal

1230 - 1400 Lunch

1400 - 1530 Session 3: Social Impacts of Fisheries Policy (i) North Atlantic
Chair: Jeremy Phillipson

Lawrence Hamilton, Cynthia Duncan and Nicholas Flanders (US) Fisheries dependence and demographic change in the North Atlantic arc

Mark Nuttall (UK) Social impact of fisheries policy in NE Scotland

1530 - 1600 Tea

1600 - 1730 Session 4: Social Impacts of Fisheries Policy (ii) the Kattegat and the Baltic Sea
Chair: Jeremy Phillipson

Laura Píriz (Sweden) Conflict management and coastal planning in fisheries dependent regions

Jesper Raakjaer Nielsen and Tomas Vedsmand (Denmark) Development potentials of fishery dependent communities: experiences from Denmark

Juhani Salmi, Pekka Salmi and Ari Lappalainen (Finland) Finnish part-time fishery - a flexible local strategy or a nuisance to management?

Friday 28th August

0900 - 1030 Session 5: Fisheries Dependent Regions in Norway
Chair: Oddmund Otterstad

Knut Bjørn Lindkvist (Norway) Supportive and undermining properties of fishing activities and production systems in Norway's coastal regions

Ketil Hanssen (Norway) Fishing dependent, people dependent, or both? Fishing dependent communities and their abilities to recruit educated people.

Svein Jentoft (Norway) User conflicts and ethnic relations: fisheries management from the Saami perspective

1030 - 1100 Coffee

1100 - 1230 Session 6: Fisheries Dependent Regions in Norway continued
Chair: Oddmund Otterstad

Petter Holm, Bjørn Hersoug and Stein Arne Rånes (Norway) Revisiting Lofoten: co-managing fish, people or conflicts

Liv Toril Pettersen (Norway) The impacts of fisheries policies in North Norwegian fishing communities

1230 - 1400 Lunch

1400 - 1600 Session 7: The Lofoten Fishing Industry

A round table discussion with representatives from the Lofoten fishing industry.

1600 - 1630 Tea

Saturday 29th August

0900 - 1000 Session 8: Social Impacts of Fisheries Policy (iii) Southern Europe
Chair: Katia Frangoudes

Jean Luc Prat (France) Legal influences on the evolution of fishing and related activities of southern Brittany

Duarte Nuno Vicente and Ana Rapaz Ramos (Portugal) The socio-economic dependence on fishing in Portugal: the case of Peniche

1000 - 1230 Session 9: The Development of Fisheries Dependent Regions
Chair: Babis Kasimis

Clare Coffey (UK) EC funding for sustainable development of FDRs

[Coffee]

Nathalie Steins (UK) The PESCA programme and its impact on fisheries dependent communities in Ireland

Helen Haugh and William Pardy (UK) Community business development in coastal villages in North East Scotland

José Luís Osuna Llaneza, José Carlos Cuerda García-Junceda, Carlos Bueno Suárez and Alejandro Rodríguez Carrillo (Spain) New employment perspectives in southern European fishing regions

1230 - 1400 Lunch

1400 - 1600 Session 10: Plenary Discussion
Chair: David Symes

Rapporteurs: Jesper Raakjaer Nielsen (Denmark)
Bjørn Hersoug (Norway)

1600 Close

1600 - 1630 Tea

1700 Fishing Trip

Sunday 30th August

Fisheries excursion around Lofoten

Appendix B: Workshop Participants

Denmark Peter Friis, Roskilde University
Jesper Raakjaer Nielsen, The North Sea Centre
Tomas Vedsmand, Danish Technology Institute

Finland Juhani Salmi, Finnish Game and Fisheries Research Institute
Pekka Salmi, Finnish Game and Fisheries Research Institute

France Katia Frangoudes, OIKOS
Michel Morin, Saint-Nazaire
Jean-Luc Prat, Centre de droit et d'economie de la mer

Greece Babis Kasimis, University of Patras

Neths Martijn van Vliet, Erasmus University Rotterdam

Norway Ketil Hanssen, Finnmark College
Bjørn Hersoug, University of Tromsø
Petter Holm, University of Tromsø
Svein Jentoft, University of Tromsø
Knut Bjørn Lindkvist, University of Bergen
Oddmund Otterstad, Senter for Samfunnsforsning
Liv Toril Pettersen, Nordland Research Institute
Stein Arne Rånes, University of Tromsø

Portugal Duarte Nuno Vicente, Escola Superior de Tecnologia e Gestco
Antonio Brandão Moniz, Universidade Nova de Lisboa
Ilona Kovács, Universidade Nova de Lisboa

Spain Carlos Bueno Suárez, Instituto de Desarrollo Regional
Alejandro Rodriguez Carillo, Instituto de Desarrollo Regional

Sweden Laura Píriz, National Board of Fisheries

UK Clare Coffey, Institute for European Environmental Policy
Mark Nuttall, University of Aberdeen
William Pardy, Aberdeenshire Council
Jeremy Phillipson, University of Hull
Nathalie Steins, University of Portsmouth
David Symes, University of Hull

USA Cynthia Duncan, University of New Hampshire
Lawrence Hamilton, University of New Hampshire